Rutherford County, TN At-A-Glance

This summary serves as an excerpt of the VUMC Community Health Needs Assessment. For the full, board-approved report, please visit the VUMC Community Health Improvement website.

TN Department of Health | Rutherford County Health Department

VANDERBILT UNIVERSITY MEDICAL CENTER

Saint Thomas Health | ASCENSION

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Introduction

Vanderbilt University Medical Center ("VUMC") is located in Nashville, Tennessee, and chiefly serves Tennessee, northern Alabama, and southern Kentucky. Although licensed as Vanderbilt University Hospitals under a single hospital facility license, VUMC owns and operates three separate hospitals: The Vanderbilt University Adult Hospital ("VUAH"), Monroe Carell Jr. Children's Hospital at Vanderbilt ("the Children's Hospital") and the Vanderbilt Psychiatric Hospital ("VPH"). As part of a joint venture with Encompass Health Corporation, VUMC also owns 50% of Vanderbilt Stallworth Rehabilitation Hospital ("Stallworth").

Non-profit hospital organizations such as VUMC are required to complete a Community Health Needs Assessment (CHNA) and an accompanying Implementation Strategy every three years as mandated by the 2010 Patient Protection and Affordable Care Act. The CHNA process is designed to identify key health needs and assets through systematic, comprehensive data collection in target communities.

VUMC conducts the CHNA in three Tennessee counties where a large number of VUMC's patients live—Davidson, Rutherford, and Williamson counties. These counties are diverse in socio-economic status, race and ethnicity, health risks and health outcomes. The CHNA sought to better understand community concerns related to health and health care, the social, environmental and behavioral factors that impact health, the greatest needs and assets in communities, and strategies for improving community health and well-being – with a focus on the underserved, low-income and minority populations. The CHNA serves as a health profile for the community in which VUMC patients live.

This "at a glance" excerpt provides a summary of data regarding Rutherford County. The full VUMC CHNA report outlines the complete needs assessment process, shares results and describes how needs were prioritized by the community in each of the three counties. The accompanying Implementation Strategy (IS) outlines the programs and resources committed to address these prioritized needs. Both reports can be accessed via the Community Health Improvement Website.

Rutherford County Collaborations

In Rutherford County, VUMC collaborated on the CHNA with Saint Thomas Health (STH), another local non-profit hospital system. Our collaboration included nearly every component of the planning and data collection process including interviews, listening sessions, and community surveys; secondary data collection; and the community summit for Rutherford County.

VUMC also collaborated with the Rutherford County Health Department for the CHNA. The Rutherford County Health Department and staff were critical in identifying interview participants as well as recruiting participants and securing space for listening sessions. In addition, the Rutherford County Health Department joined in the planning and implementation of the community summit in Rutherford County.

The Circle of Engagement (COE) was a group of leaders in Rutherford County that also helped guide the CHNA process and had a strong impact on the community. The COE provided guidance to the core planning team throughout planning the assessment, data collection, and needs prioritization. The COE met every other month throughout the Needs Assessment process,

and this group also aided in community mobilization to help drive assessment participation and build relationships.

The CHNA approach from which this summary derives relies on secondary data and primary data from community stakeholders and members. Input from persons representing the broad interests of the community, including those with expertise in public health, was obtained through face-to-face interviews, community listening sessions, and community surveys. An environmental scan was conducted in each county to examine existing reports relevant to community health and identify strengths, assets, and areas of improvement regarding the health and healthcare in the community. In addition, VUMC continuously solicits written feedback on the most recent CHNA/IS on the VUMC Community Health Improvement website. VUMC and its collaborators benefitted from the input of over 1100 individuals across the three counties, each sharing their time, perspectives, and experience in helping VUMC to identify significant health needs in the community.

In Rutherford County, the assessment methods include: 1) an environmental scan of 5 community reports from 2015-2017; 2) 26 key informant interviews with community leaders; 3) 4 community listening sessions with 60 participants; and 4) community surveys with 1,027 respondents. We also conducted an in-depth review of secondary data using indicators recommended by the Centers for Disease Control, other national public health institutions, and community advisory groups. These efforts culminated in a summit in Rutherford to solicit community input in identifying and prioritizing health needs. A summary of methods and the overall assessment process are described in the table below.

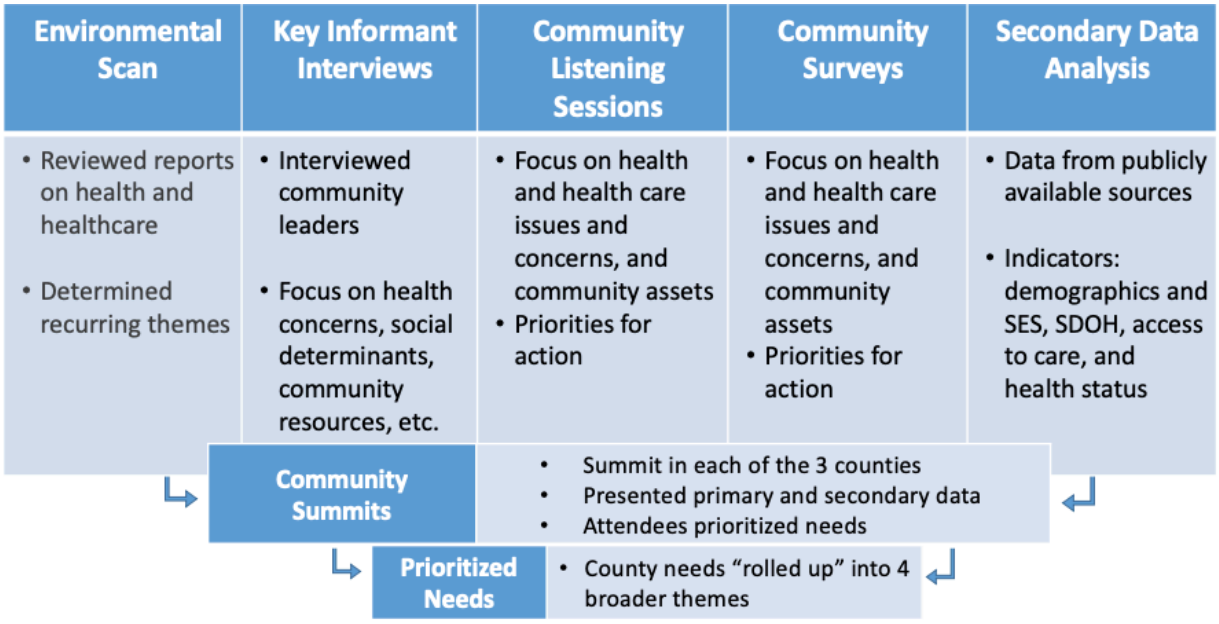

Figure 1. Methodology of the CHNA Process.

Environmental Scan Results

Introduction

This environmental scan is a summary of health and health-related studies that provide information, data, and common themes presented in various reports published about Rutherford County. The purpose of the review is to examine existing data released within the last five years 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.

When examining these reports, it is important to understand the underlying and systematic barriers affecting the health outcomes of the populations of focus. To ensure that the populations and communities at higher risk for adverse health outcomes were included, the review used "healthy equity buckets" as outlined in the Mobilizing for Action through Planning and Partnerships ("MAPP") handbook published by the National Association of County and City Health Officials ("NACCHO"). Some of the 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; school readiness and educational attainment; environmental quality; and availability and utilization of medical care.

Major 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. Murfreesboro and all of Rutherford County is continuing to grow in population and becoming a major hub for economic and social growth. However, these changes and opportunities invite 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 housing 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 at least 30% of their income is spent on housing. These difficult living conditions make homelessness a reality for some. 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 that affect a wide range of health risks and outcomes. The environmental scan 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 mentioned above helps to ensure that all people can lead healthy lives.

The third and last main 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 all residents in Rutherford County and are easily preventable. However, some groups are more equipped to take preventative measures. Having things like parks and recreation centers allows for easy exercise opportunities. Additionally, sidewalks, public transportation, and safety can all help to ensure that someone is willing and able to walk or run in their own neighborhood. Many of the at-risk groups mentioned above (single-mother families, Veterans, minorities, and those living with disabilities) are at an equally high risk of getting one of these preventative diseases.

Conclusion

Overall, Rutherford County is one of the healthiest counties in the state of Tennessee. However, there are still many community health issues that need to be addressed to improve health outcomes for everyone in the county. By focusing on the top themes mentioned above: affordable housing and homelessness, social determinants of health, and wellness and disease prevention, we can begin to address the major health concerns in the county.

Secondary Data Results

Demographics and Socioeconomics

Rutherford County is home to approximately 317,157 individuals as of 2017. Compared to the State (38) and The Nation (37), it is a relatively young county with a median age of 33 and seniors make up 10.1% of the population. Similar to national and statewide statistics, Rutherford County is growing in racial and ethnic diversity; However, about 79% are white. The county also has a relatively low percentage of residents who are Hispanic (7.6%). Rutherford county also reports that 10.1% of households speak a language other than English compared to 21.3% of national households. Veterans make up almost 9% percent of the population in Rutherford County which is slightly higher than that of the U.S.A (8.0%). Additionally, 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%). [1]

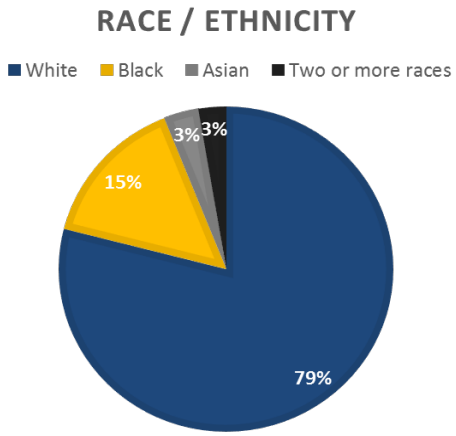

Figure 2. Demographics of Rutherford County, US Census Bureau (2018)

Projected Population and Job Growth

Rutherford County is experiencing rapid growth with a 21% increase in population between 2010 and 2017 **(Figure 3).** This is almost three times faster than the state as a whole. The Nashville Metro Planning Organization estimated a 42% increase in population and a 46% increase in jobs between 2015 and 2035.[2] 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%). [3]

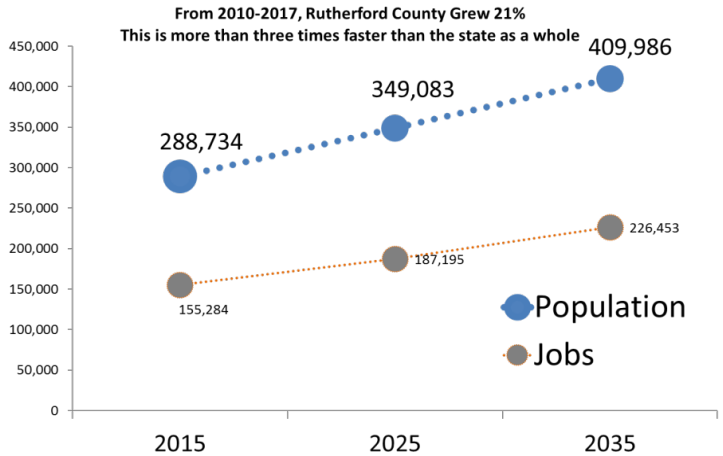

Figure 3. Rutherford County Growth Forecasts 2015 - 2035, Nashville Metro Planning Organization (2019)

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

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

[3] 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 including 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. 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 is still a significant number. Poverty levels are higher in some geographic areas of Rutherford County as seen in **Figure 4**, a map from the U.S. Census Bureau where the darkest green indicates areas with the highest rates of poverty (up to 55.6%).

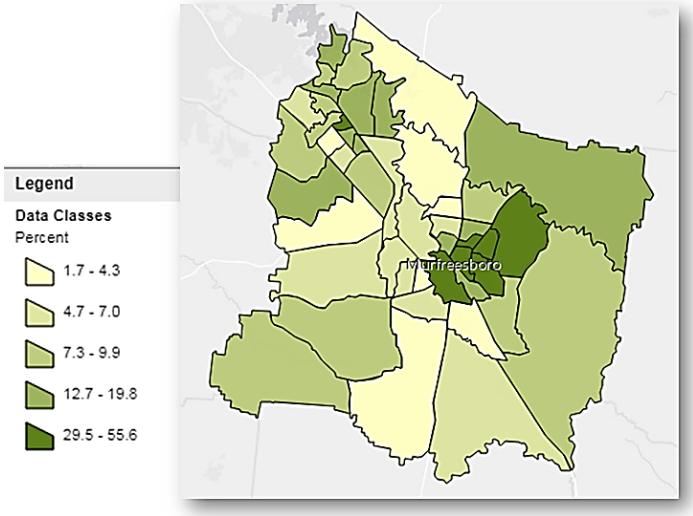

Figure 4. Distribution of poverty in Rutherford County, US Census Bureau (2018)

The prevalence of poverty also varies by race. In Rutherford County, individuals who identify as "some other race" have the highest percentage of individuals experiencing poverty (22.8%) and African Americans have the second highest percentage (19%). **Figure 5** denotes the percentage of each race that is below the Federal Poverty Level and illustrates that the rates in Rutherford County are similar to that of the State and the Nation as a whole. In Tennessee, individuals that identify as "some other race" have the highest percent of population in poverty (34.2%). Native Hawaiian/Pacific Islanders are ranked second highest with 32.7% living in poverty.[4]

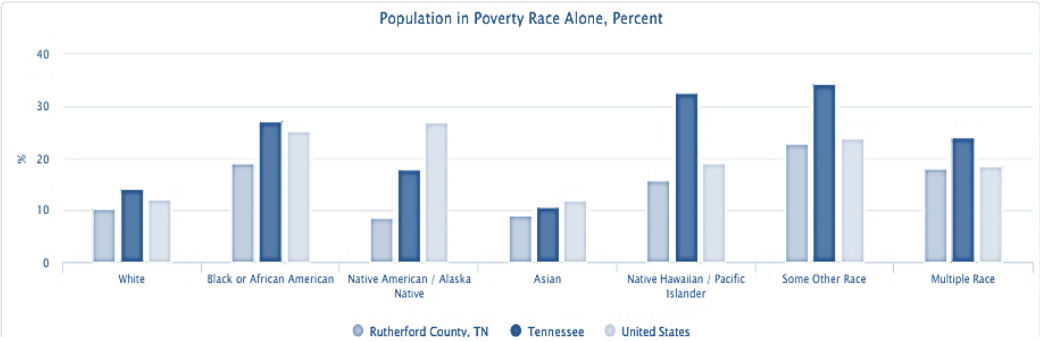

Figure 5. Population in poverty by race in Rutherford County, US Census Bureau (2018)

[4] 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

The challenges of poverty are not only an issue for many of the adults in Rutherford County. Unfortunately, many of our children also experience these stressors, with almost 15% currently living in poverty. This equates to more than 10,000 children in Rutherford County. This is an improvement from the CHNA report in 2016 (17.7%). Additionally, Rutherford County has less children living in poverty when compared to the state (24.25%) and the nation (20.31%).[5]

Education

The residents in Rutherford County have overall success in attaining the traditional levels of education. However, educational attainment differs for many minority populations. Educational attainment is linked with improved health behaviors, longer life, and positive health outcomes. County Health Rankings says "better educated individuals live longer, healthier lives than those with less education, and their children are more likely to thrive."

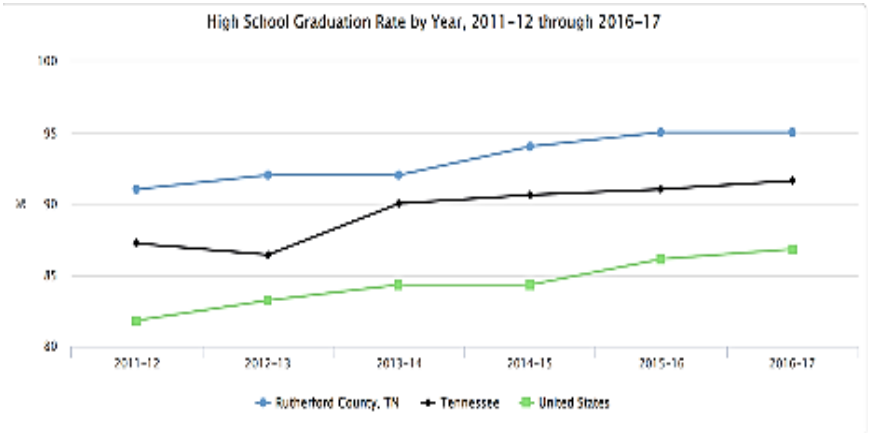

Figure 6. High school graduation rates 2011-2017, Annie E. Casey Foundation (2017)

In Rutherford County, 9.15% of residents over the age of 25 do not have a high school diploma (or equivalency) or higher which equates to almost 17,000 people. However, this is still 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 10.6% of African Americans. [6]

The rate of graduation serves as an indicator for increasing the percent of the population with a high school diploma. In **Figure 6**, 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 4-5% at the county, state, and national levels since 2011. [7]

[5] 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
[6] The Annie E. Casey Foundation KIDS COUNT. (2017). *Graduation Rates.* Retrieved from http://www.datacenter.aecf.org
[7] 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

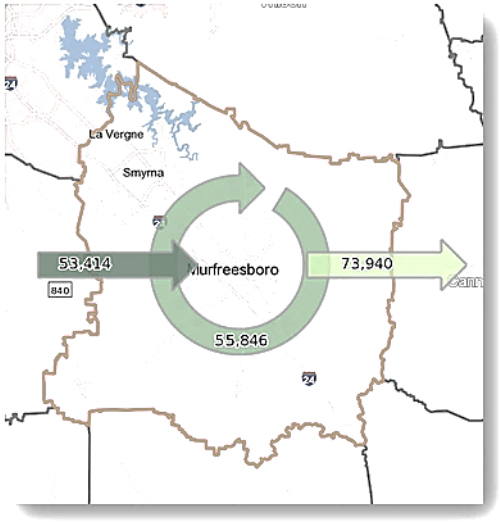

Figure 7. Residents that commuting in and out of Rutherford Country for work, US Census Bureau (2018)

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. In fact, the unemployment rate is only 2.5%, which is lower than both the state (3.3%) and the nation (4%). However, many residents work in surrounding counties. **Figure 7** from the U.S. Census Bureau estimates the number of residents that commute in and out of the city each day.[8] There are about 53,000 coming in and almost 74,000 going out daily. The number of residents that are commuting out of the county daily make up about 57% of the workforce. While many residents do stay within the County lines for work, many residents work in Davidson, Williamson, Cannon, and other counties with some traveling as far as Montgomery County (Clarksville, TN).[9]

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.[10]

The projected growth in the senior population is illustrated in **Figure 8,** showing the percent increase in Tennessee and Rutherford County between 2017 and 2030.

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

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

[10] **Source:** 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

Figure 8. Forecasted grown of senior population in Tennessee and Rutherford County, TN Commission on Aging and Disability (2017)

Social Determinants of Health

Our health is shaped by factors such as 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.[11]

Housing

According to the American Community Survey 2013-2017 5-year estimates, 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).[12] County-wide, 82.6% of residents live in the same house as one year ago, compared to 85.4% in the nation and the 85.2% in the state.[13] This indicator helps describe "residential stability and the effects of migration" within a community.[14]

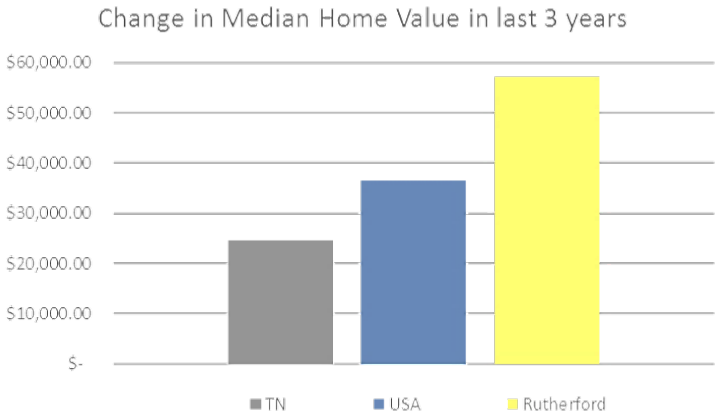

Figure 9. Comparison in changes in median home value, US Census Bureau (2018)

[11] World Health Organization. (n.d.). *Social Determinants of Health.* Retrieved from https://www.who.int/social_determinants/sdh_definition/en/
[12] U.S. Census Bureau. (2019). *Selected Housing Characteristics, 2017 American Community Survey 5-year estimates.* Retrieved from https://factfinder.census.gov/
[13] 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/
[14] 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/

The availability of safe and affordable housing stock has a direct bearing on health. Poor quality housing can contribute to the risk of injury and to other illnesses through poor maintenance, leaks, toxic factors in the environment (such as lead), increased risk of infectious/contagious disease through overcrowding, and psychological distress.[15]

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 a particular 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."[16]

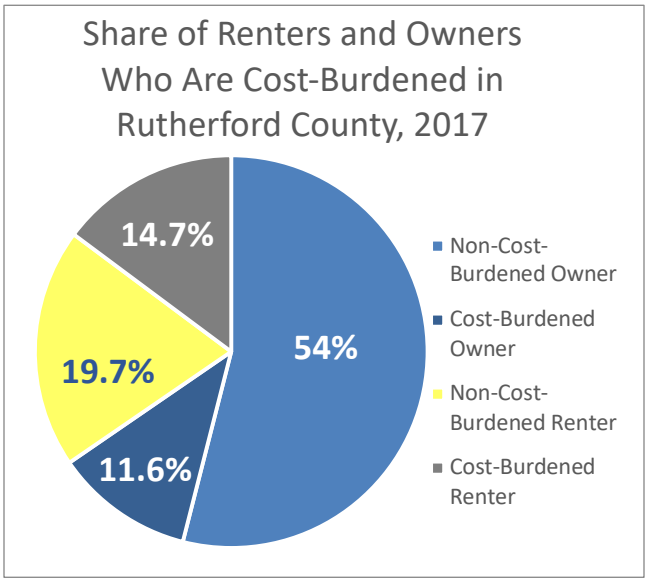

Figure 10. Share of renters and owners who are cost-burdened in Rutherford County, US Census Bureau (2018)

Through the course of the Community Health Needs Assessment process, Rutherford County residents repeatedly voiced concern about the challenges of a growing population and its implications for housing in Rutherford County. Data on housing value bear out this concern. According to the American Community Survey 2014 and 2017 1-year Estimates **(Figure 9),** 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.[17]

There is concern over the number of cost-burdened households, which are defined as households that spend more than 30% of their 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".[18] 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".[19]

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

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

[17] 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

[18] 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=

[19] 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/

The chart above **(Figure 10)** shows the share of homeowners versus renters in Rutherford County. Of the 106,673 occupied housing units in the county in 2017, 65.6% were owner-occupied (both blue segments combined) and 34.4% were renter-occupied (the yellow and gray segments combined). The gray 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.[20]

Homelessness

Many in Rutherford County have expressed worry that a growing population and rising home costs have put many on the brink of homelessness. Point-in-Time count is the 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 (City of Murfreesboro, 2018). 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.[21]

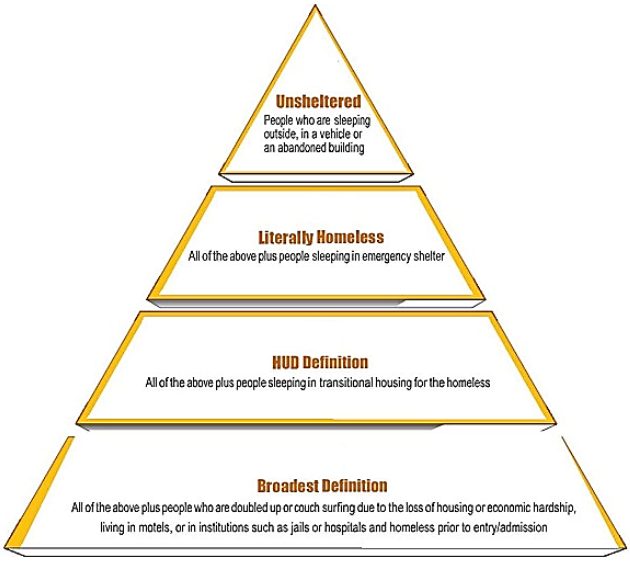

Figure 11. Varying definitions of homelessness, Nashville Metropolitan Development and Housing Agency (2018)

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 **(Figure 11).**[22]

Meanwhile, 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 (D. Garrett, personal communication, December 4, 2018). "The U.S. Department of Education defines homeless youth 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

[20] 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

[21] 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

[22] 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

for human beings.' This definition includes both youth who are unaccompanied by families and those who are homeless with their families."[23]

Transportation

The built environment and transportation options affect people's health and their ability to make healthy choices. A robust transit system ensures people can easily access essential resources and services needed to support health. Public transportation can also help to improve air quality by taking individual cars off the roads and can help reduce stress due to traffic. In addition to this, better transit options can alleviate the burden of long solo commutes to work. Finally, well-designed transit options can also support health equity by bringing transportation options within reach of vulnerable populations.[24]

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. However, 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**[25] to see the Rover bus routes.

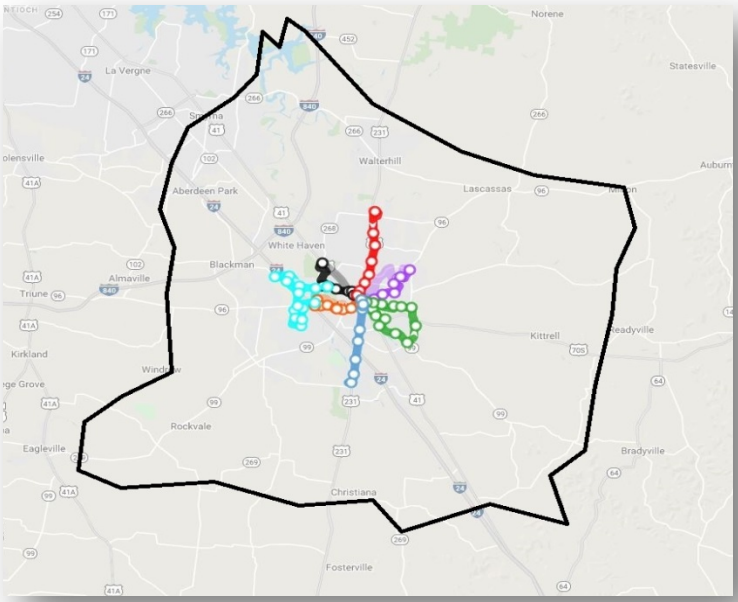

Figure 12. Rover bus routes in Rutherford County, City of Murfreesboro (nd)

[23] Youth.gov. (n.d.) *Federal Definitions.* Retrieved from http://youth.gov/youth-topics/runaway-and-homeless-youth/federal-definitions

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

[25] City of Murfreesboro. (n.d.). *Rover Route Map.* Retrieved November 12, 2018 from: http://63.137.71.220/RouteMap/Index

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 constitute 12.4%-17.2% of households with 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.[26]

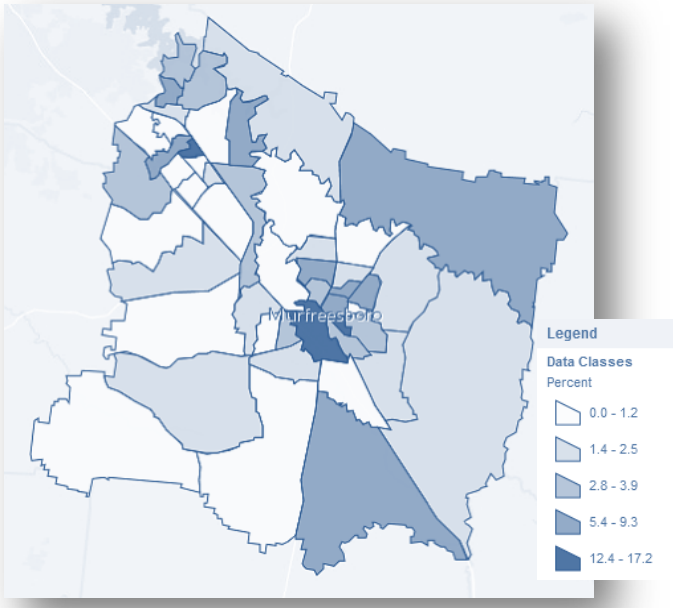

Figure 13. Percentages of households without a vehicle by census tract, US Census Bureau (2018)

Rutherford County residents spend significant time sitting in the car, with 85% of workers driving alone to work[27] and less than 2% walking, biking, or taking public transit to get to their jobs.[28] 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 some kind of sustained exercise. This puts Tennessee in the 5th percentile nationwide for active transit that represents sustained exercise indicating lower health performance.[29]

Mean travel time to work in Rutherford County is 28.1 minutes[30] 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".[31]

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

[27] 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

[28] 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

[29] U.S. Department of Transportation (n.d.) *Transportation and Health Indicators.* Retrieved June 1, 2018 from https://www.transportation.gov/transportation-health-tool/indicators

[30] US Census Bureau. (2017). *Workers Commuting by Public Transportation, 2016 American Community Survey 5-year estimates.* Retrieved from https://factfinder.census.gov/

[31] 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

Food Access

The built environment and access to transportation also affect the choices people can make regarding what they eat. Lower-income and rural neighborhoods are often awash in 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.[32]

Overall, 28.6% of Rutherford County's low-income population also face low food access, "defined as living more than ½ mile from the nearest supermarket, supercenter, or large grocery store".[33] **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.[34]

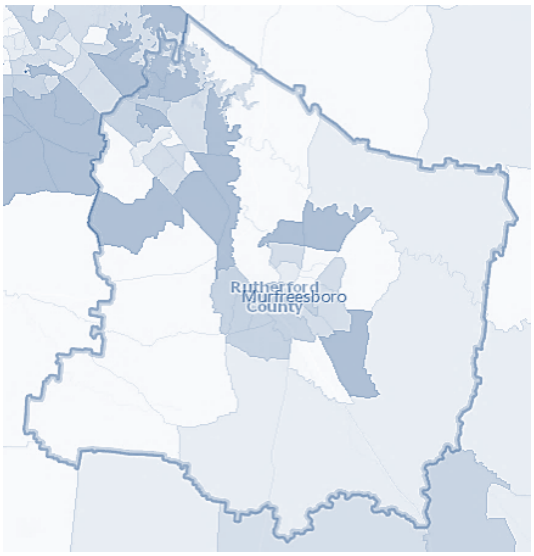

Figure 14. Low food access by census tract in Rutherford County, Community Commons (2018)

However, in terms of access to fast food, Rutherford County outstrips both the state and the nation with a rate of 91.01 fast food establishments per 100,000 people.[35] 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.[36]

Again, it is clear that pockets of need are geographically concentrated within the county, suggesting that place matters in terms of residents' ability to make healthy choices. **Figure 15** outlines the fast food restaurant abundance.

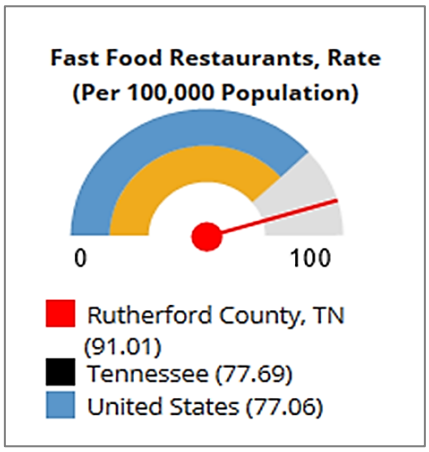

Figure 15. Fast food restaurants per 100,000 population, Community Commons (2019)

[32] 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
[33] Community Commons. (2018). *Food Access – Low Income & Low Food Access*. Retrieved February 12, 2019 from https://www.communitycommons.org/board/chna
[34] Community Commons. (2018). *Food Access – Low Income & Low Food Access*. Retrieved February 12, 2019 from https://www.communitycommons.org/board/chna
[35] Community Commons. (2018). *Food Access – Low Income & Low Food Access*. Retrieved February 12, 2019 from https://www.communitycommons.org/board/chna
[36] 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".[37] Safety is a social determinant that affects inequities in health outcomes.[38]

Figure 16 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 per 100,000 residents.[39]

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.[40] 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.[41]

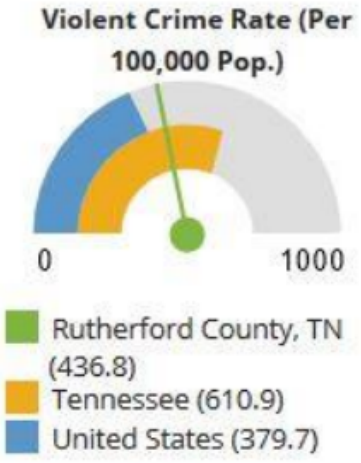

Figure 16. Violent crime rate per 100,000, Community Commons (2019)

Emerging research on 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,

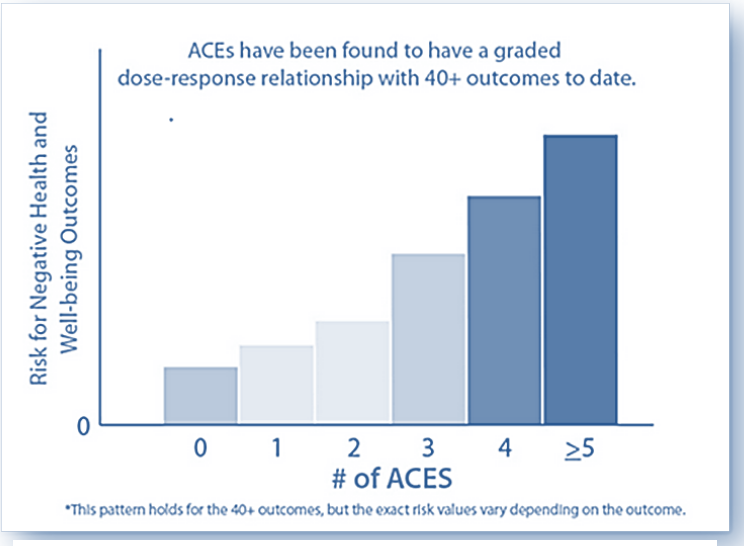

Figure 17. Correlation of ACE score and life outcomes, CDC (2016)

[37] 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

[38] 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

[39] 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

[40] 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/

[41] 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

graded relationship to numerous health, social, and behavioral problems throughout their lifespan, including substance use disorders".[42]

Figure 17[43], from the CDC, represents state level ACE data. There is not yet county-level data on ACEs for Rutherford County, but it has been determined that Tennesseans fall in the highest quartile nationwide in prevalence of many childhood traumas.[44] 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.

Access to Health Care

Access to appropriate healthcare is a critical piece in the puzzle of factors that affect 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".[45]

Insurance Coverage – Adults

For most people, the way they gain entry to the healthcare system is through insurance coverage.[46] 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. For this reason, we can look at insurance rates as a proxy for health outcomes in general.[47] The age group with the highest uninsured rates nationwide is

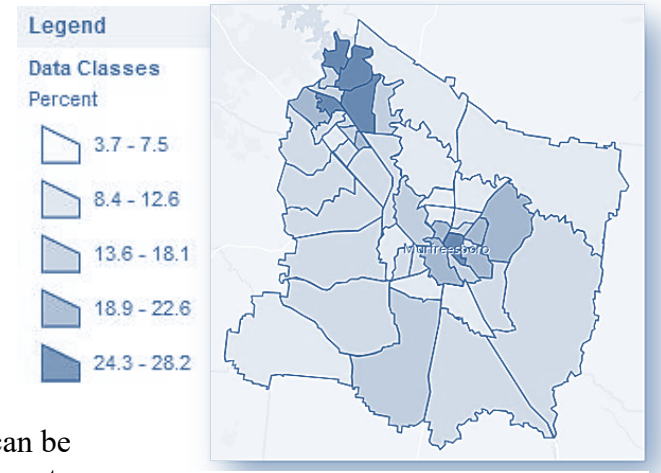

Figure 18. Percent of population age 19-64 that is uninsured by census tract, US Census Bureau

[42] 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

[43] 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

[44] 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

[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] 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

[47] 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/

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.[48] 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 18** shows where in Rutherford County these uninsured adults 19-64 reside by census tract, with the darkest tracts having rates of 24.3%-28.2% uninsured.[49]

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 19** below outlines these racial disparities.[50]

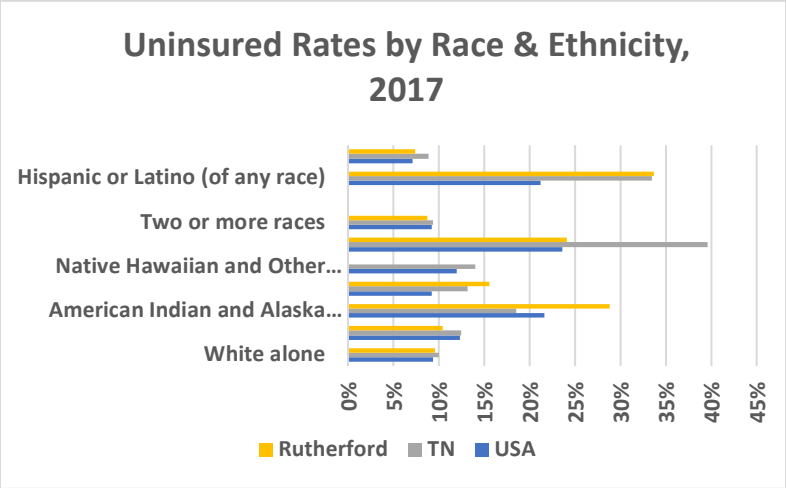

Figure 19. Uninsured rates by race and ethnicity, US Census Bureau (2017)

Insurance Coverage – Children

Children's uninsured rates are also at an all-time low nationally. Access to insurance is crucial in getting kids the care they need that can set them up for good health later in life, as well as for better academic and economic outcomes. Insurance coverage affects the care children receive. In the graph below, the orange and dark blue bars represent children with private and public insurance/Medicaid, and the light blue bars represent children with no insurance. 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.[51] **Figure 20**, from the Kaiser Family Foundation represents the likelihood of a child receiving care depending on their insurance status.

[48] 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
[49] 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
[50] 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
[51] 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/

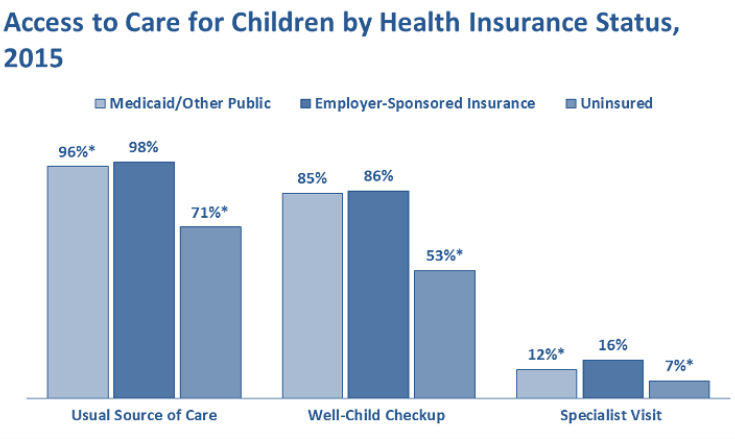

Figure 20. Access to care for children by insurance status, Kaiser Family Foundation (2017)

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 21** shows where these children reside in the county, with the darkest census tracts representing areas where 18.3% to 29.2% of children do not have insurance.[52]

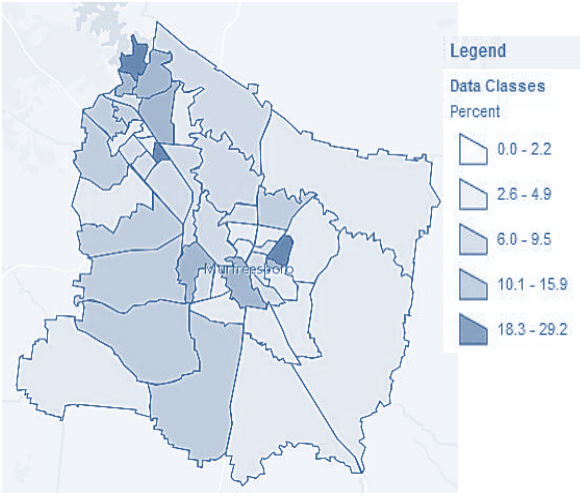

Figure 21. Percentage of uninsured of population under age 19 by census tract, US Census Bureau

Provider Ratios

Access to care depends not only on insurance coverage, but on the availability of providers nearby. 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 primary care provider for every 1,380 residents), and the ratio of the top 10% of counties nationwide (1 provider for every 1,030 residents).[53]

Similarly, 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.[54]

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

[52] 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
[53] University of Wisconsin Population Health Institute. (2018). *Primary care physicians.* Retrieved from http://www.countyhealthrankings.org/app/tennessee/2018/measure/factors/4/map
[54] University of Wisconsin Population Health Institute. (2018). *Dentists.* Retrieved from http://www.countyhealthrankings.org/app/tennessee/2018/measure/factors/88/map

1,269 residents. **Table 1** below shows how Rutherford continues to fall behind both the state (1:742) and the top 10% of counties, which have a ratio of 1 provider for every 330 citizens.[55]

Table 1. Provider Ratios, County Health Reports (2018)

	Primary Care Providers	Dentists	Mental Health Providers
	**1:2300**	**1:1860**	**1:1270**
	**1:1382**	**1:1892**	**1:742**
Top 10% of counties in the US 	**1:1030**	**1:1280**	**1:330**

There are racial disparities across Tennessee in the way people are able to access the care they need. This chart 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. However, those of other races or of mixed race couldn't see a doctor due to cost at much higher rates (26.5% and 35.5% respectively).[56]

Access to a consistent primary care physician is a crucial piece of preventive care. In Tennessee, about 21% of white and 25% of black residents don't have anyone they consider to be their personal health care provider. For individuals who identify as Hispanic, 37% of this population feels that they don't have one person who is their doctor.[57]

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. The same is true for the trends of disease that we see in the United States.

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

[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

[57] 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

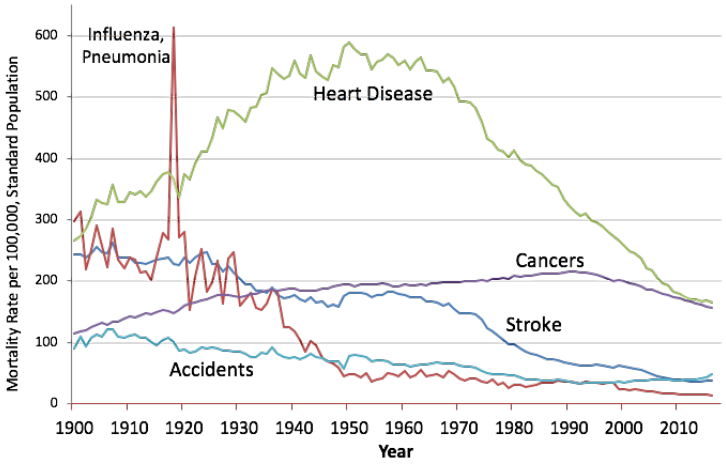

Figure 22. Top five leading causes of death in the US 1900-2016, CDC (2018)

Figure 22 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 U.S. were infectious diseases such as Influenza/Pneumonia, Tuberculosis, and Diarrhea/Enteritis/Ulcerative Colitis. More than a century later, the leading causes of death have shifted to be more chronic diseases such as Heart Disease and various Cancers. These data illustrate how the conditions in which we live, work, and play impact how we are affected by disease. [58]

The leading causes of death in Rutherford County are consistent with the state and national trends. Between the years of 2014-2016, there were about 5,500 deaths in Rutherford County for which we have data (**Figure 23**). Cancer (23%) and Health Disease (22%) make up, by far, the largest portion of deaths with 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 makeup more than three quarters (78%) of deaths in Rutherford County. The other category, though large, represents any causes of death outside of these leading causes.

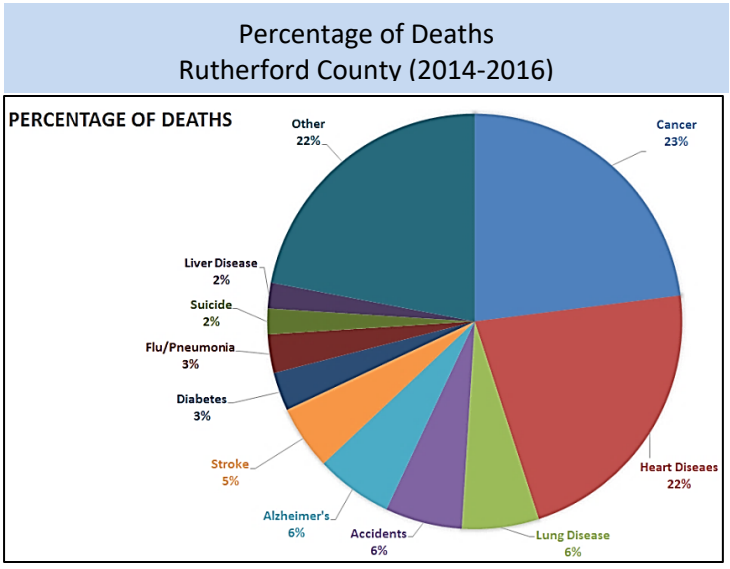

Figure 23. Percentage of deaths in Rutherford County 2014-2016, CDC Wonder (2018)

Birth Outcomes

Infant Mortality

Infant mortality in the United States continues to be an important health issue, even though it has been on the decline over the last century. However, the Rutherford County infant

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

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] During this time, the racial disparity in infant mortality has also continued to widen, with African American babies dying at almost 2.5 times the rate of white babies. This racial disparity also exists in the United States with a rate of 13.9 deaths per 1,000 live births for African Americans and 4.6 deaths per 1,000 live births for whites.[61] While Rutherford County does worse than the United States overall in infant mortality rates, it continues to be better than the state of Tennessee. **Figure 24** depicts the racial disparity that exists for infant mortality rates across Rutherford County, Tennessee, and the United States.[62]

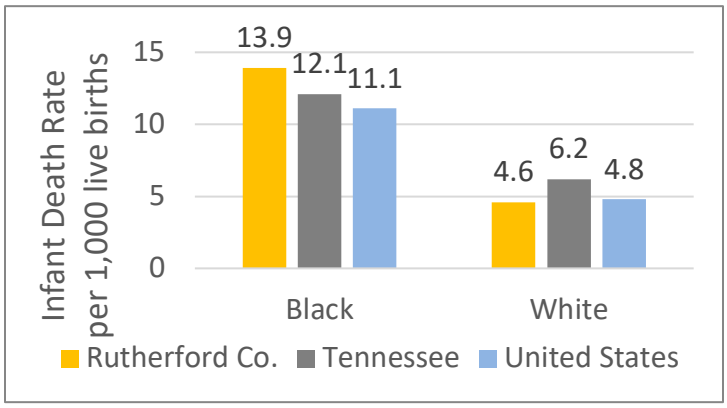

Figure 24. Infant Death Rates per 1,000 live births by race, Kids Count Data Center (2018) & TN Dept of Health (2017)

Teen Pregnancy

Teen pregnancy increases the risks of many different factors of pregnancy. Some of the increased risks associated with teen pregnancy include low birth weight, higher infant mortality rates, and premature births.[63] 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 as a whole has seen a 59% decline.[64] Rutherford County's teen pregnancy rate of 9.7 per 1,000 is lower than Tennessee's rate of 13.7 per 1,000.[65]

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[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
[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] 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
[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] 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

Behavioral Risk Factors

Multiple behavioral factors have a large influence on our 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.[66]

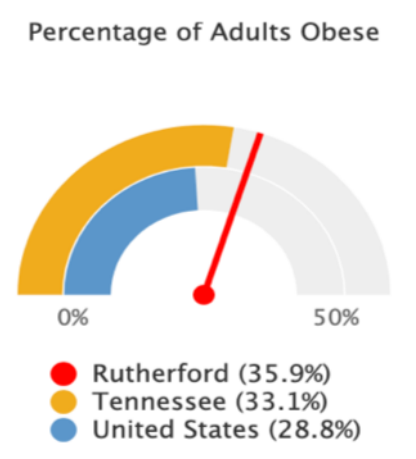

Figure 25. Percentage of adults that are obese, CDC (2017)

Obesity and Physical Activity – Adult

Behaviors that affect the likelihood of adult obesity include physical activity and eating patterns. Other contributing factors to the risk of obesity include the food and 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).[67] The percentage of obese adults in Rutherford is compared to the state and national rates in **Figure 25.**

The CDC 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 and 30.[68]

Figure 26 represents Rutherford obesity rates compared to the state and nation in 2018.[69] Over the last 10+ years, Rutherford's percentage of obese adults has been similar to the state. Both Tennessee and Rutherford County have historically been above the national obesity rate for adults, which in 2015 was 28%.[70]

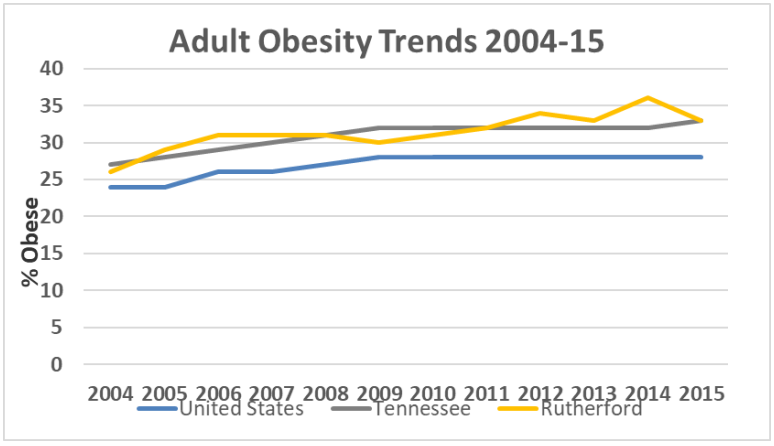

Figure 26. Obesity trends in adults 2004-2015, County Health Rankings (2018)

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[66] 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

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

[68] 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

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

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.[71]

Obesity and Physical Activity – Youth

Lack of physical activity and consumption of "high-calorie, low-nutrient food and beverages" can lead to childhood obesity (Centers for Disease Control and Prevention, 2016). Childhood obesity is related to a number of adverse physical and psychosocial problems in childhood and beyond. Not only is it 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 emotional problems like anxiety, depression, and low self-esteem. It is likely that these conditions will become more severe in adulthood.[72]

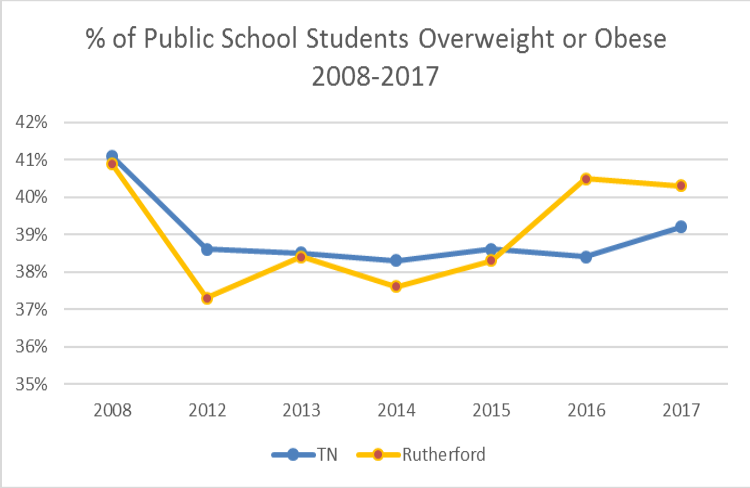

Figure 27. Rutherford County student obesity trends, CDC (2017)

The Centers for Disease Control and Prevention define childhood overweight as having a BMI in the 85th-94th percentile among children of the same age and sex. Childhood obesity is defined as a BMI in the 95th percentile and above.[73] 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%[74], while in Rutherford County, roughly 40% of public school students are overweight or obese, and this rate has been on the rise over the last several years.[75]

Figure 27 outlines the percent of public-school students in Tennessee and Rutherford County that are deemed overweight or obese. 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.[76]

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[71] 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

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

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

[74] 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

[75] 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

[76] 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

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".[77] Recreation and fitness facilities can include exercise centers, skating rinks, gymnasiums, physical fitness centers, tennis clubs, and swimming pools, among others.

Figure 28 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.[78]

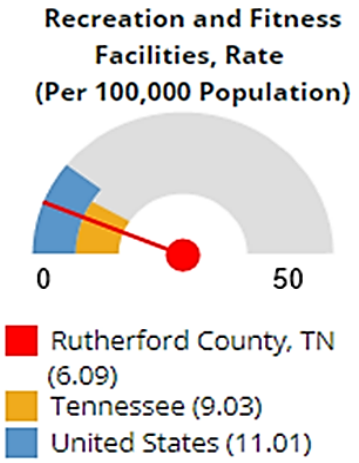


Figure 28. Recreation and fitness facilities per 100,000, Community Commons (2018)

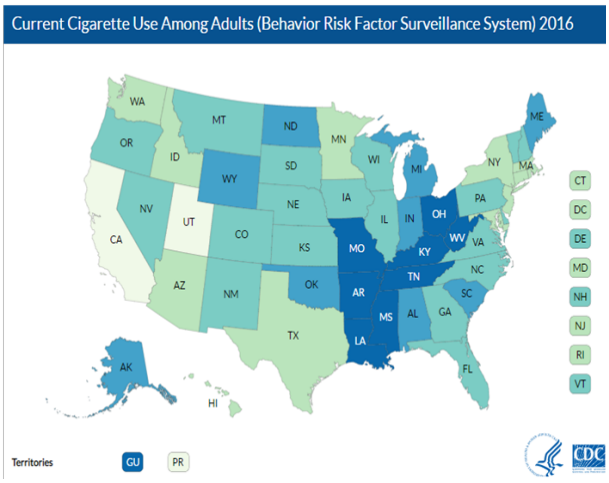
Tobacco Use

Smoking and tobacco use are health behaviors which affect almost every part of the body negatively. According to the Centers for Disease Control and Prevention, "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".[79]

Unfortunately, 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 29).**[80] While nationwide, 15.5% of adults report smoking cigarettes, in Tennessee, this is 22%, and in Rutherford County, 20% of adults report smoking cigarettes.[81] **Figure 30** shows both the

[77] Community Commons. (2018). *Recreation and Fitness Facilities, Rate (Per 100,000 Population).* Retrieved November 12, 2018 from
[78] 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
[79] 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
[80] 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
[81] 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

state of Tennessee and Rutherford County have a long way to go in meeting the Healthy People 2020 nationwide goal of 12% of adults smoking.[82]



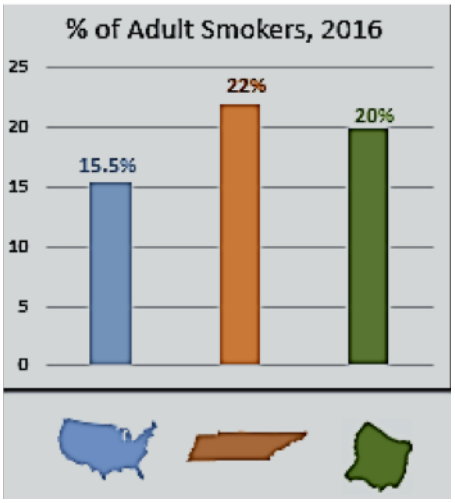


Figure 29. Cigarette use among adults, BRFSS (2016)

Figure 30. Percentage of adult smokers, County Health Rankings (2018)

Substance Use

Alcohol Abuse

According to the Centers for Disease Control and Prevention, "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".[83]

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 hypertension and heart disease, liver disease, certain cancers, and anxiety or depression. Avoiding excessive drinking can help reduce likelihood of developing these conditions.[84]

According to the 2016 Behavioral Risk Factor Surveillance System survey, 18% of adults in Rutherford County reported drinking excessively in the last 30 days **(Table 2).** This is lower

[82] 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
[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] 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

than the national rate of 27%, though higher than the state rate of 14%.[85] In Rutherford County, 25% of driving deaths involved alcohol impairment[86], and in 48% of admissions to substance abuse treatment services in Rutherford County, alcohol was named as the substance of abuse.[87]

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 Abuse

Death due to drug overdose is on the rise in the US, according to the Centers for Disease Control and Prevention. 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.[88]

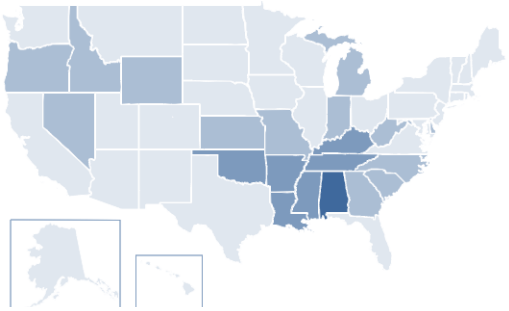


Figure 31. Prescribing rates map, CDC (2017)

[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/49/map

[86] : 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

[87] 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

[88] 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

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 (Alabama and Arkansas had 107.2 and 105.4 respectively).[89] **Figure 31** shows the states with the highest opioid prescription rates as darker colors.

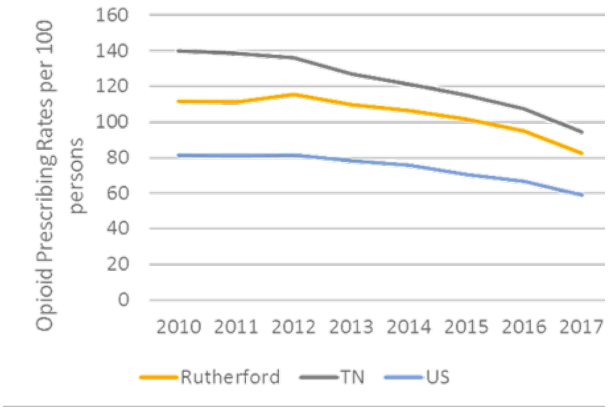


Figure 32. Opioid prescribing rates per 100 persons, CDC (2017)

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.[90] **Figure 32** illustrates these rates per 100 people.

In 2017, there were 12,680 opioid-related deaths in Tennessee. **Figure 33** 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. Heroin is an illegal opioid whose use in on the rise, especially as opioid prescriptions have begun to be been more tightly restricted. Of the 48 opioid deaths in 2017, 18 represented a heroin overdose. Note the steady increase in heroin overdose deaths over the last 5 years.[91]

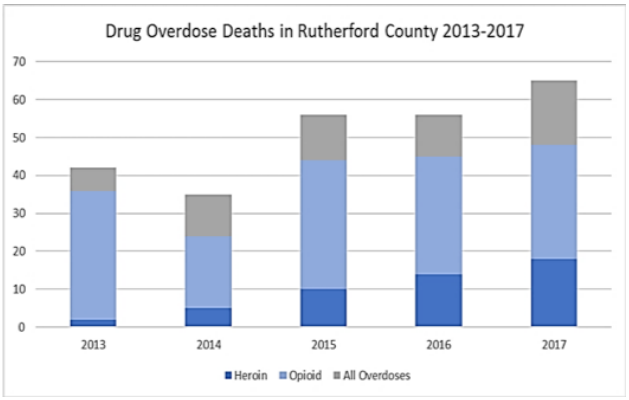


Figure 33. Drug overdose deaths in Rutherford County, TN Dept of Health (2017)

[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
[90] Centers for Disease Control and Prevention. (2017). *U.S. County Prescribing Rate Maps.* Retrieved from https://www.cdc.gov/drugoverdose/maps/rxrate-maps.html
[91] 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

Figure 34 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 bars) declined, opioids (dark blue bars) and methamphetamines (light blue) continued to rise. From 2015 to 2016, opioid admissions rose from 40% to 47%.

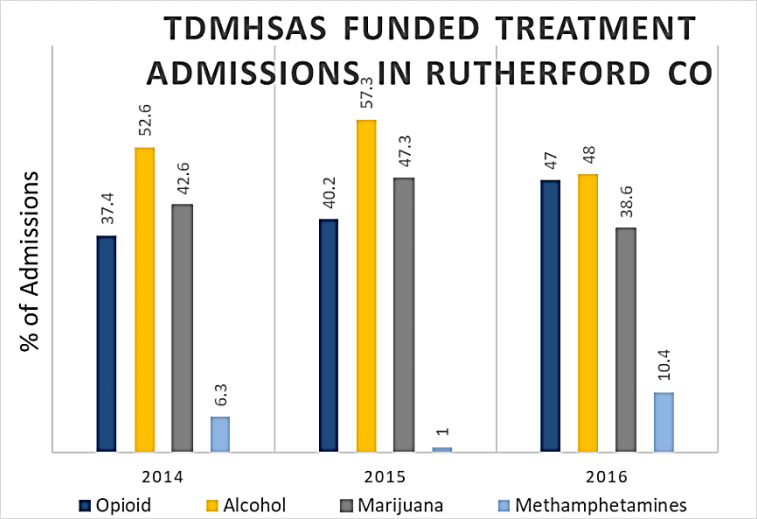


Figure 34. Reasons people sought treatment for substance abuse, TN Dept of Mental Health and Substance Abuse Services (2017)

Outpatient rehabilitation programs accounted for 43.7% of admissions statewide, while 56.3% were to some kind of inpatient program. The biggest groups of these were to freestanding residential detoxification programs (25.9%), Intensive Outpatient Programs (23% statewide), and short term (<30 days) residential services (23.2%).[92]

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. Mental health is 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.[93]

The Behavioral Risk Factor Surveillance System survey in Rutherford County showed residents having self-reported a monthly average of 4.2 poor mental health days. These estimates are in response to the question: "Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" Looking at poor mental health days per month can help to shed light on the quality of life in an area. Though 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 Americans experience 3.7 days.[94]

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[92] 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

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

[94] 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

As mentioned in the *Access to Healthcare* section, provider ratios speak to the number of healthcare providers there are available for members of a given community. In the case of mental healthcare, mental health providers include psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, mental health providers treating substance abuse, and advanced practice nurses specializing in mental health care.[95]

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 citizens for each mental health provider. In Tennessee overall, there are 740 citizens for each provider. But in Rutherford County, there are 1,270 citizens per provider[96].

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.

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 very well. This linguistic barrier limits access to necessary services and the ability to seek healthcare. **Figure 35** shows where those households are concentrated. In the darkest tracts, 5.5 to7.2% of households would be considered linguistically isolated.[97] Another source of social support is the faith community. There are 10 faith congregations per 10,000 people in Rutherford County.[98] Statewide, Tennessee has 18 congregations per 10,000 people, which is the 9th highest in the nation.[99]

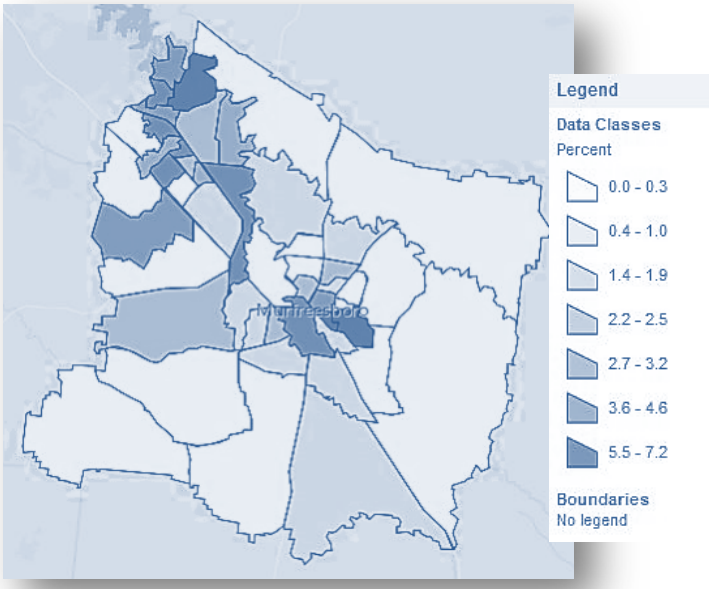

Figure 35. Concentration of linguistically isolated households in Rutherford County, CDC (2016)

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

[96] 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

[97] 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

[98] 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

[99] Stebbins, S. (2018, March 18) The most religious counties of every state in the U.S. *USA Today*. Retrieved from https://www.usatoday.com/story/news/2018/03/13/most-religious-counties-every-state-u-s/421946002/

Primary Data Results

Rutherford County Community Survey Results

In Rutherford County, an electronic community survey was distributed to focus on the health status and needs of Rutherford residents.

The community survey was an electronic 63-item survey of open and closed-ended questions. 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 networks.

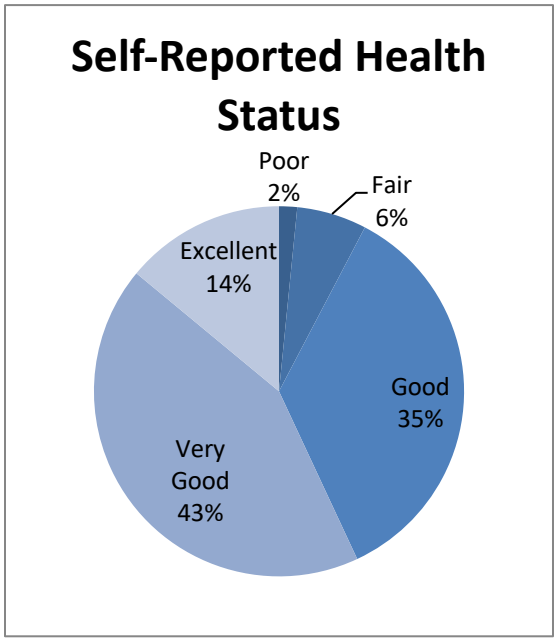

Figure 36. Self-reported health status of Rutherford County survey respondents

The majority of 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 their 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" **(Figure 36).** A majority of individuals have exercised in the previous month (81%) or seen a doctor in the last year (86%). About 7.5% of respondents currently use tobacco or e-cigarettes.

The next question asked how often individuals have been stressed in the last two weeks, to which about half of responses were "none" (17%) or "a little" (39%). Around a 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 of the time. Participants were then asked how many days have been spent feeling 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. Only 15% reported feeling sad 7-30 days total. 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 that they are *always* able to take their children to a doctor when needed.

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%**

Table 3. Availability/need of resources in Rutherford County

Respondents were then asked about adequate resources and education surrounding a variety of areas involving children's safety, to which the most prominent answer for every question was "don't know." When asked if enough is being done to prevent child abuse and neglect, 18% agreed and 25% disagreed while 57% did not know. The next question asked if there are enough resources and education surrounding safe car seat use, to which 42% agreed or strongly agreed and 47% did not know. When asked about safe sleep practice education for infants, 34% agreed there were resources and 58% did not know. The next question asked about safe seatbelt use for children ages 9-14 to which 41% agreed and 45% did not know. Respondents were then asked about education surrounding driver safety for teens older than 15, and 41% agreed there were resources while 42% did not know. The last related question asked if there are resources surrounding home safety related to the prevention of falls for children ages 0-5, to which 23% agreed and 65% did not know. These percentages can be found above in **Table 3.**

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 did not receive necessary medical care in the last 12 months, 13% of people cited appointment schedules as a barrier and 10% said the hours were not convenient. Respondents were then asked about dental care, which included 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.

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 indicated they did not 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 then asked whether they had access to basic needs such as food, clothing, housing, and medication, to which 90% of individuals reported having the ability to meet basic needs for themselves and their families. 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% just said safe.

In addition to these close-ended questions, the survey included four open-ended questions that allowed participants to expand and further elaborate on certain topics. The first question was "What do you think is the most important health issue for children in Rutherford County?" The themes highlighted were lack of nutrition, poor parenting, negative home life, and an overall increase in stress and anxiety. Respondents were also asked to share issues related to health care access, insurance, and health systems. Healthcare affordability and coverage were commonly mentioned, as was the lack of access for healthcare. Other healthcare issues such as accessing healthcare and the lack of healthcare equity were also discussed.

The third open-ended question asked respondents to note important characteristics of a "healthy community for all." Rutherford residents prioritized safety, access to basic resources, clean environment, and a strong sense of community. Finally, respondents were able to wrap up the survey by adding anything that they felt was left out of their previous responses. Better support for youth, mental health services, improved resources, and communication were highlighted.

Rutherford County Community Listening Sessions

In Rutherford County, community listening sessions were conducted to assess the needs of the community with input from community members. These sessions were initiated by Saint Thomas Health, Vanderbilt University Medical Center (VUMC), and the Rutherford County Health Department. The prevalent themes were utilized to inform Rutherford County Health Department's Community Health Improvement Plan (CHIP) in addition to VUMC and Saint Thomas Health's CHNA and Implementation Strategy.

"Within the city, so many properties are being bought up and being replaced with houses that no one can afford"
– Listening Session Attendee

Four listening sessions were held in Rutherford County, planned by the collaborating organizations involved in the assessment. Two sessions were held at First Baptist Church, one was held at Journey Home, and the last was conducted at Rutherford County Health Department. Recruitment was done by Murfreesboro City Schools Community Outreach Department. 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.

Table 4. Top community issues in Rutherford County listening sessions

Rutherford County	
Housing & Homelessness	**Vulnerable Populations**
Navigating & Accessing Health Care	**Built Environment & Transportation**
Opportunities for Youth	**Hidden Racism**
Growth	**Childcare Costs**

With a total of 60 participants, the participant pool was primarily female, African American, and spoke English as primary language. 22% of individuals were Hispanic or Latino, and a third were over the age of 65. About a third of participants were uninsured, while another third reported being insured by Medicare or Medicaid programs.

When asked about the community's strongest assets, responses included public services, non-profit organizations, healthy options particularly related to the built environment (e.g., greenways), 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, which are discussed in **Table 4.** The primary responses were housing and homelessness, vulnerable populations, healthcare navigation, built environment (e.g., sidewalks), transportation, racism, cost of childcare, growth, and the lack of positive youth opportunities. Vulnerable populations were noted to be 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, varying of literacy levels, language barriers, lack of transportation, affordability of housing, and inconsistent and unsustainable solutions to these issues. Responses also included that healthy choices are often not always easily accessible or affordable for all people.

Community members were then asked, "If you had a magic wand, what would be your top initiatives/priorities?" The main responses were to eliminate homelessness, improve housing, address racism, foster self-sufficiency, focus on reproductive health, have more support for vulnerable populations, strengthen families, invest in the youth, improve walkability and traffic, and create more resources for older adults. In addition to addressing racism, respondents also noted a need to address stigma and discrimination. As a summary to much of the listening session discussion, participants reiterated a desire for their community/neighbors to "love each other."

The overall themes that emerged 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.

Rutherford County Key Informant Interview Themes

Community representatives and leaders representing the broad interests of the community were identified by the collaborating organizations to participate in key informant interviews. Diverse interviewees 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 represented areas of healthcare, law enforcement, education, non-profit agencies, faith communities, government representatives, safety net service providers, economic and workforce developers, mental/behavioral health providers, housing and homeless workers, 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. Questions focused on community assets, issues/concerns, obstacles to addressing concerns, and priorities. Twenty-six interviews were conducted, consisting of five 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 summary.

When asked about the community's strongest assets, interviewees highlighted Rutherford's strong sense of connectedness and social support, the sustained growth that the county has recently endured, and a solid education system. When discussing the top issues present in the community, themes pointed to common repercussions of growth, including decreased affordability of housing, lack of proper infrastructure, increased crime rates, decreased access to resources, and the presence of various health inequities. Next, interviewees were prompted with questions specific to issues in health or health care. Their answers touched on the unaffordability of care, while also emphasizing issues related to accessing specialty services, medication, and insurance coverage. They also expressed concern regarding mental health and substance abuse treatment availability, as well as the need to prioritize positive health behaviors. In order to address these issues, interviewees stated that the community would need to overcome the following obstacles: lack of resources, lack of collaboration, and the challenge of shifting Rutherford's overall culture of health.

Finally, interviewees were given the opportunity to explore the kinds of initiatives that they would choose to implement into their community if given a magic wand. The topics discussed included overall affordable living, an enhanced built environment with more green spaces, and true health equity for all people.

Identifying and Prioritizing Needs

Community Summit

Results of the environmental scan, community survey, listening sessions, key informant interviews, and secondary data review were presented at the Rutherford County Community Health Summit. Summit invitees included many participants from interviews and community listening sessions, as well as community members with expertise in public health and who work with medically underserved, minority, or low-income populations. Leadership from VUMC, Saint Thomas Health, Rutherford County Health Department, and other community stakeholders were also present.

The purpose of the Summit was to solicit input and take into account the broad interests of the community in identifying and prioritizing the community's health needs. The summit was facilitated by VUMC, Saint Thomas Health, and Rutherford County Health Department.

After presenting primary and secondary data gathered during the assessment on a number of issues faced in the community, summit participants had the chance to provide their input into prioritizing the most important health needs in the community. Attendees broke up into groups and discussed the top three health issues that they had individually prioritized. Summit hosts entered the health issues that each group agreed on into a REDCap survey, allowing participants to individually select their top three priorities. and participants voted on their top three priorities.

The voting results are shown here in **Figure 37**. Summit hosts also consulted the Rutherford County Wellness Council for feedback regarding final interpretation of these results.

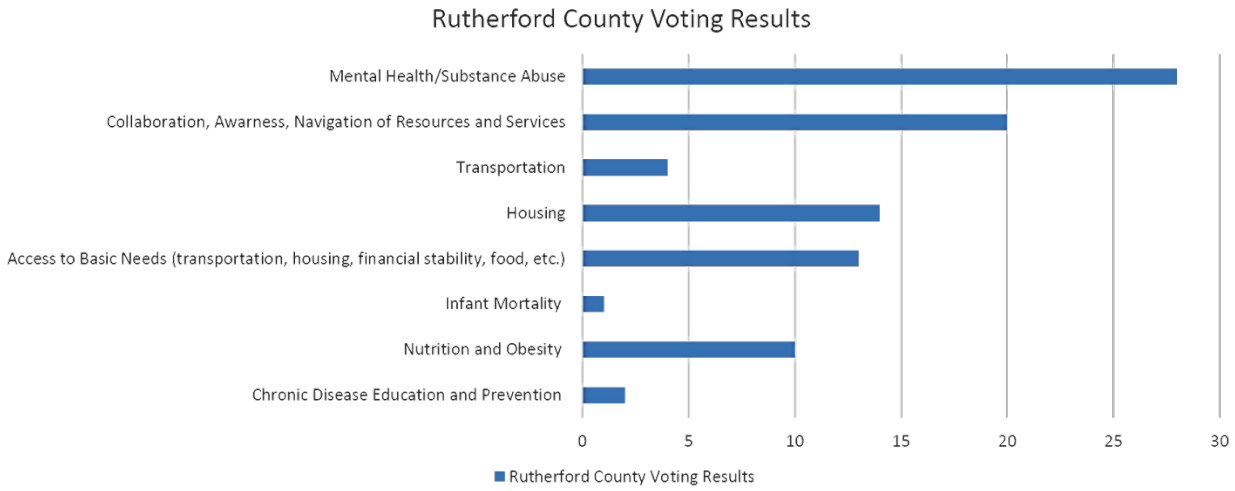

Figure 37. Rutherford County health summit voting results

Summary of Prioritized Needs: Rutherford County

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 and Services**
- **Nutrition and Obesity**

Mental Health/Substance Abuse - Summary

Primary and secondary data highlighted the drastic need to address substance abuse and mental health services in Rutherford County. Opioid use and related deaths, lack of mental health care services, and high rates of tobacco use were some of the main topics emphasized when discussing mental health and substance abuse.

Nationally, Rutherford County falls short when it comes to mental health provider access, poor mental health days, and opioid use. Community survey respondents and listening session participants also alluded to the dire need to address these issues. In fact, 70% of survey respondents stated they agree or strongly agree with the statement "Drug use/abuse is a problem in my county." When asked, "What would you say are the top three issues specific to health or health care that you are most concerned about in your community?", mental health and addiction were both common themes.

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 treatment, 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 in order for success to occur in the next three years.

Access to Basic Needs - Summary

Throughout the needs assessment process, Rutherford County residents also described gaps in access to basic needs. The basic needs that were deemed as non-accessible for certain populations were housing, transportation, and general healthcare services.

Primary data collected through listening sessions and community surveys highlighted the need for affordable housing for vulnerable populations. When asked "What are the top three community issues?" one of the most popular responses was housing and homelessness, with transportation and the built environment to follow. Much of the focus regarding this priority stressed vulnerable populations being the target group for improvement strategies. Secondary data indicators revealed the problematic housing crisis in Rutherford County, pointing to the overall lack of affordable housing. Over the last 3 years, the median home value in Rutherford County has increased by nearly $60,000. The value in Tennessee increased by around $25,000 and approximately $35,000 nationwide. While housing costs have risen, the trend with wages remains consistent. The *American Community Survey* estimated that 45% of renters in the county are cost burdened, with over 30% of their income going towards housing. Furthermore, 316 homeless individuals have been identified through a Point-in-Time count and 1,480 students in the county met the definition of homeless. Rover, the public transportation service in the county, is centralized around Murfreesboro, the hub city in the county, and does not extend far beyond the city lines. It also has hours that are not conducive for many in the workforce that also need transportation to and from work. The lack of food access also poses a significant threat, with 29% of low-income families in Rutherford County having low access to healthy affordable food, but data show that fast food is highly accessible throughout the county.

Discussions at the summit revealed that there should be greater focus on vulnerable populations and that organizations need to better collaborate on solutions to address these issues. Some of the populations most burdened by lack of access to basic needs are unemployed populations, refugees, and minority populations. Summit participants determined the goals for this priority to be: (1) Creating a community resource bank, (2) Increasing access to affordable housing, and (3) Increasing public transportation throughout the entire county with more inclusive hours.

Concentration on Housing

As it has been highlighted, Rutherford County is in need of more affordable housing. This issue was highlighted in both the primary and secondary data analysis.

When asked, "*If you had a magic wand, what top initiatives would you implement in your community in the next three years?"* the most common response was affordable housing. Participants stressed the burden of housing for many people in the community, especially vulnerable populations. As highlighted before, the burden of housing costs is very impactful for both renters and homeowners.

Summit participants focused on a need for greater awareness of the housing issue issues and making it a priority to increase affordable housing units in the county. Populations affected by a lack of affordable housing include those with mental health issues, disabled, seniors, and low to middle class individuals/families. Participant discussions at the summit stressed the need to increase affordable housing, but also supported the idea of affordable housing with supportive services. A large part of the conversation focused on the need for sustainable solutions. In order

for sustainable solutions to be created, collaboration from many existing organizations is essential.

Enhance Resources and Services- Summary

Prioritizing collaboration between many different service providers was seen as a necessity for many community members throughout the needs prioritization process. "Enhance resources and services" includes both the need to improve community awareness and engagement, but also the need to improve community collaborations and simplify the navigation of community resources. This priority emphasizes a need for interdisciplinary teamwork between organizations and the community.

"I answered many of the questions in the survey with 'I don't know'. I do believe there is information out there for people who need help. I do not believe enough is being done to help people who need help. Many are embarrassed to ask for help. We often think it's the responsibility of the person who needs help to stand up and say something. We have to be more aware of who needs help so that the right information can get into the hands of those who need it (i.e., widows with children, victims of sexual abuse/domestic assault.)"
-Survey Participant

Primary data collection was an area where this priority was highlighted. When asked, "*What do you think are the obstacles or challenges to addressing these issues?"* the most common response was the need for increased collaboration and coordination. Establishing more collaboration between organizations was noted as key to addressing the other priorities highlighted through this process.

Needs prioritization efforts at the summit revealed what success looks like in three years for this need. This discussion highlighted that enhancing resources and services within the community is essential to achieving success in the other priority areas. Participants noted that this priority incites the need to "keep a pulse on all issues that the community faces" and respond accordingly. Participants also mentioned having regular attendance at interdisciplinary, collaborative meetings as an essential component for addressing the largest needs throughout Rutherford County.

Nutrition and Obesity- Summary

Obesity and a lack of nutrition are an ongoing struggle for residents of Rutherford County. Primary and secondary data support the problematic nature of this issue.

Obesity rates are high in Rutherford County, with 33% of Rutherford County residents being reported as obese by the County Health Rankings. This is higher than both the nation and the state of Tennessee. Tennessee ranks second in the nation for number of students in high school who are overweight or obese. In Rutherford County, 40.3% of high school students are either overweight or obese. Furthermore, access to recreation and fitness activities in Rutherford is lacking. When asked, 56% of all high school students across Tennessee were not physically active for more than 60 minutes, 5 days a week. When the community was asked, "*What do you think is the most important health issues for Children in Rutherford County,"* one of the top answers was nutrition. When analyzing the county's healthy food access, over 29% of low-income population are considered as having low food access. There is a significant number of

fast food restaurants per capita in the county, at 91.1/100,000. Comparatively, Tennessee has 77.69/100,000 and the United States has 77.06/100,000.

During the prioritization process, community members and health officials mentioned that prevention, education and access were the three most important components related to this health need. Individuals in the community need to receive quality education on healthy eating and drinking habits in order to foster behavior change. Furthermore, prevention initiatives were also mentioned – specifically for children and youth – such as encouraging more activity during school hours by adding walkable parks and trails. People lack access to healthy foods, making food access a huge priority in Rutherford County. Schools have the ability to greatly decrease the impact of this by implementing various policies. For example, schools could implement a policy waving the total cost of breakfast and lunch for all low-income students. Creating sustained behavior change requires effort from a variety of stakeholders. This includes policymakers being dedicated to improving access to necessary resources.

Appendices

Appendix A: Acknowledgements

Appendix B: Interviewee Demographics

Appendix C: Community Listening Session Demographics

Appendix D: Healthcare & Community Resources

Appendix E: Secondary Data Table

Appendix A: Acknowledgements

VUMC's 2019 CHNA and IS reports were completed primarily within the Institute for Medicine and Public Health and were made possible with invaluable contributions from those both within VUMC and from other areas of the community.

We would like to acknowledge the expertise provided by Vanderbilt's Community Health Improvement Working Group, and VUMC's CHNA/IS Advisory Committee. VUMC's CHNA / IS Advisory Committee (listed below), is a group of senior leaders responsible for high-level guidance on the CHNA/IS. A special thanks to the VUMC leadership who attended community health summits: Robert Dittus (*Executive Vice President for Public Health and Health Care*), Marilyn Dubree (*Executive Chief Nursing Officer*), Pam Jones (*Sr.Associate Dean, Clinical and Community Partnerships*), Jameson Norton (*Chief Executive Officer of Vanderbilt Behavioral Health*), Jeffrey Palmucci (*Chief Executive Officer of Vanderbilt Stallworth Rehabilitation Hospital*) and David Posch (*Executive Vice President for Population Health*). We are deeply appreciative of the Community Health Improvement Working Group (listed below) for their time, perspective, energy, and attention to detail. In addition, we would like to thank Abby Palmer from VUMC Finance for her guidance. We would also like to thank Vanderbilt's Office of Community, Neighborhood, and Government Relations for the work they have done on the "Vanderbilt in Tennessee: County by County" report which provided valuable information for this summary.

VUMC's collaborators at Saint Thomas Health were invaluable, and helped to add perspective, experience, and value to both the process and the end product. In particular, we would like to acknowledge the contributions made by Bridget Del Boccio, Liz Malmstrom, and Lindsay Voigt. We hope that the collaboration between the two hospital systems will serve as a springboard for future collaboration and as a model for other hospitals seeking to have a more collaborative process for their CHNAs, Implementation Strategies, and - most importantly – for driving changes in collaborative efforts to improve community health.

Most importantly, this summary would not have been impossible without the participation of individuals in the community who took time out of their busy schedules to participate in face-to-face interviews and/or community listening sessions as well as those who responded to the community surveys. Their feedback and expertise helped us understand the challenging and complex issues facing low-income, minority, and under-served populations in the community.

We would also like to thank participants in each of the three community summits, each of whom took several hours of their valuable time to discuss the assessment, to offer their own perspectives on community health and well-being, and to identify the most important health needs within the community.

In **Rutherford County**, we would like to recognize the leadership, support, and hospitality that we received from several organizations:

- ***Rutherford County Health Department:*** Director Dana Garret and her staff, particularly LaShan Mathews Dixon and Aubrenie Jones. LaShan and Aubrenie were instrumental in identifying interview participants and facilitating community listening sessions in Rutherford County.
- ***Listening Session Host Sites:*** First Baptist Church, Journey Home, Murfreesboro City Schools, and the Rutherford County Health Department.

- ***Circle of Engagement (COE):*** Middle Tennessee State University, Matthew Walker CHC, Primary Care & Hope Clinic, Veteran's Affairs, Coordinated School Health.
- ***Summit Host Site:*** Patterson Park Community Center.

The Implementation Strategy Development Process (ISDP) for LGBTQ Health could not have been completed without the hard work of the VUMC Program for LGBTQ Health staff and their summer interns. Program director Del Ray Zimmerman teamed up with Keanan Gottlieb and Shawn Reilley, as well as a talented group of interns to bring this project together. The interns included: Derek Chen from Stanford University, Angie Deng from John Hopkins Nursing School, Reid Gamble from Kansas City University of Medicine, Tyler Hanlyn from University of North Texas, and Andrew Pregnall from Virginia Tech. We would also like to thank the team at the Brain Injury Association of Tennessee, Angela Pearson and Woodrow Lucas, who helped convene a listening session with Stallworth patients.

We would also like to acknowledge the talented group of interns from across multiple academic institutions who supported the CHNA and IS process. Thanks go to the following: Morgan Batey, Rohini Chakravarthy, Carleigh Frazier, Katie Horneffer, Madeline Gordon, Tamee Livermont from Vanderbilt University, Danielle Epps and Mabya Nyannor from Meharry Medical College, Garvita Thareja from Middle Tennessee State University and Chandler Floyd from Harvard University.

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Appendix B: Interviewee Demographics

Conducted by: Rutherford County Health Department, Vanderbilt University Medical Center, and Other Community Organizations

Organization Sector	***Organization***
Faith Based	First Presbyterian
Education	MTSU – Center for Health & Human Services
Healthcare	Saint Thomas – Rutherford ED
Education	Murfreesboro City Schools
Government	Rutherford County – District 13
Large Corporate Employer	Nissan – Diversity and Inclusion Committee
Housing	ATLAS Program
Homelessness	Murfreesboro Cold Patrol
Substance Abuse	Rutherford Opioid Taskforce
Education	MTSU
Faith Based	First Baptist Church
EMS	Rutherford County EMS
Healthcare	St. Louise Clinic
Government	Rutherford County- District 21
Senior Community	Smyrna Senior Center
Substance Abuse	Narcotics Anonymous
Government	Rutherford County Government
Veteran Health	Veteran's Affairs
Homelessness	Journey Home
Healthcare	Primary Care and Hope Clinic of Rutherford County
Dental	Interfaith Dental Clinic
Healthcare	Matthew Walker
Public Health	Rutherford County Health Department
Law Enforcement	Rutherford County Police Department

Appendix C: Community Listening Sessions

Listening Session Site	*# of Participants*	*County*	*Population Served*
First Baptist #1	21	Rutherford	African-American Seniors
First Baptist #2	16	Rutherford	African-Americans
Rutherford County Health Department	12	Rutherford	Latino
Journey Home	10	Rutherford	People Experiencing Homelessness

Appendix D: Healthcare & Community Resources

In addition to the resources listed for each county below, please refer to the resource guides below for Davidson, Rutherford, and Williamson Counties.

- *211: United Way of Metropolitan Nashville - A database of more than 10,000 social, educational and health services*
- *Meharry-Vanderbilt Alliance's Faith & Health Resource Guide*
- *My Healthcare Home*
- *TN Disability Pathfinder*
- *Where to Turn in Nashville*

Rutherford County	**Prioritized Need: Mental Health and Substance Abuse** *Healthcare Resources:* Insight Counseling Center LifeCare Family Services TVHS PTSD Clinic Volunteer Behavioral Health *Community Resources:* 180 Degrees Ministries A Friend of Bill's Alcoholics Anonymous Al-Anon Branches Counseling Domestic Violence Program Exchange Club Fellowship UMC First Baptist Church of Murfreesboro Guidance Center Lost & Found Narcotics Anonymous Nar-Anon North Boulevard Church of Christ Rutherford Department of Children's Services Spring 2 Life TN Tobacco Quit Line Warrior 180 Foundation

	Prioritized Health Need: Access to Resources and Services *Healthcare Resources:* American Family Care Smyrna Baptist Women's Treatment Center-Murfreesboro, Boulevard Terrace Rehabilitation and Nursing Center CareNow Urgent Care - Murfreesboro Caris Healthcare, LP Child & Youth Clinic Centennial Pediatrics- Smyrna Community Care of Rutherford County Crisis Pregnancy Support Family Health Associates – Murfreesboro Hope Clinic II Interfaith Dental Clinic Matthew Walker, Smyrna Health Center Primary Care & Hope Clinic Rutherford County Health Department Rutherford Interfaith Dental Clinic *Community Resources:* CASA of Rutherford County Community Helpers of Rutherford County Child Support Enforcement Office Legal Aid Society Social Security Administration Kymari House Tucker's House United Way of Rutherford
	Prioritized Health Need: Basic Needs *Community Resources:* A Second Look at Consignment All Things Possible Bargain Center American Red Cross Carolyn's Consignment Store Cold Patrol Community Helpers Crisis Intervention Center Goodwill (Murfreesboro and Smyrna) Grace Lutheran Church – *Katie's Garden* Greenhouse Ministries Hope Station Journey Home Day Shelter Last Call 4 Grace LaVergne Food Bank LifePoint Church MCHRA Transportation Nourish Food Bank

	Once Upon a Child Outreach Thrift Store Murfreesboro Housing Authority Murfreesboro Muslim Youth Rocking Horse Rutherford County Shelter – Salvation Army Rutherford County Food Bank Room in the Inn Salvation Army St. Luke's Catholic Church Food Pantry and Last Resource Stepping Stones Safe Haven, Inc. Victory Christian Center West Main Mission
	Prioritized Health Need: Prevention and Education *Community Resources:* Big Brothers Big Sisters of Middle Tennessee Head Start (Murfreesboro and Smyrna) Murfreesboro City Schools Read to Success Rutherford County School System

Appendix E: Secondary Data Tables

Demographics

Indicator	Rutherford	TN	USA
Demographics.			
Population	**Rutherford**	**TN**	**USA**
Land area in square miles, 2017	619.36	41,234.90	3,531,905.43
Population 2017 estimate	317,157	6,715,984	325,719,178
Percent of States/Countries Population in County/State	4.72%	2.06%	
Population density, persons per square mile, 2017	424.00	153.90	87.40
Population, percent change - April 1, 2010 to July 1, 2017	20.80%	5.80%	5.5
Population growth special population— elderly 2017-2030 (percent change)	125%	37%	31%
Projected population 2030	414,119	7,390,535	373,504,000
Population growth 2017-2030 (percent change)	31%	10%	20%
Population growth 2010-2040 (percent change)	103%	34%	24.10%
Urban-Rural Population mix - Percent Urban	82.98%	66.39%	80.89%
Urban-Rural mix - Percent Rural	17.02%	33.61%	19.11%
Gender	**Rutherford**	**TN**	**USA**
Female persons, percent, 2013	50.80%	51.20%	50.8
Special Populations	**Rutherford**	**TN**	**USA**
% Veterans (of total population age 18 and older)	8.7%	9.0%	8.0%
Population with Any Disability, percent	10.1%	15.4%	12.5%
Foreign born persons, percent, 2012-2016	7.0%	4.8%	13.2%
Age	**Rutherford**	**TN**	**USA**
Median age, years	32.9	38.5	37.7
Persons under 5 years, percent, 2017	6.7%	6.1%	6.2%
Persons under 18 years, percent, 2017	24.9%	22.6%	22.8%
Persons 65 years and over, percent, 2017	10.1%	15.7%	15.2%
Race/Ethnicity	**Rutherford**	**TN**	**USA**
White alone, percent, 2017 (a)	78.6%	78.7%	76.9%
Black or African American alone, percent, 2017 (a)	14.9%	17.1%	13.3%
American Indian and Alaska Native alone, percent, 2017 (a)	0.5%	0.4%	1.3%
Asian alone, percent, 2017 (a)	3.4%	1.8%	5.7%

Native Hawaiian and Other Pacific Islander alone, %,2017a	0.1%	0.1%	0.2%
Two or More Races, percent, 2017	2.6%	1.9%	2.6%
Hispanic or Latino, percent, 2017 (b)	7.6%	5.2%	17.8%
White alone, not Hispanic or Latino, percent, 2017	72.1%	74.2%	61.3%
Language other than English spoken at home, pct. age 5+, 2012-2016	10.0%	6.8%	21.1%
Educational Attainment	**Rutherford**	**TN**	**USA**
Percent Population Age 25+ with No High School Diploma, 2012-2016	9.23%	14.02%	13.02%
- White	8.48%	13.11%	11.06%
- Black or African American	10.41%	16.13%	15.66%
- Native American/Alaska Native	33.83%	22.20%	20.69%
- Asian	16.59%	14.89%	13.73%
- Native Hawaiian / Pacific Islander	0.00%	16.07%	13.61%
- Some Other Race	29.17%	47.92%	39.83%
- Multiple Race	8.23%	15.86%	13.31%
Bachelor's degree or higher, percent, 2012-2016	30.2%	25.4%	30%

Socio-Economic Status

Indicator	Rutherford	TN	USA
Socio-Economic Status			
Income/Poverty	**Rutherford**	**TN**	**USA**
Median household income, 2012-2016	$58,032	$46,574	$55,322
Per capita money income in past 12 months (2016 dollars), 2012-2016	$26,373	$26,019	$29,829
Adults in poverty, count, 2012-2016	35,764	1,100,169	46,932,225
Persons below poverty level, percent, 2012-2016	10.3%	15.8%	12.7%
- White	10.6%	14.5%	12.4%
- Black	20.6%	28.1%	27.6%
- Native American	23.7%	18.5%	27.6%
- Asian	15.3%	12.5%	12.3%
-Native Hawaiian / Pacific Islander	36.0%	29.0%	20.1%
- Some other race"	21.4%	34.6%	25.4%
- "Multiple races"	22.0%	26.0%	19.3%
- Hispanic / Latino Ethnicity	23.9%	32.0%	23.4%
Children in Poverty, percent	13%	23%	20%
-- Non-Hispanic White	10.05%	17.82%	12.72%

- Black	28.58%	42.36%	37.42%
- Native American	46.32%	20.76%	35.20%
- Asian	24.77%	12.49%	12.54%
- Native Hawaiian/Pacific Islander	100.00%	46.67%	26.76%
- Some other race	29.25%	47.78%	34.63%
- Multiple Race	20.35%	29.71%	21.62%
Poverty - Children Below 100% FPL	15.74%	25.13%	21.17%
Poverty - Children Below 200% FPL	39.42%	49.36%	43.29%
Children eligible for Free/Reduced Price Lunch, (%)	43.62%	58.82%	52.61%
Percent of public school students who are economically disadvantaged, 2016-2017	21.4%	34%	
Households Receiving SNAP Benefits	11.4%	16.5%	13.05%
Households with Cash Public Assistance Income	2.6%	2.9%	2.67%
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
Income inequality, County 80th Percentile Income	$103,602		
Income inequality, County 20th Percentile Income	$27,595		
Federal Poverty Threshold, Family of 1 (48 contiguous states)			$12,140.00
Federal Poverty Threshold, Family of 4 (48 contiguous states)			$25,100.00
Unemployment	**Rutherford**	**TN**	**USA**
Unemployment rate, March 2018	2.60%	3.50%	4.20%
Number of Jobs, 2015	155,284		
Projected Jobs, 2025	187,195	3433000, by 2024	
Projected Jobs, 2035	226,453		
Population, 2015	288,734		
Projected Population, 2025	349,083		
Projected Population, 2035	409,986		
Average annual weekly wage (2017)	$921	$939	$1,065
Annual establishments (2017)	5,556.00	157,095.00	9,851,747.00
U-1 Persons employed 15 weeks or longer, as a % of the civilian labor force (2017-2018)		1.00%	1.40%
U-2 Job losers and persons who completed temporary jobs as a % of the civilian labor force (2017-2018)		1.50%	1.90%
U-3 Total unemployed as a % of the civilian labor force (definition used for official unemployment rate) (2017-2018)		3.50%	4.00%

U-6 Total unemployed, plus all who want and are available for work but have given up looking, plus involuntary part-time workers (those who want to work full-time but are working <35 hours/week because hours were cut or unable to find full-time job) as a % of civilian labor force (2017-2018)		7.60%	7.80%

Social Determinants of Health

Indicator	Rutherford	TN	USA
Social Determinants of Health			
Education	**Rutherford**	**TN**	**USA**
Students in public schools, White, percent	62.1%	63.4%	
Student in public schools, Black or African American, percent	19.5%	24.1%	
Students in public schools, Hispanic or Latino, percent	13.2%	9.7%	
Students in public schools, Asian, percent	4.7%	2.2%	
Students in public schools, Native American/Alaskan, percent	0.3%	0.3%	
High School Graduation Rate (NCES), 2008-2009	89.3%	77.4%	75.5%
High School Graduation Rate, 2013-2014	92.5%	87.2%	
High School Graduation Rate, 2014-2015	93.9%	87.8%	
High School Graduation Rate, 2015-2016	95.2%	88.5%	86.1%
High School Graduation Rate, 2016-2017	95.3%	89.1%	
High school graduate or higher, percent, 2012-2016	90.8%	86.0%	87.0%
Event High School Dropouts, 2012	2.3%	4.3%	3.4%
Event High School Dropouts, 2013	1.7%	3.4%	4.7%
Event High School Dropouts, 2014	1.5%	3.4%	5.2%
Event High School Dropouts, 2015	1.0%	2.5%	
Event High School Dropouts, 2016	1.1%	2.7%	
College Going Rate among Public High School graduates, Fall 2015	63.9%	62.5%	
4th grader not proficient in reading, 2014-2015	49.1%	54%	46%

% of students grades three through 8 that are proficient or above in reading	Rutherford	TN	USA
3-8th grade proficient or advance - language, 2015-2016	40.8%	33.8%	
3-8th grade proficient or advance - language, 2015-2016 Asian	44.0%	57.6%	
3-8th grade proficient or advance - language, 2015-2016 Black	28.0%	18.6%	
3-8th grade proficient or advance - language, 2015-2016 Hawaiian or Pacific Islander	no data	44.2%	
3-8th grade proficient or advance - language, 2015-2016 Hispanic	25.8%	22.4%	
3-8th grade proficient or advance - language, 2015-2016 White	47.8%	40.5%	
3-8th grade proficient or advance - math, 2015-2016	46.6%	38.0%	
3-8th grade proficient or advance - math, 2015-2016 Asian	57.2%	68.0%	
3-8th grade proficient or advance - math, 2015-2016 Black	30.9%	19.9%	
3-8th grade proficient or advance - math, 2015-2016 Hawaiian or Pacific Islander	54.3%	47.2%	
3-8th grade proficient or advance - math, 2015-2016 Hispanic	33.5%	27.7%	
3-8th grade proficient or advance - math, 2015-2016 White	53.7%	45.4%	
Student-to-Teacher Ratio, 2015-2016	14.84	14.89	
Adverse Childhood Experiences	**Rutherford**	**TN**	**USA**
Percent Adults with 0 Adverse Childhood Experiences, 2014		48%	
Percent Adults with 1-2 Adverse Childhood Experiences, 2014		38%	
Percent Adults with 3 or more Adverse Childhood Experiences, 2014		13%	
Two most common ACEs in Tennessee		Economic Hardship, Divorce	
Housing	**Rutherford**	**TN**	**USA**
Residential segregation - black/white 2012-2016 (where 0 is complete integration and 100 is complete segregation)	29.12	66.97	
Residential segregation - nonwhite/white 2012-2016 (where 0 is complete integration and 100 is complete segregation)	24.89	58.69	
Living in same house 1 year & over, percent, 2012-2016	82.0%	84.9%	85.2%
Housing units, 2016	115,467	2,919,671	135,697,926
Households, 2012-2016	103,562	2,522,204	117,716,237

Owner-occupied housing unit rate, 2012-2016	65.4%	66.3%	63.6%
Owner occupied Black householder households, % of Black occupied households (2012-2016)	42.2%		
Owner occupied Asian householder households, % of Asian occupied households (2012-2016)	69.5%		
Owner occupied Hispanic householder households, % of Hispanic occupied households (2012-2016)	46.5%		
Owner occupied white householder households, % of white occupied households (2012-2016)	69.9%		
Persons per household, 2012-2016	2.76	2.54	2.64
Median value of owner-occupied housing units, 2012-2016	$164,800	$146,000	$184,700
Median household income, 2012-2016	$58,032	$46,574	$55,322
House value: Income	2.84	3.13	3.34
Persons below poverty level, percent, 2012-2016	10.3%	15.8%	12.7%
Housing Cost Burden (>30% monthly income), 2012-2016	28.0%	28.7%	32.9%
% of Rental Households that are Cost Burdened, 2012-2016	44.2%	44.2%	47.3%
Severe Housing Problems, 2010-2014	15%	16%	19%
Overcrowded housing, 2012-2016	3.11%	2.1%	3.3%
Homelessness (2017)	316	8,309	554,000
Homelessness (2015)	289	9123	564,708
Students experiencing homelessness		15404	1,263,323
Residential Segregation - black / white	29	67	
Transportation	**Rutherford**	**TN**	**USA**
Mean travel time to work (minutes), workers age 16+, 2012-2016	28.1	24.7	26.1
Households with No Vehicles, 2012-2016	3.4%	6.25%	8.97%
Driving Alone to work, 2012-2016	85%	84%	76%
Long commute - driving alone	42%	34%	35%
Workers Commuting by Public Transportation, 2012-2016	0.34%	0.78%	5.13%
Workers Commuting by Public Transportation, 2010-2014	0.5%	0.8%	
Percent of workers who walk or bike to work, 2012-2016	1.13%	1.49%	3.37%
Mortality - Motor Vehicle Accident, age-adj. rate per 100,000, 2010-2016	10	15	11
Mortality - Pedestrian Accident, number of pedestrians killed, 2016	4	97	5,987.00
Annual public transit trips per capita (2011)	2.00	4.40	

Annual public transit trips per capita score/100 (percentile) (urbanized area, 2011)	7.00	25.00	
Percent of population who commute by private vehicle (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area and State)	92.20%	93.20%	
Percent of population who commute by public transit (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area and State)	1.10%	0.80%	
Percent of population who commute by bicycle (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area and State)	0.20%	0.10%	
Percent of population who commute by walking (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area and State)	1.20%	1.30%	
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	
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	
% of income average household spends on housing and transportation combined (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area and State)	49.50%		
% of income average household spends on housing and transportation combined score/100 (percentile) (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area)	61.00		
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	
Annual person miles of travel by private vehicle		31,480.00	
Annual person miles of travel by private vehicle score/100 (percentile)		35.00	
Annual person miles of travel by walking		95.00	
Annual person miles of travel by walking score/100 (percentile)		3.00	
% of foot/bicycle trips that are at least 10 minutes long (sustained exercise)		4.50%	
% of foot/bicycle trips that are at least 10 minutes long (sustained exercise) score/100 (percentile)		5.00	
Seat belt use by drivers and front seat passengers		83.70%	

Seat belt use by drivers and front seat passengers score/100 (percentile)		39.00	
Access to Healthy Food	**Rutherford**	**TN**	**USA**
Food Environment Index (indicator of access to healthy foods with 0 being worst and 10 being the best)	7.80	6.20	
Food Insecurity Rate, 2014	13.52%	16.90%	14.91%
Child Food Insecurity, 2014	20.80%	25.45%	23.49%
% Food insecure children likely ineligible for assistance	37%	31%	21%
Limited Access to Health Foods	8%	8%	6%
Fast food restaurants/1,000 pop. (2014)	0.70		
Fast food restaurant growth (% change) 2009-2014	18.13%		
Expenditures per capita on fast food (2012)	$665.32	$665.32	
Number of Farmers' markets (2016)	4.00		
Farmers' market growth (% change 2009-2016)	300.00%		
Fast Food Restaurant Access, rate per 100,000 pop., 2015	80.35%	75.12%	74.60%
Fast Food Restaurant Access, rate per 100,000 pop., 2012	72.73%	72.15%	72.84%
Grocery Store Access, rate per 100,000 pop. 2015	12.19%	17.41%	21.19%
# of supermarkets and grocery stores per 1,000 population (Grocery Store Density)	0.12		
% of people 65+ with low access to a grocery store	2.28%		
Convenience stores/1,000 population (2014)	0.35		
Convenience stores % change 2009-2014	10.32%		
Liquor Store Establishments, Rate per 100,000 Population, 2016	10.66	9.71	11.00
Low Income Population with Low food Access, 2010 (%)	28.60%	24.10%	18.94%
Percent Population in Census Tract with No Food Outlet, Mod. Retail Food Environment Index	0.00%	0.34%	0.99%
Percent Population in Census Tract with No Healthy Food Outlet, Mod. Retail Food Environment Index	14.63%	23.74%	18.63%
Percent Population in Census Tract with Low Healthy Food Access, Mod. Retail Food Environment Index	33.74%	24.77%	30.89%

Percent Population in Census Tract with Moderate Healthy Food Access, Mod. Retail Food Environment Index	51.62%	48.87%	43.28%
Percent Population in Census Tract with High Healthy Food Access, Mod. Retail Food Environment Index	0.00%	2.27%	5.02%
Population with Low Food Access	24.74%	27.87%	22.43%
Neighborhood Safety - Crime	**Rutherford**	**TN**	**USA**
Substantiated Child abuse/neglect cases, per 1,000 children, 2013	3.6	4.9	
Substantiated Child abuse/neglect cases, per 1,000 children, 2014	3.5	5.4	
Substantiated Child abuse/neglect cases, per 1,000 children, 2015	3.9	5.9	
Substantiated Child abuse/neglect cases, per 1,000 children, 2016	3.2	4.6	
Substantiated Child abuse/neglect cases, per 1,000 children, 2017	3.5	4.7	
Child Maltreatment / 1000 (2016)		6.3	9.1
Violent Crime Rate per 1,000,000, 2012-2014	437	614	380
Injury deaths, per 100,000, 2012-2016	55	83	65
Economic Opportunity	**Rutherford**	**TN**	**USA**
Opportunity Index Score (score/100 where 100 is best) (2017)	53.2	48.1	
Access to revolving line of credit (% of population, 2016)		58.30%	
Unbanked Households (2013)		9.70%	
Underbanked Households (2013)		18.70%	
Income inequality (2014) (Ratio of income of top quintile to bottom quintile)		4.97	
Underemployment rate 2017 (TN ranked 25th)		9.40%	
Employed involuntary part time, 2017		102,100	5,300,000

Access to Health Care

Indicator	Rutherford	TN	USA
ACCESS TO HEALTH CARE			
PCP / Provider Availability	**Rutherford**	**TN**	**USA**
Primary Care Provider Ratio, (population: provider), 2015	2297:1	1382:1	
Dentists Ratio, (population: provider), 2016	1857:1	1892:1	
Mental Health Provider Ratio, (population: provider), 2017	1269:1	742:1	529:1
Population Living in a Health Professional Shortage Area, Percent, 2016	0.00%	70.32%	33.13%

Percent Adults who needed to see a doctor but could NOT due to Cost, last 12 mo. TN BRFSS 2016		12.40%	
Less than $15,000		30.80%	
$15,000-$24,999		21.60%	
$25,000-$34,999		12.70%	
$35,000-$49,999		9.20%	
$50,000+		9.60%	
White		11.00%	
Black		14.90%	
Hispanic		23.60%	
Have one person you think of as a personal doctor or health care provider, percent, TN BRFSS 2016 [NO]		22.00%	
White		20.60%	
Black		20.30%	
Hispanic		51.90%	
18-24		38.60%	
25-34		39.50%	
35-44		26.10%	
45-54		18.40%	
55-64		12.00%	
65+		5.90%	
Health Insurance	**Rutherford**	**TN**	**USA**
Uninsured adults (>18) 2015	13.11%	15.00%	
Uninsured children (<18) 2015	4.04%	4.19%	
Health Insurance Coverage of Total Population, 2013 - Employer	61.90%	52.20%	54.50%
Health Insurance Coverage of Total Population, 2013 - Medicare	10.50%	17.10%	15.50%
Health Insurance Coverage of Total Population, 2013 - Medicaid	13.00%	19.10%	17.80%
Health Insurance Coverage of Total Population, 2013 - Other Private	71.50%	64.00%	65.20%
Health Insurance Coverage of Total Population, Uninsured 2014 ACS 5-year estimates	13.00%	13.60%	14.20%
Percent Uninsured, Total civilian noninstitutionalized population. American FactFinder 2011-2013 ACS Health Insurance Status	13.90%	14.10%	14.80%
Percent Uninsured, age Under 18 years American FactFinder 2011-2013 ACS Health Insurance Status	6.10%	5.70%	7.30%
Percent Uninsured, age 18-64 yrs American FactFinder 2011-2013 ACS Health Insurance Status	18.60%	20.30%	20.60%
Percent Uninsured, age 65 years and older American FactFinder 2011-2013 ACS Health Insurance Status	1.20%	0.5	1.00%

Percent Uninsured, age 19 to 25 years American FactFinder 2011-2013 ACS Health Insurance Status	24.00%	25.50%	26.70%
Uninsured Population by Race: Non-Hispanic White	11.10%	11.80%	10.40%
Uninsured Population by Race: Black or African American	11.80%	16.30%	17.30%
Uninsured Population by Race: Native American / Alaska Native		27.00%	27.30%
Uninsured Population by Race: Asian	28.20%	18.90%	15.00%
Uninsured Population by Race: Native Hawaiian / Pacific Islander		19.00%	18.20%
Uninsured Population by Race: Non-Hispanic Other	20.50%	48.70%	32.50%
Uninsured Population by Race: Non-Hispanic Multiple Race	16.20%	13.90%	13.90%
Uninsured Population by Ethnicity Alone: Hispanic/Latino	41.80%	40.30%	29.10%
Public Health Insurance Coverage by Type	**Rutherford**	**TN**	**USA**
Employee Share of Insurance Premium (2014) (Note that TN ranks 50th/51 (inc. Washington DC) in terms of what share of ins. premium citizens pay)		32.80%	
Dental Care	**Rutherford**	**TN**	**USA**
Visited the dentist or dental clinic for any reason in past year (2016)		59.10%	
<$15,000		36.00%	
$15,000-$24,999		45.70%	
$25,000-$34,999		50.40%	
$35,000-$49,000		59.30%	
$50,000-$74,000		70.20%	
$75,000+		79.00%	
Adults that have had 6+ permanent teeth removed because of tooth decay or gum disease (2016)		11.80%	
<$15,000		22.00%	
$15,000-$24,999		18.20%	
$25,000-$34,999		12.50%	
$35,000-$49,000		10.40%	
$50,000-$74,000		10.70%	
$75,000+		3.00%	
College graduate		4.10%	
H.S. or G.E.D.		13.80%	
Less than H.S.		21.90%	
Adults aged 65+ who have had all their natural teeth extracted, TN BRFSS 2016		21.60%	
Have Not visited a dentist, dental hygienist or dental clinic within the past year, TN BRFSS 2016		59.10%	
Hospitalizations	**Rutherford**	**TN**	**USA**

Preventable Hospital Stays, per 1,000 Medicare enrollees	67	59	
Preventive Care	**Rutherford**	**TN**	**USA**
Number of doctor's office visits per 100 persons per year (2014)		353.5	
Number of doctor's office visits per 100 persons per year (2014) - Non-Hispanic white			330.1
Number of doctor's office visits per 100 persons per year (2014) - Non-Hispanic black			203.3
Number of doctor's office visits per 100 persons per year (2014) - Hispanic or Latino			215.20
Number of doctor's office visits per 100 persons per year (2014) - Non-Hispanic Other			177.70
Preventive care visits made to primary care specialists per 100 people per year (2014) - all		84.70	
Preventive care visits made to primary care specialists per 100 persons per year - White (2014)		58.30	
Preventive care visits made to primary care specialists per 100 persons per year - Black (2014)		40.00	
Preventive care visits made to primary care specialists per 100 persons per year - Hispanic or Latino (2014)		46.10	
Women 40+ who have had a mammogram in past 2 years (2016)		71.10%	
Women 50-74 who have had a mammogram in past 2 years (2016)		77.10%	
Women 21-65 who have had a pap test in past 3 years (2016)		20.20%	
Mammography Screening (% of Medicare enrollees ages 67-69 who have had mammogram in last 2 years - 2014) - White	67.90%	62.90%	
Mammography Screening (% of Medicare enrollees ages 67-69 who have had mammogram in last 2 years - 2014) - Black	77.90%	61.00%	
Males 40+ who have had PSA test in past 2 years (2016)		56.80%	
Vaccinations	**Rutherford**	**TN**	**USA**
During past 12 months, had a seasonal flu shot or vaccine spray (Adults) 2016		36%	
During past 12 months, had a seasonal flu shot or vaccine spray (Adults 65+) 2014		56.90%	
Ever had a pneumonia shot (Adult) 2016		34%	
Ever had a pneumonia shot (Adult Age 65+) 2016		74.10%	
24-Month Vaccinations, 7 vaccine series, % complete 2017		73.50%	
24-Month Vaccinations, DTaP, % complete 2017		81.20%	
24-Month Vaccinations, Poliomyelitis, % complete 2017		93.00%	
24-Month Vaccinations, MMR, % complete 2017		90.50%	
24-Month Vaccinations, Hepatitis B, % complete 2017		93.80%	
24-Month Vaccinations, Hib, % complete 2017		79.80%	

24-Month Vaccinations, Varicella, % complete 2017		90.70%	
24-Month Vaccinations, Pneumococcus, % complete 2017		82.70%	
24-Month Vaccinations, Hepatitis A, % complete 2017		89.90%	
24-Month Vaccinations, Influenza, % complete 2017		45.90%	
24-Month Vaccinations, Rotavirus, % complete 2017		77.30%	

Social Environment

Indicator	Rutherford	TN	USA
Social Environment			
Social / Emotional Supports	**Rutherford**	**TN**	**USA**
Linguistically isolated households, % of all households, 2012-2016	1.52%	1.54%	
Lack of social or emotional support	13.4%	19%	21%
Social associations, memberships per 10,000 pop., 2015	7.0	11.3	9.3
Children in single-parent households, 2012-2016	29%	36%	34%
Faith congregations per 10K People, 2010	10		
How often do you get the social and emotional support you need?			
Always		49.40%	
Usually		24.20%	
Sometimes		14.50%	
Rarely		4.90%	
Never		7.10%	
In general, how satisfied are you with your life?			
Very satisfied		42.90%	
Satisfied		49.80%	
Dissatisfied		5.40%	
Very dissatisfied		1.90%	

Health Status

Indicator	Rutherford	TN	USA
Health Status			
Self-reported health status	**Rutherford**	**TN**	**USA**
% Fair or Poor Health (2014-2016)	16%	19%	18.0%
# Days in 30 - Physical Health Not Good (2016)	4.1	4.7	3.8
- <$25k		9.4	7.2
- $25k - 49.9k		4.1	4.1
- $50-74.9k		2.6	3.1
- $75k+		2.2	2.2
- Age 18-44		2.7	2.6
- Age 45-64		6.5	4.9
- Age 65+		6	5.2
- Black		4.1	4
- Hispanic		3.6	3.6
- Multiracial		9.5	5.9
- White		4.7	4
- Female		5.1	4.2
- Male		4.2	3.5
- < HS		9.6	6.6
- HS Grad		5.4	4.6
- College Grad		2.5	2.4
Poor mental health days, past 30 days, 2016	4.2	4.5	3.8
- <$25k		7.4	5.9
- $25k - 49.9k		4.1	3.6
- $50-74.9k		3.1	2.9
- $75k+		2.4	2.3
- Age 18-44		4.6	4.2
- Age 45-64		5.2	3.9
- Age 65+		2.6	2.4
- Black		4.7	4
- Hispanic		4.2	3.4
- Multiracial		7.7	6.2
- White		4.2	3.8
- Female		5.2	4.3
- Male		3.5	3.1
- < HS		7.6	5.1
- HS Grad		4.1	3.8

- College Grad		2.7	2.5
Mortality	**Rutherford**	**TN**	**USA**
Life expectancy		76.3	80 (2017)
- male (2014)	75.8	73.5	77.7
- female	80.2	79	82.2
# of Deaths, by Cause	**Rutherford, 2014-2016**	**TN, 2016**	**USA, 2016**
Total	5500	67857	2,744,248
Heart Disease: Diseases of heart (I00-I09,I11,I13,I20-I51)	1234	15429	635,260
Cancer: Malignant neoplasms (C00-C97)	1222	14450	598,038
Accidents: Accidents (unintentional injuries) (V01-X59), Y85-Y86)	344	4318	161,374
Lung Disease: Chronic lower respiratory diseases (J40-J47)	314	4238	154,596
Alzheimer's Disease: Alzheimer's disease (G30)	318	3250	116,103
Stroke: Cerebrovascular diseases (I60-I69)	285	3508	142,142
Diabetes: Diabetes mellitus (E10-E14)	152	1883	80,058
Suicide: Intentional self-harm (suicide) (*U03,X60-X84,Y87.0)	120	1111	44,965
Flu / Pneumonia: Influenza and pneumonia (J09-J18)	109	1533	51,537
Liver Disease / Cirrhosis: Chronic liver disease and cirrhosis (K70,K73-K74)	79	960	40,545
Nephritis ((N00-N07,N17-N19,N25-N27))	72	1150	50,456
% of deaths	**Rutherford. 2014-2016**	**TN, 2016**	**USA, 2016**
Heart Disease: Diseases of heart (I00-I09,I11,I13,I20-I51)	22.4	22.7	23.1
Cancer: Malignant neoplasms (C00-C97)	22.2	21.3	21.8
Accidents: Accidents (unintentional injuries) (V01-X59), Y85-Y86)	6.3	6.4	5.9
Lung Disease: Chronic lower respiratory diseases (J40-J47)	5.7	6.2	5.6
Alzheimer's Disease: Alzheimer's disease (G30)	5.8	4.8	4.2
Stroke: Cerebrovascular diseases (I60-I69)	5.2	5.2	5.2
Diabetes: Diabetes mellitus (E10-E14)	2.8	2.8	2.9
Suicide: Intentional self-harm (suicide) (*U03,X60-X84,Y87.0)	2.2	1.6	1.6
Flu / Pneumonia: Influenza and pneumonia (J09-J18)	2.0	2.3	1.9
Liver Disease / Cirrhosis: Chronic liver disease and cirrhosis (K70,K73-K74)	1.4	1.4	1.5
Nephritis ((N00-N07,N17-N19,N25-N27))	1.3	1.7	1.8
Age adjusted Death Rate / 100k, by Cause	**Rutherford, 2014-2016**	**TN, 2016**	**USA, 2016**
Total Death Rate	614.0	1020.2	728.8
- Black male			1,081.2
- Black female			734.1
- White male			879.5
- White female			637.2
- Hispanic male			631.8
- Hispanic female			436.4

Heart Disease: Diseases of heart (I00-I09,I11,I13,I20-I51)	177.5	198.8	165.5
Cancer: Malignant neoplasms (C00-C97)	163.1	179.9	155.8
Accidents: Accidents (unintentional injuries) (V01-X59), Y85-Y86)	41.7	61.1	47.4
Lung Disease: Chronic lower respiratory diseases (J40-J47)	46.4	54.7	40.6
Alzheimer's Disease: Alzheimer's disease (G30)	55.0	44.2	30.3
Stroke: Cerebrovascular diseases (I60-I69)	44.2	46.0	37.3
Diabetes: Diabetes mellitus (E10-E14)	21.9	24.0	21.0
Suicide: Intentional self-harm (suicide) (*U03,X60-X84,Y87.0)	13.5	16.3	13.5
Flu / Pneumonia: Influenza and pneumonia (J09-J18)	16.4	20.1	13.5
Liver Disease / Cirrhosis: Chronic liver disease and cirrhosis (K70,K73-K74)	9.2	12.2	10.7
Nephritis ((N00-N07,N17-N19,N25-N27))	10.5	14.9	13.1
Septicemia (A40-A41)	8.0	11.9	10.7
Years of Potential Life Lost (YPLL)	**Rutherford**	**TN**	**USA**
Premature Death (YPLL <75)	20582	613214	22047384
- White YPLL	16414	472,225	16750094
- Black YPLL	3233	132,590	4359397
Age Adjusted YPLL / 100k (2014-2016)	6379.0	8,760.0	
- Black	7199		
- Hispanic	3794		
- White	6589		
YPLL Rate / 100k	368.0	557.9	
- White rate	401.6	578.5	
- Black rate	293.5	575.1	
# YPLL from Cancer	4248	116,575	4362037
# YPLL from Heart Disease	3177	104582	3225740
# YPLL from Accidents	3674	103857	3901259
# YPLL from Suicide	1280	31580	1289181
# YPLL from deaths in Perinatal Period	1192	18725	860014
# YPLL from Homicide	419	22748	795211

# YPLL from Stroke	412	16942	543414
# YPLL from Chronic Lung Disease	643	23218	622866
# YPLL from Diabetes	630	15878	596730
# YPLL from Liver Disease		14342	610807
# YPLL congenital anomalies	409		
Years of Potential Life Lost (YPLL), by % of Total YPLL (years reviewed)	**Rutherford**	**TN**	**USA**
% YPLL from Cancer	20.6	19.0	19.8
% YPLL from Heart Disease	15.4	17.1	14.6
% YPLL from Accidents	17.9	16.9	17.7
% YPLL from Suicide	6.2	5.1	5.8
% YPLL from deaths in Perinatal Period	5.8	3.1	3.9
% YPLL from Homicide	2.0	3.7	3.6
% YPLL from Stroke	2.0	2.8	2.5
% YPLL from Chronic Lung Disease	3.1	3.8	2.8
% YPLL from Diabetes	3.1	2.6	2.7
% YPLL from Liver Disease		2.3	2.8
% YPLL from congenital anomalies	2.0		
Disability	**Rutherford**	**TN**	**USA**
Difficulty doing errands alone %	4.5	7.3	5.8
Difficulty dressing or bathing %	2	3.30	2.70
Difficulty seeing, even w/ glasses %	1.9	3.00	2.30
Difficulty concentrating, remembering or making decisions %	4.2	6.30	5.00
Difficulty walking or climbing stairs %	5.4	9.10	7.00

Mental Health

Indicator	Rutherford	TN	USA
Mental Health			
Self-Reported Mental Health	**Rutherford**	**TN**	**USA**
Poor Mental Health Days, last 30 days (2016)	4.2	4.5	3.7 (2015)
% for whom mental health days not good, prev 30 (2015)		33.9	34.3
Adults with Mental Illness in the Past Year (2015)		19.90%	18.00%
MH Providers (2017)	1,270:1	740:1	529:1
Serious Mental Illness in the past year (18+) (2012-2014)		5.0 (2016)	3.9 (2015)
Received MH Services (18+)		15.1	
Had serious thoughts of suicide (18+)		4.6	
Major depressive episode (18+)		7.1 (2016)	6.1 (2015)
Frequent Mental Distress (% of adults reporting 14+ days of poor mental health per month)	12%	14%	
TDMHSAS-funded Admissions to substance abuse treatment services (female) (2016)		4,944	
TDMHSAS-funded Admissions to substance abuse treatment services (male) (2016)		9,057	
TDMHSAS-funded Admissions to substance abuse treatment services, % Black/African American (2016)		20.80%	
TDMHSAS-funded Admissions to substance abuse treatment services, % White (2016)		77.10%	
TDMHSAS-funded Admissions to substance abuse treatment services, % of admissions with prescription opioids as a substance of abuse (2016)	47.00%	41.40%	
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - rate/1,000 pop 18+ (2016)	1.8	2.3	
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - # of admissions (2016)	407	12284	
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - % female (2016)		33.60%	
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - % male (2016)		66.40%	
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - % 18-25 (2016) (dropped for 18-25)		16.10%	
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - % 26+ (2016) (grew for 26+)		83.90%	
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - % black/African American (2016) (grew for blacks region 4)		23.80%	
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - % white (2016)		73.40%	

Behavioral Health Safety Net enrollees/1,000 individuals 18+ living in poverty (2016)		38.58 (has also declined steadily from 44.8 over 3 years)	
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - rate/1000 pop 18+ (2016)	1.8	2.3	
TDMHSAS-funded crisis services face-to-face assessments - rate/1000 pop 17 and under (2016)	5.9	7.38	
TDMHSAS-funded crisis services face-to-face assessments - rate/1000 pop 18+ (2016)	7.19	12.29	
Alcohol and drug abuse adolescent residential rehabilitation sites as of 05/15/2017 - # of beds available	0	333	
Substance abuse adolescent treatment sites in FY2016	0	15	
Alcohol and drug abuse adult residential rehabilitation sites as of 05/15/2017 - # of beds available	53 (up from 8 in 2014)	1305	
Substance abuse addictions recovery program sites in FY2016	0	84	
Mental Health Residential treatment sites for children / youth as of 05/15/2017 - # of beds available	40	1540 (up from 1371 in 2014)	
Mental Health Residential treatment sites for adults as of 05/15/2017 - # of beds available	0	377	
Mental Health Adult supportive residential sites as of 05/15/2017 - # of beds available	0	651	
Licensed MH Psychosocial rehab program sites as of 05/19/2017 - # of beds available	2	54	
Opioid prescription rate per 100 population (2006-2017) (note that TN is ranked 3rd for this behind Alabama and Arkansas)	82.2	94.4	
Drug overdose deaths per 100,000 population (2010)		16.9	
Drug overdose deaths per 100,000 population (2016)		24.5	
Youth 12-17 who had at least one major depressive episode in last year (2015)		10.90%	11.90%
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%
Youth high school grades 9-12 who attempted suicide in previous 12 mo. (2015) (TN ranked 22 of 35)		9.90%	8.60%
Youth high school grades 9-12 who were electronically bullied in previous 12 mo. (2015) (TN ranked 17 of 36)		15.30%	15.50%
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%
Children 2-17 with a parent reporting doctor told them child has autism, developmental delays, depression, anxiety, ADD/ADHD, or behavioral problems (2012) (TN ranked 43/50)		21.00%	17.00%
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%
Adults who report being very satisfied with access to mental health services, quality of services, and overall satisfaction (FY12-15)		>90%	
Children who report being very satisfied with participation in treatment, cultural sensitivity, social connectedness, and satisfaction with services (FY12-15)		>90%	

Birth Outcomes

Indicator	Rutherford	TN	USA
Birth Outcomes			
Infant Mortality	**Rutherford**	**TN**	**USA**
Infant Mortality Rate (/1000 live births) (2016)	6.3	7.40	5.87
Infant Mortality Rate - Black	13.9	12.10	11.1
Infant Mortality Rate - White	4.6	6.20	4.8
Low Birth Weight	**Rutherford**	**TN**	**USA**
Low birth weight, % (2016)	8.5	9.20	8.17
Low birthweight - black	14.3	14.40	13.68
Low birthweight - white	7.4	7.90	6.67
Very Low birth weight, % (2016)	1.4	1.60	1.40
Very Low Birthweight - black	4	3.20	2.95
Very Low Birthweight - white	0.9	1.20	1.07
Prenatal Care	**Rutherford**	**TN**	**USA**
Adequate Prenatal Care, 2016	55.6	52.40	
Adequate Prenatal Care, 2015	57.4	55.00	
Adequate Prenatal Care, 2014	55.7	56.60	
Adequate Prenatal Care, 2013	57.8	60.00	
Adequate Prenatal Care, 2012	56.4	59.10	
Percentage of women who smoked during pregnancy, 2016, All	9.1	13.40	7.20
Percentage of women who smoked during pregnancy, 2016, White	10	15.20	10.50
Percentage of women who smoked during pregnancy, 2016, African American	6.9	8.00	6.00
Maternal outcomes	**Rutherford**	**TN**	**USA**
Maternal mortality (per 100,000 births)		23.30	20.70
Maternal mortality - Black		38.20	47.20
Maternal mortality - White		20.80	18.10
Aged 15-24		8.70	11.00
Aged 25-34		19.20	14.00
Aged 35-44		54.40	38.50
Maternal Depression			
Told by provider had depression before pregnancy (2015)		12.20	
Self-reported postpartum depressive symptoms (2015)		15.40	
Ever Breastfed (2016)		71.10	82.50
Teen Pregnancy	**Rutherford**	**TN**	**USA**

Teen Pregnancy, rate/1,000 females age 15-17, 2016	9.7	13.7	
Teen Birth, rate/1,000 females age 15-17, 2016	7.8	11.50	
Teen Birth, rate/1,000 females age 15-19, 2006-2012	35.3		36.60
Teen Birth, rate/1,000 Black, 2017	9.8		
Teen Birth, rate/1,000 White, 2017	8.1		
Vaccinations	**Rutherford**	**TN**	**USA**
Percent of children complete at 24-months			
DTAP		83.10	
Polio		94.40	
MMR		91.60	
Hib		94.70	
Hep B		81.80	
Varicella		91.10	
Pneumococcus		84.50	

Child/Adolescent Health

Indicator	Rutherford	TN	USA
Child / Adolescent Health			
Social / Emotional Supports	**Rutherford**	**TN**	**USA**
Disconnected Youth (ages 16-24 who are neither working nor in school) 2014	10.98%	16.76%	
Child Injury / Death	**Rutherford**	**TN**	**USA**
Fatalities in crashes involving young drivers age 15 to 20, 2016		127	4,853
Child Abuse / Neglect	**Rutherford**	**TN**	**USA**
Reported child abuse cases victims younger than 18, 2017, percent of same age population	3.5%	4.9%	
Youth Risk Behavior Survey	**Rutherford**	**TN**	**USA**
High School Youth, Ever tried cigarette smoking		31.6	28.9
High School Youth, Smoked a whole cigarette before age 13 yrs. for first time		12.3	9.5
High School Youth, Currently smoke cigarettes		9.4	8.8
High School Youth, Currently smoke cigarettes, White		11.6	11.1
High School Youth, Currently smoke cigarettes, Black or African American Students		1.9	4.4
High School Youth, Currently smoke cigarettes, Hispanic/Latino		7.4	7
High School Youth, Currently smoked cigarettes frequently		2.8	2.6
High School Youth, were obese		20.5	14.8
High School Youth, were obese, white		20.4	12.5

High School Youth, were obese, black or African American		20.7	18.2
High School Youth, were obese, Hispanic/Latino`		22	18.2
High School Youth, were overweight		17.5	15.6
High School Youth, did not eat vegetables		10.0	7.2
High School Youth, did not drink milk		30.2	26.7
High School Youth, did not participate in at least 60 min of Physical activity on at least 1 day		16.8	15.4
High School Youth, Were not physically active at least 60 min per day on 5 or more days		55.9	53.5
High School Youth, did not play on at least one sports team		50.8	45.7
Health Insurance	**Rutherford**	**TN**	**USA**
Youth on TennCare (2017)	35.9	48.5	
Uninsured Children and youth under age 19 (2016)	3.3	3.7	
Uninsured Children and youth qualify for CHIP or Medicaid (2017)	5.3	4.8	
Pediatrician Rate (/10k) (2015)	4.0		
Psychiatrist rate (/10k) (2015)	2.6		
Psychologist rate (/10k) (2015)	7.6		
LSW rate (/10k) (2015)	11.3		
Childhood Obesity	**Rutherford**	**TN**	**USA**
Public School students measured as overweight or obese	40.3	39.2	

Environmental Health

Indicator	Rutherford	TN	USA
Natural Environment			
Air	**Rutherford**	**TN**	**USA**
Air Pollution - Particulate Matter, Avg. daily density of fine particulate matter in micrograms per cubic meter, 2012	10.4	9.7	8.7

Behavioral Risk Factors

Indicator	Rutherford	TN	USA
Behavioral Risk Factors			
Obesity & Nutrition	**Rutherford**	**TN**	**USA**
Obese adults (%)	36%	32%	40%
Adults who have a Body Mass Index Greater than 25 (Overweight or Obese), 2016		33.20%	35%
Adults who have a Body Mass Index Greater than 30 (Obese), 2016	36%	34.80%	30%
Access to Exercise Opportunities, 2016	82%	71%	
Leisure Time / Physical Activity	**Rutherford**	**TN**	**USA**
Adults who reported doing physical activity or exercise during past 30 days other than regular job		71.60%	76.9%
Recreation and fitness facilities - total # of sites in county (2014)	18.00		
Recreation and fitness facilities/ 1,000 pop. (2014)	0.06		
Percentage of adults age 20 and over reporting no leisure-time physical activity, 2014	29%	30%	
Have you used internet in the past 30 days			
18 - 24		97.20%	
25-34		95.20%	
35-44		91.60%	
45-54		80.70%	
55-64		74.70%	
65+		53.70%	
College graduate		96.20%	
H.S. or G.E.D.		75.70%	
Less than H.S.		47.00%	
Firearms	**Rutherford**	**TN**	**USA**
Handgun Carry Permits Issued, 2017	9149	218536	16358844
Handgun Carry Permits Revoked, Suspended, or Denied, 2017	261	5134	
Firearm Deaths-- all intents, 2016 (per 100,000)	149	1148	
Firearm Deaths, homicide only, 2016		434	
Firearm deaths, suicide only, 2016		675	
Number of deaths due to firearms per 100,000 population, 2012-2016	10	16	
Substance Use / Abuse	**Rutherford**	**TN**	**USA**

Number of drug overdose deaths per 100,000, 2014-2016	147	22	
Number of TDMHSAS-licensed mental health and substance abuse sites	77	2671	
Estimates of current illicit drug use among youth ages 12-17, 2012-2014		7.5%	9.3%
Estimates of current illicit drug use among adults 18+, 2012-2014		6.8%	9.6%
Tobacco	**Rutherford**	**TN**	**USA**
Current smokers, Adult, Percent of Adults Age 18+, 2016	20%	21.9%	15.5%
Current tobacco use among youth ages 12-17, 2012-2014		10.0%	7.8%
Percent of Adults Ever Smoking 100 or More Cigarettes, 2011-2012	41.12%	47.97%	44.16%
Adults Ever Smoking 100 or More Cigarettes, White Non-Hispanic, Percent, 2011-12		50.64%	48.52%
Adults Ever Smoking 100 or More Cigarettes, Black Non-Hispanic, Percent, 2011-12		36.49%	38.34%
Adults Ever Smoking 100 or More Cigarettes, Other Race Non-Hispanic, Percent, 2011-12		44.11%	31.30%
Adults Ever Smoking 100 or More Cigarettes, Hispanic/Latino, Percent, 2011-12		45.36%	34.17%
Smoke Every Day		15.2%	12.4%
College graduate		4.5	
H.S. or G.E.D.		18.6	
Less than H.S.		27.5	
<$15000		27.7	
$15,000-$24,999		21.0	
$25,000-$34,999		17.9	
$35,000-$49,999		12.3	
$50,000+		9.2	
Annual deaths from smoking related causes			480,000
Percent Smokers with Quit Attempt in Past 12 Months, 2011-2012.	84.15%	61.54%	60.02%
Alcohol	**Rutherford**	**TN**	**USA**
Excessive Drinking	18.0%	14.0%	26.9%
Alcohol-impaired driving deaths, % of deaths with alcohol involvement, 2012-2016	25%	28%	29%
Percent of admissions to substance abuse treatment services with alcohol as substance of abuse, FY 2016	48.0%	42.1%	34%
Estimates of alcohol dependence or abuse among youth ages 12-17, 2012-2014		2.7%	3%
Estimates of alcohol dependence or abuse among adults 18+, 2012-2014		5.8%	7%
Binge drinkers, percent, TNBRFSS 2016		13.10%	16.9%
Alcohol-impaired driving deaths, % of death with alcohol involvement, 2009-2013	25%	28%	29%

Opioid Use	Rutherford	TN	USA
Past year nonmedical use of pain relievers, adults 18+, 2012-2014		4.1%	4.2%
Past year nonmedical use of pain relievers, adults 18+, 2008-2010		4.6%	4.7%
Percent of admissions to substance abuse treatment services with prescription opioids as substance of abuse, FY 2016	47.0%	41.4%	34.0%
Percent of drug overdose deaths involving an opioid, 2015	78.6%	72%	73.00%
Percent of drug overdose deaths involving heroin, 2015	17.9%	15.90%	25.00%