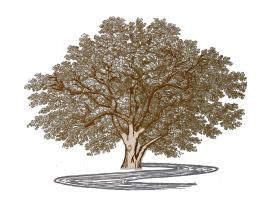
# **TENNESSEE** HEALTH & WELL-BEING INDEX

### 2017

TRACKING THE DRIVERS OF TENNESSEANS' HEALTH



THE SYCAMORE INSTITUTE THE SYCAMORE INSTITUTE | SycamoreInstituteTN.org

March 2017



### THE SYCAMORE INSTITUTE

**BUILDING A STRONGER TENNESSEE THROUGH DATA AND RESEARCH** 

### CONTENTS

Statewide Health & Well-Being Index Score	1
Summary of Methods, Background, and Special Topics	3
Statewide Health & Well-Being Index Domain Scores	7
Regional Health & Well-Being Index Scores	12
Detailed Methodology and Limitations	27
Data Sources	31
References	37
Detailed Data Tables	APPENDIX

Launched in 2015, The Sycamore Institute is an independent, nonpartisan public policy research center for Tennessee. The organization's mission is to provide accessible, reliable data and research in pursuit of sound, sustainable policies that improve the lives of all Tennesseans.

#### THE SYCAMORE INSTITUTE | SycamoreInstituteTN.org



-

## **TENNESSEE** STATEWIDE HEALTH & WELL-BEING INDEX 2017

STATEWIDE overall score

out of 10

#### HOW ARE TENNESSEANS DOING?

### WHAT INFLUENCES HOW TENNESSEANS ARE DOING?

THE DRIVERS OF HEALTH

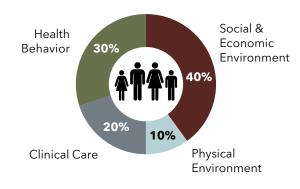
### HOW DOES TENNESSEE SCORE ON THE DRIVERS OF HEALTH?

The Index measures performance in 4 domains that correspond to the 4 drivers of health.

ADULTS	TN AVERAGE	NATIONAL AVERAGE
Overweight or obese	68%	vs. 64%
Diagnosed with high blood pressure	<b>39%</b>	vs. 31%
Report their health as fair or poor	23%	vs. 17%
Diagnosed with diabetes	12%	vs. 10%
Diagnosed with asthma	11%	vs. 14%



Overweight or obese	39%
Infant mortality rate	6.8
	per 1,000 live births



High school graduation rate

Adults with a

primary care

physician

Adults with stable housing

vs. 33%

vs. 6.0

per 1,000

live births

STATEWIDE DOMAIN SCORES
Social & Economic Environment
Health Behavior
Clinical Care
Physical Environment

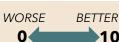
### AREAS OF STRENGTH

<b>88%</b>	Children food ins
77%	Adults smoke cig
<b>84%</b>	Women receive ina

### **AREAS FOR IMPROVEMENT**

Children who are food insecure		24%
Adults who moke cigarettes	<u>ر</u>	24%
Women who eceive inadequate prenatal care	\$	43%

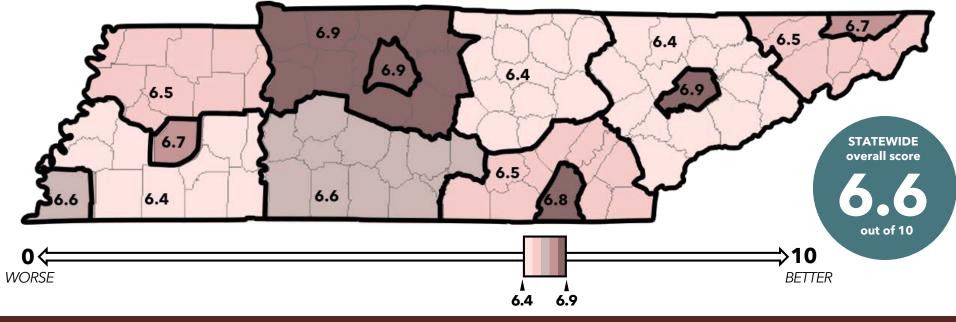




THE SYCAMORE INSTITUTE | SycamoreInstituteTN.org 1







#### REGIONS

These regions correspond to the planning regions used by the TN Department of Health.



- **1. NORTHEAST**: Carter, Greene, Hancock, Hawkins, Johnson, Unicoi & Washington Counties
- 2. EAST: Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Loudon, Monroe, Morgan, Roane, Scott, Sevier & Union Counties
- 3. KNOX: Knox County

- 4. UPPER CUMBERLAND: Cannon, Clay, Cumberland, Dekalb, Fentress, Jackson, Macon, Overton, Pickett, Putnam, Smith, Van Buren, Warren & White Counties
- **5. SOUTHEAST**: Bledsoe, Bradley, Franklin, Grundy, Marion, McMinn, Meigs, Polk, Rhea & Sequatchie Counties
- 6. HAMILTON: Hamilton County
- 7. DAVIDSON: Davidson County
- 8. MID-CUMBERLAND: Cheatham, Dickson, Houston, Humphreys, Montgomery, Robertson, Rutherford, Stewart, Sumner, Trousdale, Williamson & Wilson Counties

- **9. SOUTH CENTRAL**: Bedford, Coffee, Giles, Hickman, Lawrence, Lewis, Lincoln, Marshall, Maury, Moore, Perry & Wayne Counties
- **10. NORTHWEST**: Benton, Carroll, Crockett, Dyer, Gibson, Henry, Lake, Obion & Weakley Counties
- **11. SOUTHWEST**: Chester, Decatur, Fayette, Hardeman, Hardin, Haywood, Henderson, Lauderdale, McNairy & Tipton Counties
- **12. SHELBY**: Shelby County
- 13. MADISON: Madison County
- 14. SULLIVAN: Sullivan County



THE SYCAMORE INSTITUTE

# **TENNESSEE** HEALTH & WELL-BEING INDEX 2017

### SUMMARY OF METHODS, BACKGROUND & SPECIAL TOPICS

### BACKGROUND & METHODS

#### WHAT IS THE INDEX?

The Tennessee Health & Well-Being Index measures the factors that contribute to the health of Tennesseans.<sup>16,17</sup> Created by The Sycamore Institute, the Index highlights relative areas of strength and areas that may need improvement both statewide and by region.

#### WHAT ARE HEALTH AND WELL-BEING?

The World Health Organization defines health as "a state of complete, physical, mental, and social wellbeing and not merely the absence of disease or infirmity."<sup>1</sup> While there is no single definition for wellbeing, all definitions of well-being are based on "judging life positively and feeling good."<sup>2</sup> Well-being couples the absence of disease with a lack of stress and a feeling of hopefulness.<sup>3</sup>

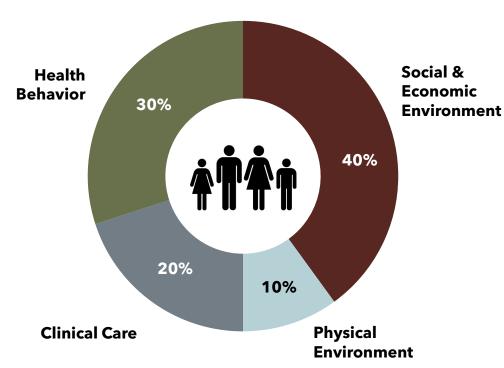
#### WHAT IS THE PURPOSE OF THE INDEX?

The Index is a tool for measuring the drivers of population health and tracking them over time:

- It is specific to Tennessee.
- It focuses on the underlying factors that contribute to health.
- It presents data at both the state and regional level.
- It shows complex information in an accessible manner.
- It provides a foundation for future work of The Sycamore Institute.

#### WHAT INFLUENCES THE HEALTH OF INDIVIDUALS AND POPULATIONS?

Health means more than just health care. While access to clinical care is a contributing factor, our behaviors and the physical, social, and economic environments in which we live, work, and play are also major drivers of health.<sup>4,5,6</sup> To better understand what influences the health of Tennesseans, we must consider people's lives in a larger context. While genetics is a documented driver of health, population-level data on genetics are unavailable.



### THE DRIVERS OF HEALTH



#### HOW IS THE INDEX SCORE CALCULATED?

The index score is a calculation of 24 metrics within 4 domains that represent the 4 drivers of health (**see figure to the right**). Each metric was compiled using data that are publicly available at both the state and regional or county level. The 4 domain scores were weighted based on their relative contributions to health. See the detailed methodology section for details about selecting the metrics and calculating the scores.

### HOW DO YOU INTERPRET THE SCORES?

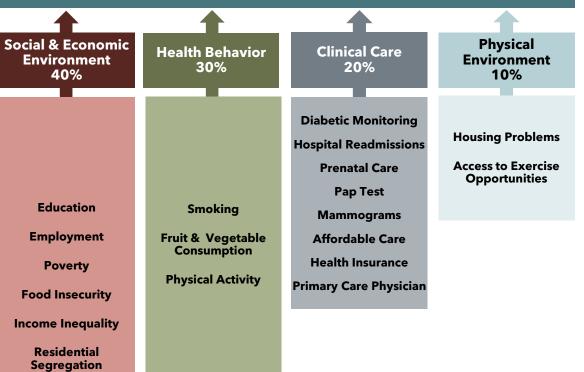
All scores are on a scale of 0 to 10. Higher scores indicate better performance. Compared to a score of 6.5, a score of 7.0 indicates that the area's conditions may better support the drivers of health and better health outcomes are expected. The state and each region has a total of 5 scores:

- Overall Health & Well-Being Index Score
- Social & Economic Environment Domain Score
- Health Behavior Domain Score
- Clinical Care Domain Score
- Physical Environment Domain Score

Select health outcomes are also highlighted at the state and regional level to provide some context for the scores. The 4 domains – and associated index scores – are areas where individuals, communities, and governments can make investments in health. Improved health outcomes are our return on those investments.

### **HEALTH & WELL-BEING INDEX FRAMEWORK**

### **HEALTH AND WELL-BEING**



**SPECIAL TOPIC: HEALTH DISPARITIES** 



### WHAT ARE HEALTH DISPARITIES?

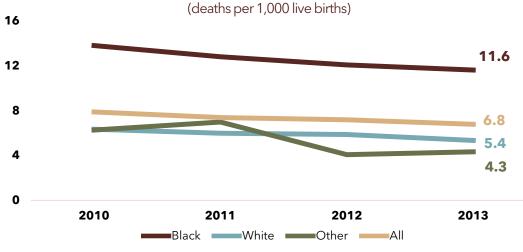
The Index provides a snapshot of the factors that influence the health of Tennesseans. While population-based averages can be important tools for tracking progress, it is important to remember that averages can sometimes hide disparities between particular groups.

Healthy People 2020 describes a health disparity as a health difference between individuals or groups that is closely linked with barriers associated with social, economic, and/or environmental disadvantages.<sup>4</sup> Every health difference that we see between different individuals or groups is not considered a health disparity. For example, while both men and women can be diagnosed with breast cancer, women have a much higher breast cancer rate than men. This is not considered a disparity because the difference is not linked to systemic disadvantage. It is important to note that disparities do not begin and end in health, but are also **seen** within the drivers of health as well.

### WHAT GROUPS EXPERIENCE DISPARITIES?

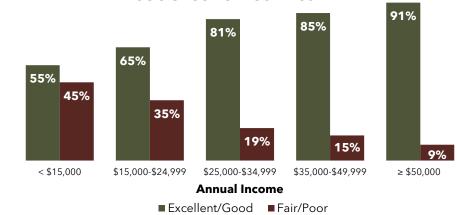
Race and ethnicity are the most frequently discussed sources of health disparities. Other groups of people also experience health disparities, and a person can be a member of more than one of these groups (e.g. a racial minority with a physical disability) which can make them increasingly vulnerable to health disparities. Health disparities can be experienced by groups because of their:

- Race and ethnicity (top right figure)
- Socioeconomic status (bottom right figure)
- Cognitive, sensory, or physical disability
- Geographic location
- Mental health status
- Gender
- Sexual orientation



**TENNESSEANS EXPERIENCE RACIAL DISPARITIES IN INFANT MORTALITY** 

Source: The Sycamore Institute's analysis of Health Information Tennessee data



#### TENNESSEANS' SELF-RATED HEALTH INCREASES WITH SOCIOECONOMIC STATUS

Source: The Sycamore Institute's Analysis of the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System annual data release, 2015



THE SYCAMORE INSTITUTE

# **TENNESSEE** HEALTH & WELL-BEING INDEX 2017

### **STATEWIDE DOMAIN SCORES**



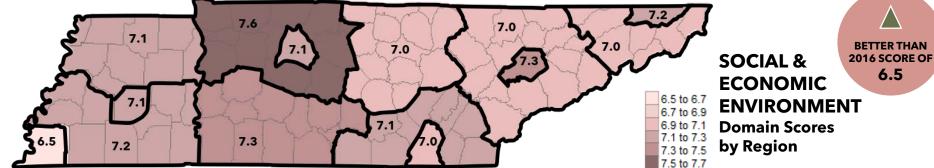
THE SYCAMORE INSTITUTE

### **DOMAIN: SOCIAL & ECONOMIC ENVIRONMENT**



Why is the social and economic environment important for health?

Our social and economic environments encompass where we live, work, and play. Influencing health and well-being more than any other domain, these factors include access to a quality education, job opportunities, safe neighborhoods, social support, and healthy foods. In fact, **education and income are the greatest predictors of health**.<sup>6</sup> Individuals with higher levels of education and income live longer and are healthier.<sup>7,8</sup> This relationship exists at both the individual and community level.<sup>9</sup> People who live in wealthy, highly-educated communities are more likely to be in better health and live longer than those who do not.



METRIC	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
High school graduation rate (2015)	87.7%	82.0%	BETTER
Adults with some college education (2014)	58.2%	46.1%	BETTER
Statewide unemployment rate (2014)	6.7%	6.2%	WORSE
Children who are food insecure (2014)	24.0%	17.0%	WORSE
Childless households that are food insecure (2014)	16.9%	13.0%	WORSE
Children who live in poverty (2014)	25.9%	19.7%	WORSE
Individuals who live in poverty (2014)	18.2%	12.4%	WORSE
Black-White residential segregation index (1-100) (2014)	67	59	WORSE
White-Non-White residential segregation index (1-100) (2014)	59	41	WORSE
Income inequality index (1-100) (2015)	47.7	47.9	SAME

SOCIAL & ECONOMIC ENVIRONMENT

score

out of 10

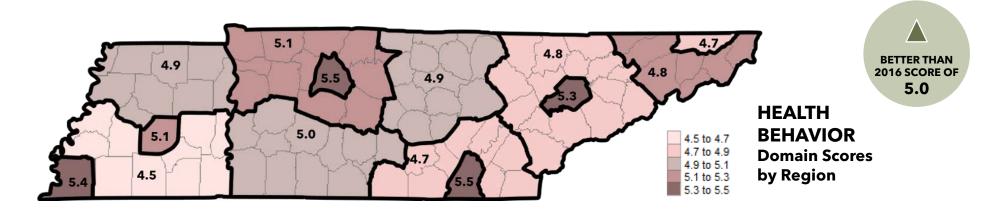


### DOMAIN: HEALTH BEHAVIOR



### Why is health behavior important for health?

A person's health behavior has a large impact on the length and quality of their life. **Smoking, physical activity, and diet are highly significant health behaviors.**<sup>5</sup> These three health behaviors are associated with a person's risk for developing many chronic illnesses such as diabetes, cardiovascular disease, cancer, and obesity.<sup>10</sup> Modifications in these three areas can bring about great changes in health outcomes and quality of life. While health behaviors are a personal choice, a person's environment can encourage or discourage healthy behaviors.



METRIC	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Adults currently smoking cigarettes (2013)	24.3%	16.8%	WORSE
Adults who are physically inactive (2012)	32.0%	29.6%	WORSE
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	9.2%	13.1% fruits	
	combined	8.9% vegetables	

HEALTH BEHAVIOR

score

out of 10

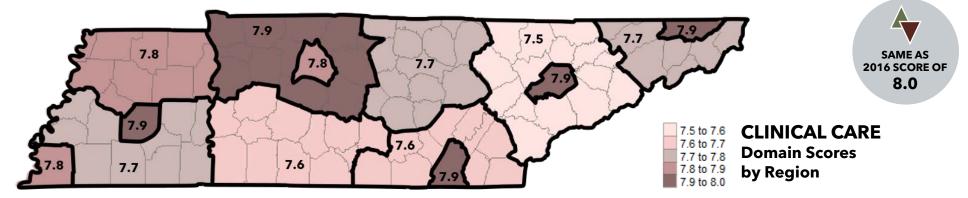


### DOMAIN: CLINICAL CARE



CLINICAL CARE contributes 20% to a person's health.

# Why is clinical care important for health? Clinical care refers to any interaction with the health care system, ranging from preventive activities like vaccines and screenings to the treatment of particular diseases and conditions. Clinical care takes place in a variety of settings such as outpatient clinics, hospitals, public health departments, and long-term care facilities. Effective health care is accessible, affordable, timely, and high quality.<sup>11</sup>



METRIC	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Adults diagnosed with diabetes who have received 2 or more HbA1c measurements in the last year (2013)	86.6%	84.9%	BETTER
Women who received a pap test within the past 3 years (2013)	80.1%	75.2%	BETTER
Children who are uninsured (2013)	5.3%	7.5%	BETTER
Adults with a primary care physician (2013)	77.0%	69.9%	BETTER
Adults who avoided medical care in the last 12 months due to cost (2013)	17.6%	15.3%	WORSE
Pregnant women who receive adequate prenatal care (2015)	56.6%	74.4%	WORSE
Adults who are uninsured (2014)	17.4%	10.4%	WORSE
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	17.9%	18.0%	SAME
Women, 40 and older, who received a mammogram in the past 2 years (2013)	73.3%	73.0%	SAME

score

out of 10

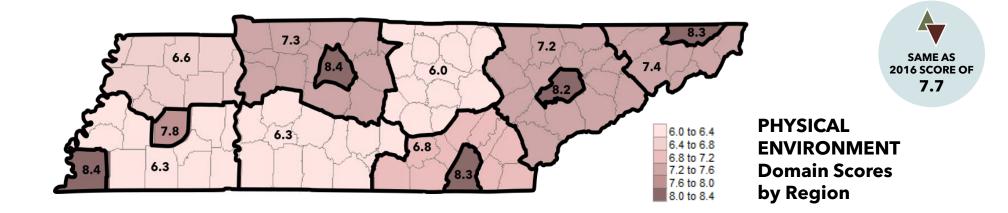


Why is physical environment important for health?

### DOMAIN: PHYSICAL ENVIRONMENT



PHYSICAL ENVIRONMENT contributes 10% to a person's health. The physical environment includes the natural environment, transportation systems, buildings, and public resources.<sup>12</sup> A person's school, work, and home **environment influences their health behaviors and has a direct impact on their health.**<sup>13</sup> For example, access to sidewalks, parks and playgrounds offer opportunities for physical activity, while exposure to pollution or unsafe drinking water contributes to health conditions like asthma and waterborne illness.



METRIC	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Households with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2014)	16.6%	19.0%	BETTER
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2012)	69.3%	77.0%	WORSE

PHYSICAL ENVIRONMENT

score

out of 10



THE SYCAMORE INSTITUTE

# **TENNESSEE** HEALTH & WELL-BEING INDEX 2017

### **REGIONAL DOMAIN SCORES**



### **TENNESSEE** NORTHEAST REGION HEALTH & WELL-BEING INDEX 2017

THE SYCAMORE INSTITUTE

6.5

#10 out of 14 regions



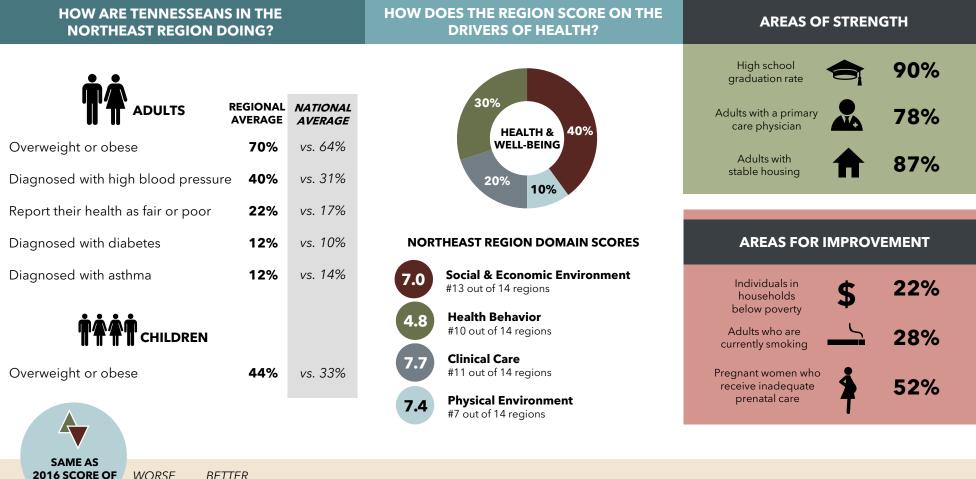
NORTHEAST REGION

overall score

for a for

10

Carter, Greene, Hancock, Hawkins, Johnson, Unicoi & Washington Counties





### TENNESSEE EAST REGION HEALTH & WELL-BEING INDEX 2017

THE SYCAMORE INSTITUTE

#12 out of 14 regions

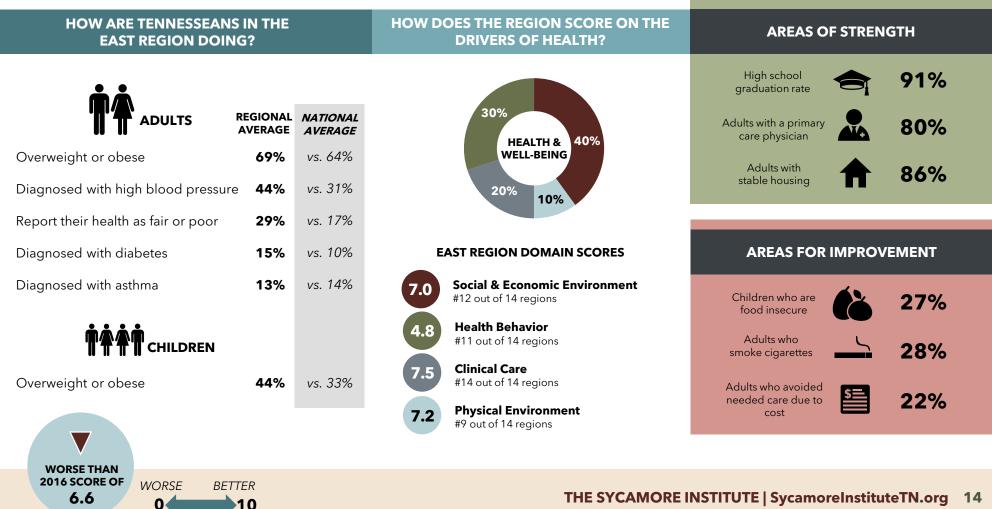
EAST REGION

overall score

out of 10



Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Loudon, Monroe, Morgan, Roane, Scott, Sevier & Counties





### **TENNESSEE** KNOX REGION HEALTH & WELL-BEING INDEX 2017

**Knox County** 

THE SYCAMORE INSTITUTE

7.0

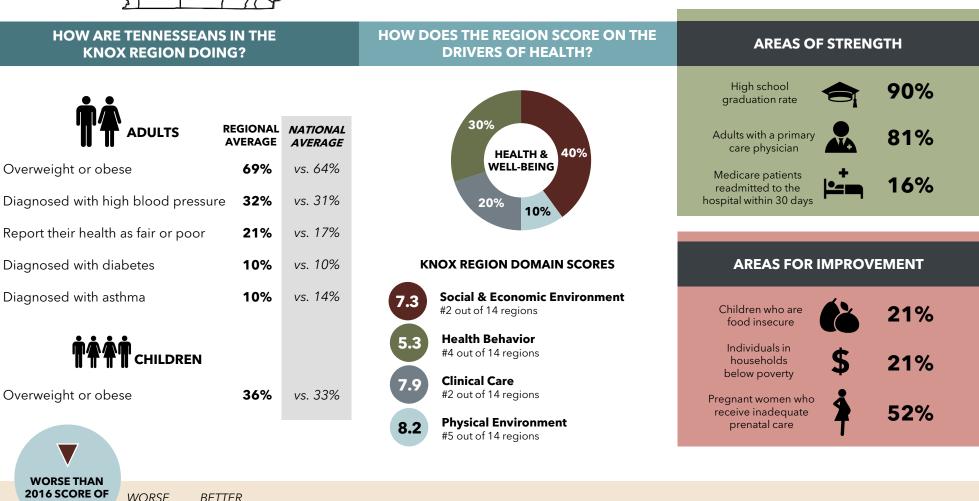
10

#1 out of 14 regions

KNOX REGION

overall score

out <u>of 10</u>





### TENNESSEE UPPER CUMBERLAND REGION HEALTH & WELL-BEING INDEX 2017

THE SYCAMORE INSTITUTE

#13 out of 14 regions

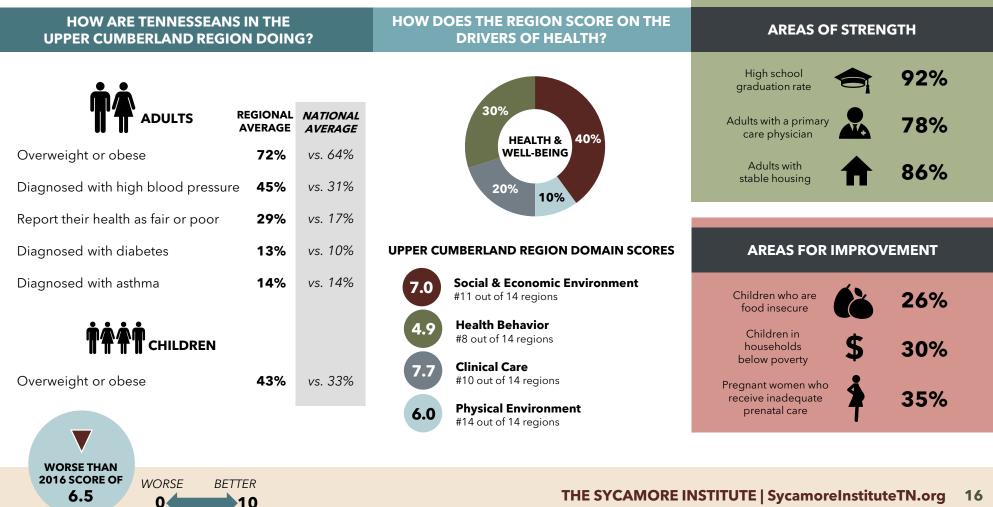
UPPER CUMBERLAND

REGION overall score

out of 10



Cannon, Clay, Cumberland, Dekalb, Fentress, Jackson, Macon, Overton, Pickett, Putnam, Smith, Van Buren, Warren & White Counties





### TENNESSEE SOUTHEAST REGION HEALTH & WELL-BEING INDEX 2017

THE SYCAMORE INSTITUTE

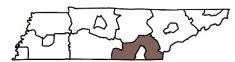
6.5

#11 out of 14 regions



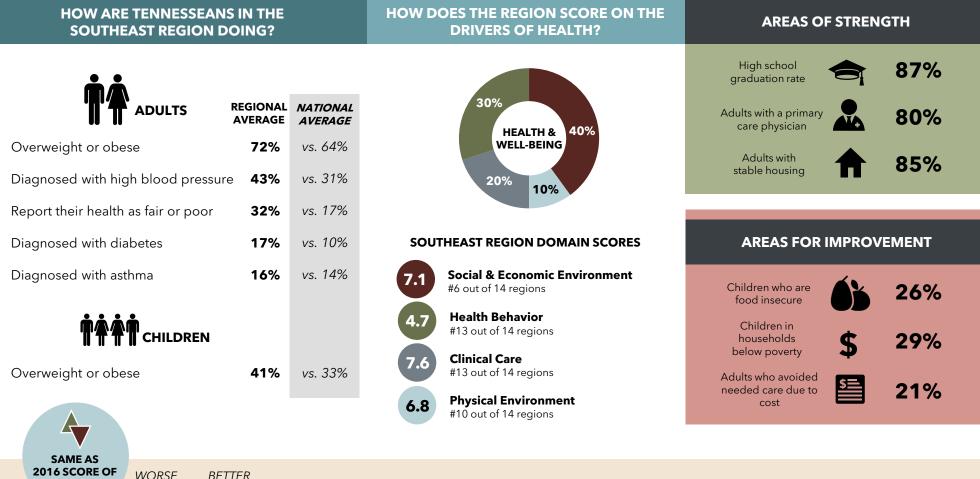
SOUTHEAST REGION

overall score



10

Bledsoe, Bradley, Franklin, Grundy, Marion, McMinn, Meigs, Polk, Rhea & Sequatchie Counties





### **TENNESSEE** HAMILTON REGION HEALTH & WELL-BEING INDEX 2017

**Hamilton County** 

THE SYCAMORE INSTITUTE

6.7

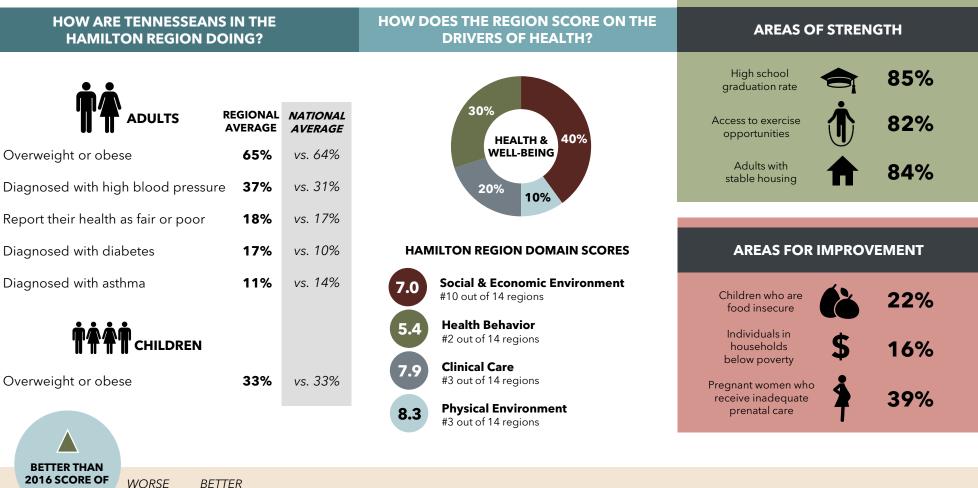
10

#4 out of 14 regions

HAMILTON REGION

overall score

out of 10





### **TENNESSEE DAVIDSON REGION HEALTH & WELL-BEING INDEX 2017**

THE SYCAMORE INSTITUTE

WORSE

6.9

BFTTFR

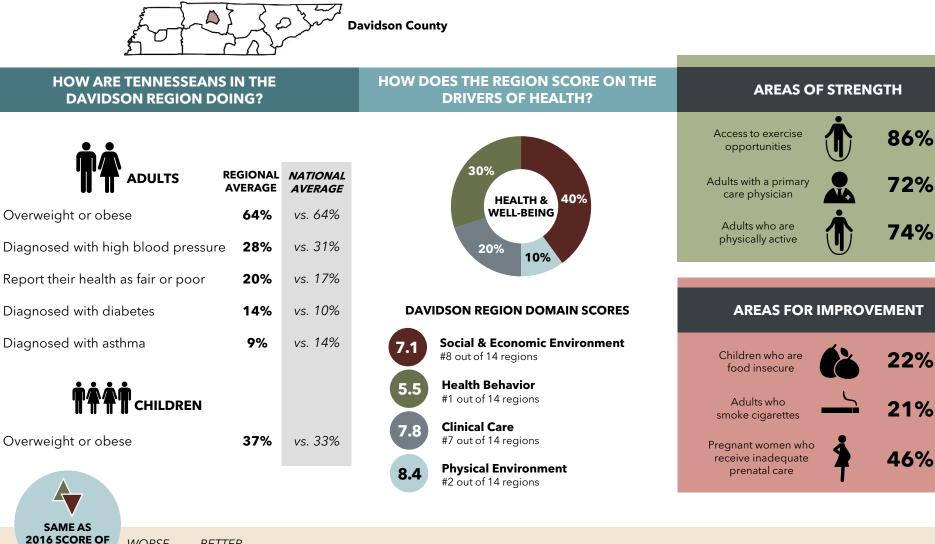
10

#2 out of 14 regions

DAVIDSON REGION

overall score

out <u>of 10</u>





### TENNESSEE MID-CUMBERLAND REGION HEALTH & WELL-BEING INDEX 2017

THE SYCAMORE INSTITUTE

#3 out of 14 regions

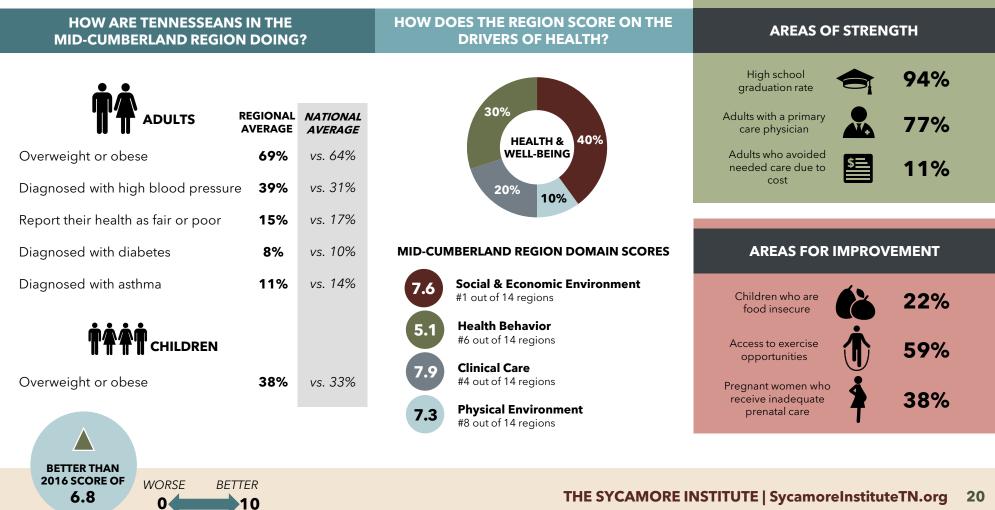
MID-CUMBERLAND

REGION overall score

out of 10



Cheatham, Dickson, Houston, Humphreys, Montgomery, Robertson, Rutherford, Stewart, Sumner, Trousdale, Williamson & Wilson Counties





### **TENNESSEE** SOUTH CENTRAL REGION HEALTH & WELL-BEING INDEX 2017

THE SYCAMORE INSTITUTE

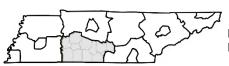
6.5

#7 out of 14 regions

SOUTH CENTRAL

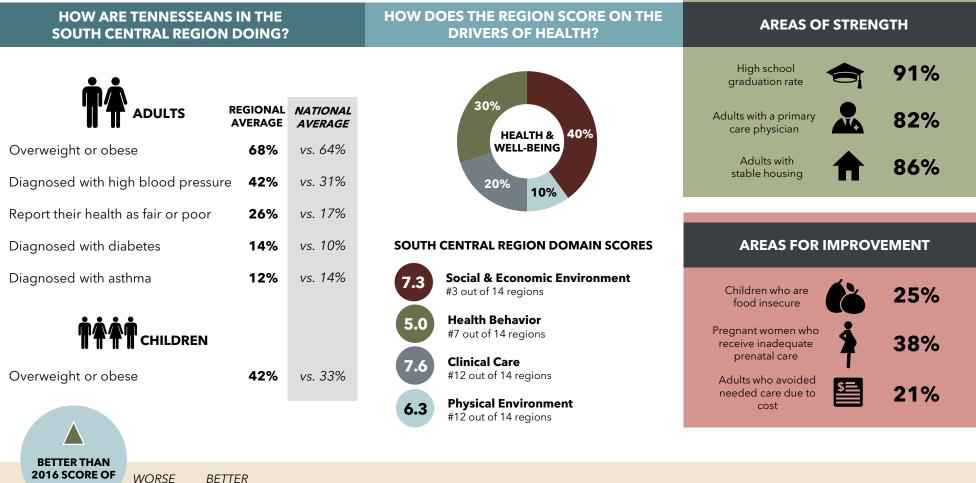
REGION overall score

out of 10



10

Bedford, Coffee, Giles, Hickman, Lawrence, Lewis, Lincoln, Marshall, Maury, Moore, Perry & Wayne Counties





### TENNESSEE NORTHWEST REGION HEALTH & WELL-BEING INDEX 2017

THE SYCAMORE INSTITUTE

#9 out of 14 regions

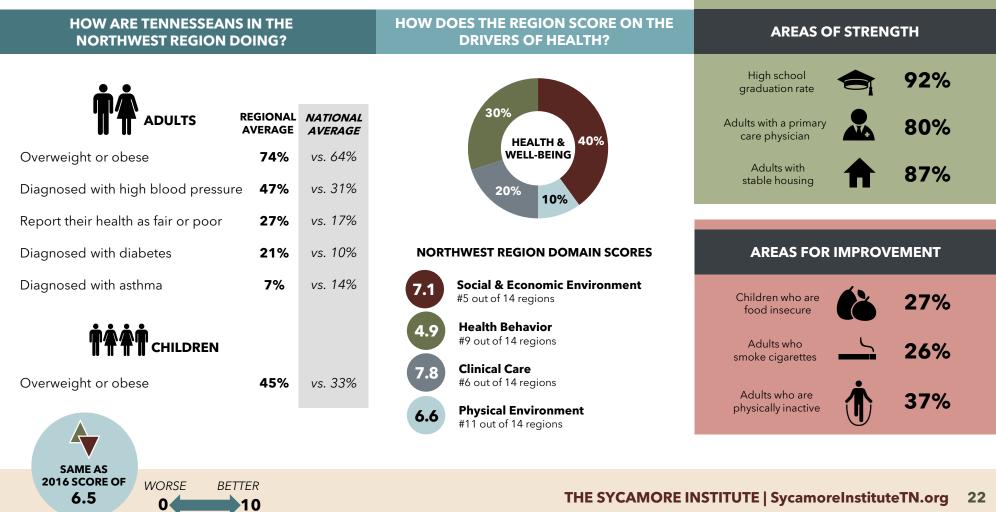
NORTHWEST REGION

overall score

out of 10



Benton, Carroll, Crockett, Dyer, Gibson, Henry, Lake, Obion & Weakley Counties





### **TENNESSEE** SOUTHWEST REGION HEALTH & WELL-BEING INDEX 2017

THE SYCAMORE INSTITUTE

6.4

#14 out of 14 regions



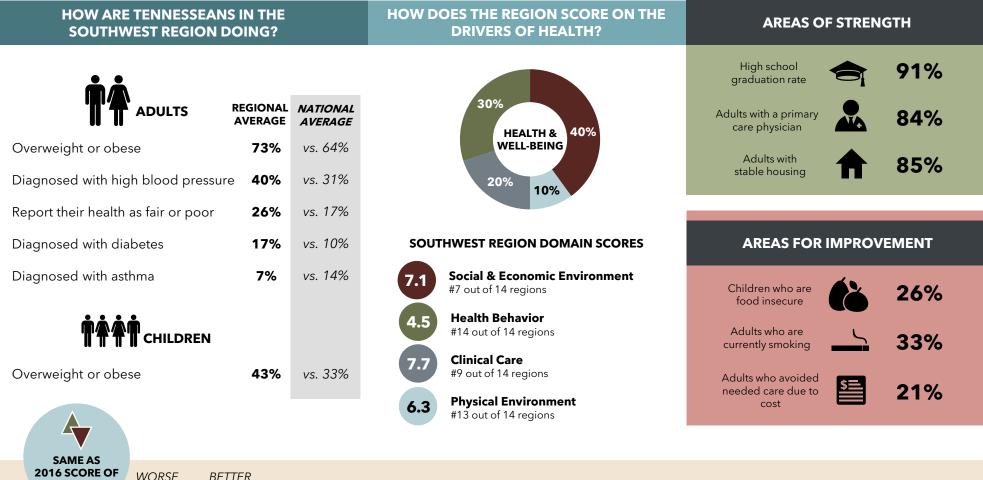
SOUTHWEST REGION

overall score



10

Chester, Decatur, Fayette, Hardeman, Hardin, Haywood, Henderson, Lauderdale, McNairy & Tipton Counties





### **TENNESSEE** SHELBY REGION HEALTH & WELL-BEING INDEX 2017

**Shelby County** 

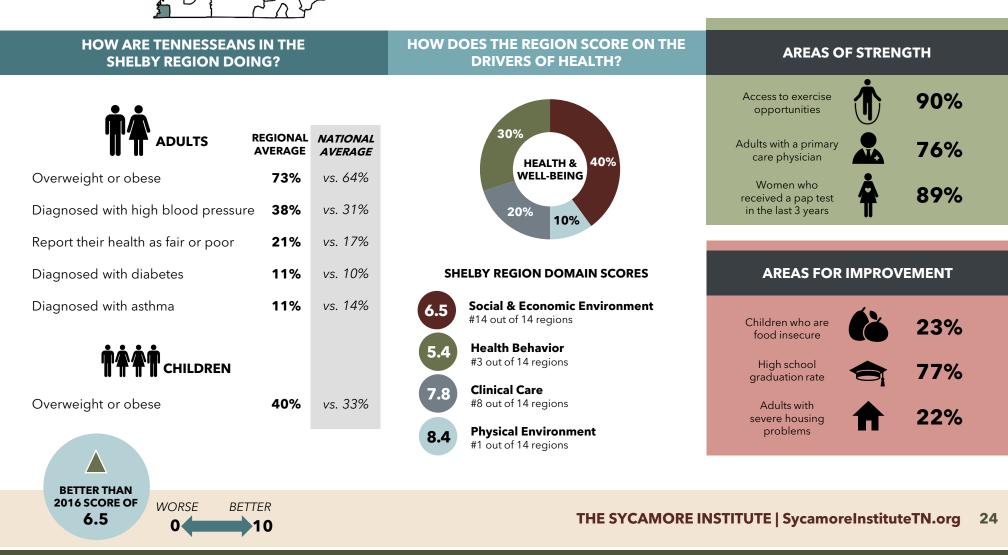
THE SYCAMORE INSTITUTE

#8 out of 14 regions

SHELBY REGION

overall score

out of 10





### TENNESSEE MADISON REGION HEALTH & WELL-BEING INDEX 2017

THE SYCAMORE INSTITUTE

6.7

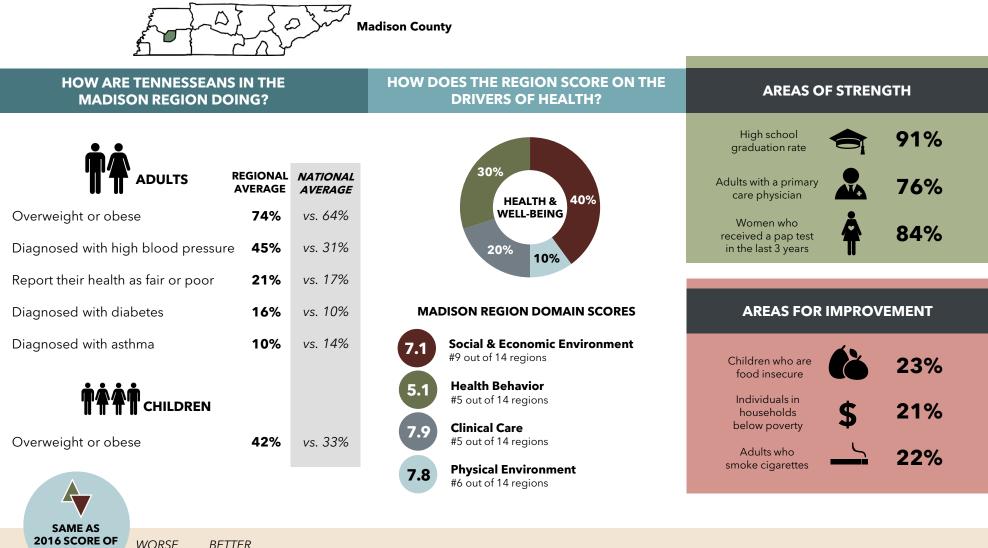
10

#5 out of 14 regions

MADISON REGION

overall score

out of 10





### **TENNESSEE SULLIVAN REGION HEALTH & WELL-BEING INDEX 2017**

**Sullivan County** 

THE SYCAMORE INSTITUTE

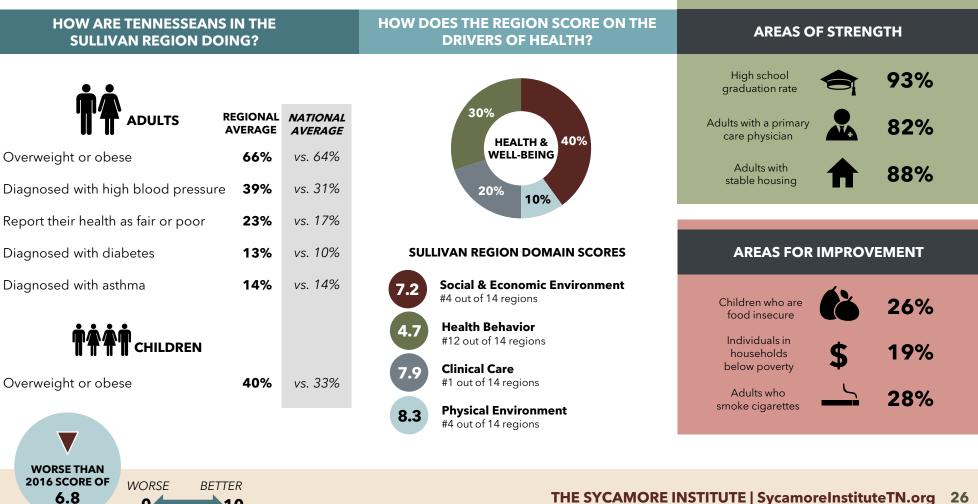
10

#6 out of 14 regions

SULLIVAN REGION

overall score

out <u>of 10</u>



### **DETAILED METHODOLOGY AND LIMITATIONS**

#### **Choosing a Methodology**

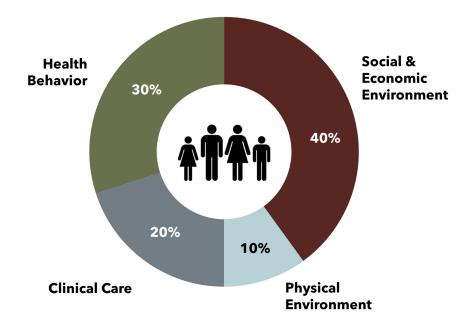
The Tennessee Health & Well-Being Index is adapted from the methodology developed by the Colorado Health Institute (CHI). CHI used this methodology for their **Colorado Access to Care Index**.<sup>14</sup> The CHI methods are based on the National Health Security Preparedness Index which was a shared effort between the Centers for Disease Control and Prevention (CDC), the Association of State and Territorial Health Officials, the Robert Wood Johnson Foundation, the University of Kentucky, and other organizations.<sup>15</sup>

We chose this methodology for our Index because:

- A scale of 0 to 10 is easy to interpret and understand.
- It allows us to track changes at both the state and regional level.
- We can calculate scores at the overall, domain, and individual metrics level.

#### **Choosing the Domains**

The 4 domains were chosen based on previous research around the drivers of health.<sup>16,17</sup> While many people think of health care as the main driver of health, where we live, work, and play has a much greater impact on our health and the quality of our lives. We chose to incorporate these factors into our Index to provide a comprehensive assessment of the drivers of population health in Tennessee. While genetics is a documented driver of health, population-level data on genetics are unavailable.



### THE DRIVERS OF HEALTH

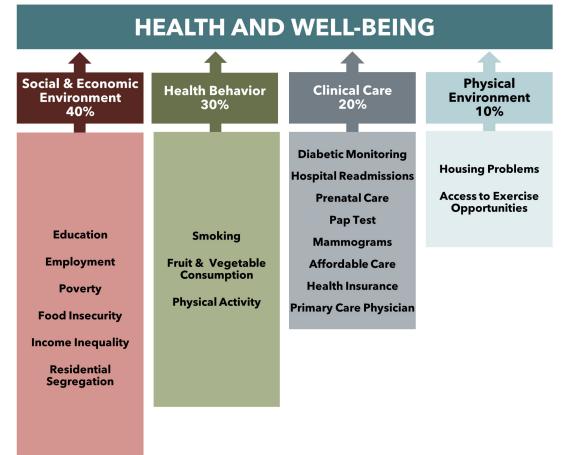
#### **Selecting the Metrics**

The following criteria were used to choose the metrics for our Index:

- Metrics must be available at both the state and regional and/or county level: It is important to show the variation within our state.
- Metrics must be available for multiple years: This allows us to update the Index and track changes over time. Most of the data sources are collected annually.
- *Metrics must be validated*: The metrics are supported by the literature and have been used in similar studies to assess the health care system, access to care, social and economic environments, public health and prevention, and health outcomes.

### **Defining the Domains and Metrics**

The Tennessee Health & Well-Being Index is comprised of 4 domains and 24 metrics. The 4 domains are: Social & Economic Environment, Health Behavior, Clinical Care, and Physical Environment.



### **HEALTH & WELL-BEING INDEX FRAMEWORK**

#### **Calculating Index Scores**

The data were compiled from each of the data sources listed below. For the 2017 Index metrics, the most recent data available were used to calculate the Index score. These data were mostly for 2015, 2014, and 2013. For the 2016 baseline measurements, data from the most recent previous years (e.g. 2014, 2013, and 2012) were used. Scores were calculated at the state and regional levels for all domains and metrics.

#### **Differences in State and Regional Scores**

State scores were not derived from averaging the regional scores. State-level aggregate data were used for the statewide scores, and regional level aggregate data were used for the regional scores. Because of this, averaging the regional scores will not produce numbers that are equal to the state scores. In fact, it is possible that a statewide score could be higher than or lower than all of the regional scores for a domain. For example, each region may have a score lower than the statewide score, but each of those lower scores may be driven by different factors (i.e. lower performance on different metrics). In the aggregate, each region's lower performance on different, specific metrics may be more than offset by the other regions' relatively higher performance. This is similar to the sensitivity issue discussed in the last bullet of the limitations sections below.

#### **Establishing Benchmarks**

Before calculating the score, an aspirational benchmark of 0% or 100% was established. For example, we set an aspirational benchmark of 100% for the proportion of Tennesseans that eat 5 or more fruits and vegetables per day. On the other hand, we set an aspirational benchmark that 0% of Tennesseans be uninsured or food insecure.

Again, these benchmarks are aspirational and may not always be possible, but ambitious benchmarks can push us towards improvements in the health and well-being of all people in our state.

#### **Calculating Domain Scores**

Each metric was converted to a score of 0 to 1 where 1 is the best score and 0 is the worst score. For example, 75.3% would be converted to .753.

For some metrics, the scores had to be flipped so that 0 would represent a poor score and 1 would represent a good score. The percent of uninsured Tennesseans is an example of this. For the 2017 calculation, 17.4% of adult Tennesseans were uninsured (from 2014). We converted the percentage to .174 and then subtracted it from 1 (1 -.174 = 0.826). In this scoring methodology, having an uninsured rate of 0% would result in an index score of 1 (1 - 0 = 1). The inequality metrics were also treated similarly because they are expressed on a scale of either to 0 to 100 or 0 to 1, where 100 and 1, respectively, represent high segregation or inequality.

After all of the metrics were converted to a scale of 0 to 1, the scores of each metric within a domain were averaged and multiplied by 10. This resulted in an overall score of 0 to 10 for each of 4 the domains.

### Calculating the Health & Well-Being Score

Individual domain scores were used to generate the state and regional Health & Well-Being Index scores. Each domain score was weighted based on its relative contribution to health and well-being. The relative contribution is based on the research cited above on the drivers of health. The following formula was used when calculating scores:

#### Health & Well-Being = (Social & Economic Environment\*0.4) + (Health Behavior\*0.3) + (Clinical Care\*0.2) + (Physical Environment\*0.1)

#### **Determining National Averages**

Each metric was compared to the United States national average to provide context for the state and each region. If possible, the national average was obtained from the same data source as the state/regional metric. If the same data source did not have a national average for the metric, a validated, outside source was used. Tables of each of the metrics compared to national averages for the state and each region can be found in the appendix.

#### Limitations

- While the most recent available data were used for each metric, the year of the most recent data varied by each source.
- There may have been more robust or timely metrics that were excluded from the Index based on our selection criteria.
- Many of the data sources rely on self-reported data. When using self-reported data, we assume that people are being honest, providing accurate answers, and that they understand the questions they are being asked.
- The Index relies on cross-sectional data that only captures a single point in time. The data do not include the impact of cumulative exposures over the life course.
- Data are presented at the regional and county level and cannot/should not be interpreted at the individual level.
- Many of the metrics were reported as crude rates. Crude rates do not take into account any confounding factors (e.g. age) that may affect the rate of the disease or circumstance reported.
- Because we used multiple sources of data, there may be inconsistencies among the data due to different sampling methods, definitions, modeling techniques, and approaches to data collection and analysis.
- The Index is not sensitive to different directional changes in domain metrics. For example, if childless household food insecurity decreases but child food insecurity increases, they may offset one another, and the domain score may remain unchanged. Because of this, we provide data for the individual metrics in the appendix in addition to the domain scores.

#### **Data Sources for Metrics**

- <u>The Tennessee Behavioral Risk Factor Surveillance System</u>
- <u>County Health Rankings & Roadmaps</u>
- Tennessee Mortality Data
- Health Indicators Warehouse
- Kids Count Data Center
- Small Area and Income Poverty Estimates
- Feeding America: Map the Meal Gap
- American Community Survey
- Small Area Health Insurance Estimates (SAHIE)

### **DATA SOURCES**

The Tennessee Health & Well-Being Index uses the 9 data sources listed below. All of the data sources are publicly available and more information can be found by clicking the title of each source.

### 1. The Tennessee Behavioral Risk Factor Surveillance System

**Description:** The Tennessee Behavioral Risk Factor Surveillance System (BRFSS) is an annual survey managed by the Tennessee Department of Health in cooperation with the Centers for Disease Control and Prevention (CDC). The survey uses telephone interviews to ask questions about individual behaviors that affect the risk of developing chronic conditions. State-level data for the health disparities metric were obtained directly from CDC.

**Time Period:** Regional level data are publically available for 2011-2013. The 2013 data were used for 2017 Index metrics, and 2012 data were used for the 2016 baseline metrics. The statewide data for the health disparities metric are from 2014 and 2015.

#### **Metrics Used:**

Domain: Clinical Care

- Diabetic Monitoring percent of adults ages 18+ diagnosed with diabetes who have received 2 or more HbA1c measurements in the last year
- Affordable Care percent of adults ages 18+ who avoided seeing a doctor because of the cost
- Primary Care Physician percent of adults ages 18+ that have a personal doctor or health care provider
- Mammogram percent of women ages 40+ who received a mammogram in the past 2 years
- Pap Test percent of women ages 18+ who had a Pap test within the past 3 years

#### Domain: Health Behavior

- Smoking percent of adults ages 18+ who currently smoke cigarettes
- Fruit and Vegetable Consumption percent of adults ages 18+ who consume 5 or more servings of fruits or vegetables per day

Health Disparities

• Self-Rated Health Status - individuals were asked "Would you say that in general your health is - Excellent, Very good, Good, Fair, or Poor?"

### 2. County Health Rankings & Roadmaps

**Description:** The County Health Rankings & Roadmaps is an annual program that measures factors that influence health. The program is a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. Rankings are generated for all states and counties in the United States.

**Time Period:** Data are available for 2010-2016. The 2016 data were used for 2017 Index metrics, and 2015 data were used for the 2016 baseline metrics.

### **Metrics Used:**

Domain: Health Behavior

• Physical Inactivity - percent of adults ages 20+ who reported no leisure-time physical activity (e.g. running, calisthenics, golf, gardening, or walking for exercise)

### Domain: Social & Economic Environment

- Unemployment percent of people ages 16+ who were unemployed and looking for work
- Child Poverty percent of children under the age of 18 living in a household with an income below the federal poverty threshold, which varies by family/household size (e.g. \$24,300 per year for a family of 4 in 2016)
- Residential Segregation differences in the residential distribution of 2 or more groups across census tracts in an area. We use two separate metrics to measure residential distribution differences between blacks and whites and whites and non-whites. These distribution differences represent residential segregation. This is measured by a dissimilarity index that quantifies the gap on a scale of 0 to 100, where 100 is considered the highest level of residential segregation (i.e. 2 groups living in different areas). Values of 40 or 50 are considered moderate levels of segregation, and values of 30 or below are considered low levels of segregation. 5-year estimates of 2012-2016 data were used because they are more accurate than 1-year estimates when analyzing small populations and geographies.
- Some College percent of adults ages 25-44 with some post-secondary education (i.e. vocational/technical school, junior college, 4 year college)

### Domain: Physical Environment

- Severe Housing Problems percent of households with at least 1 of 4 housing problems: overcrowding, lack of kitchen, lack of plumbing facilities, or high housing costs (defined as monthly housing costs including utilities that exceed 50% of monthly income)
- Access to Exercise Opportunities percent of individuals who live reasonably close to a location for physical activity (local, state, and national parks; gyms, community centers, YMCAs, dance studios, and pools). Reasonably close is defined as living within a census block that is within 0.5 miles of a park, an urban census tract that is within 1 mile of a recreational facility, or a rural census tract that is within 3 miles of a recreational facility.

Domain: Clinical Care

• Uninsured Children - percent of the population under age 19 that has no health insurance coverage

### 3. Tennessee Mortality Data

**Description:** Mortality data are collected through standardized Certificate of Death forms that are forwarded to the Tennessee Department of Health's Office of Vital Records. Data include information on in-state and out-of-state deaths of all Tennessee residents. They also include demographic characteristics and the cause of death

**Time Period:** Data are available for 1990-2014. The 2014 data were used for 2017 Index metrics, and 2013 data were used for the 2016 baseline metrics.

### Metrics Used:

Health Disparities

• Infant Mortality Rate - the number of deaths of infants under age 1 occurring among all live births in a given year

### 4. Health Indicators Warehouse

**Description:** The Health Indicators Warehouse is a collaboration of many agencies and offices within the U.S. Department of Health and Human Services and is maintained by the Centers for Disease Control and Prevention (CDC). Hospital readmission data are provided by the Centers for Medicare and Medicaid Services (CMS) databases (i.e. Medicare Administrative Data and Chronic Condition Data Warehouse).

**Time Period:** Data are available for 2007-2013. The 2013 data were used for 2017 Index metrics, and 2012 data were used for the 2016 baseline metrics.

### **Metrics Used:**

Domain: Clinical Care

• Medicare Readmissions - percent of Medicare beneficiaries covered by traditional fee-for-service Medicare that experienced an inpatient readmissions within 30 days of an acute hospital stay

### 5. Kids Count Data Center

**Description:** The Kids Count Data Center is a collaboration between the Annie E. Casey Foundation and state-level organizations in all 50 states, Puerto Rico, the U.S. Virgin Islands, and the District of Columbia. The Center provides annual data on the health and well-being of children and families in the United States and the underlying factors that influence their health and well-being.

**Time Period:** Data are available for 2010- 2015. The 2015 data were used for the 2017 Index metrics for the Social & Economic Environment domain. The 2014 date were used for the 2016 baseline metrics for the Social & Economic Environment domain. The 2014 data were used for the 2017 Index metrics for the Clinical Care domain because they were the most recent data available for the particular metric. The 2013 data were used for the 2016 baseline metrics for the Clinical Care domain.

### **Metrics Used:**

Domain: Social & Economic Environment

• High School Graduation Rate - percent of students graduating within 4 years of entering high school and graduation in more than 4 years for students with an Individual Education Plan

Domain: Clinical Care

• Adequate Prenatal Care - percent of live births in a given calendar year where the mother received adequate prenatal care. The adequacy of care is based on the Kessner index, which was developed by the Institute of Medicine in 1973 to assess prenatal care.

### 6. Small Area and Income Poverty Estimates, 2014, US Census Bureau

**Description:** The U.S. Census Bureau Small Area Income and Poverty Estimates (SAIPE) provide annual income and poverty estimates for states, counties, and school districts. The SAIPE are model-based estimates that use summary data from federal income tax returns, Supplemental Nutrition Assistance Program (SNAP) benefits data, decennial census data, postcensal population estimates, Supplemental Security Income data, economic data from the Bureau of Economic Analysis, and the American Community Survey.

**Time Period:** Data are available for 1989, 1993, and 1995-2014. The 2014 data were used for 2017 Index metrics, and 2013 data were used for the 2016 baseline metrics.

### **Metrics Used:**

Domain: Social & Economic Environment

• Overall Poverty - percent of individuals of any age living in a household with an income below the federal poverty threshold, which varies by family size (e.g. \$24,300 per year for a family of 4 in 2016)

### 7. Small Area Health Insurance Estimates (SAHIE)

**Description:** The U.S. Census Bureau Small Area Health Insurance Estimates (SAHIE) provides single-year estimates of health insurance coverage for counties in the US. The estimates are based on an area-level model and are supplemented with administrative data.

**Time Period:** Data are available for 2006-2014. The 2014 data were used for 2017 Index metrics, and 2013 data were used for the 2016 baseline metrics.

### **Metrics Used:**

Domain: Clinical Care

• Uninsured Adults - percent of adults ages 18-64 that do not have any kind of health care coverage

### 8. Feeding America: Map the Meal Gap

**Description:** The Map the Meal Gap project provides annual state and county level estimates of food insecurity, food budget shortfall, cost-offood index, and the national average cost of a meal. Data from the Current Population Survey and the Bureau of Labor Statistics are used to assess the relationship between food insecurity and associated factors (e.g. unemployment rate, poverty rate, homeownership rate, and other demographic variables) at the state level. County level estimates are then made based on the state level relationship between food insecurity and the associated variables by using the American Community Survey.

**Time Period:** Data are available for 2012-2014. The 2014 data were used for 2017 Index metrics, and 2013 data were used for the 2016 baseline metrics.

### **Metrics Used:**

Domain: Social & Economic Environment

- Childless Adult Food Insecurity percent of households without children that have limited or uncertain access to adequate food
- Child Food Insecurity percent of households with children under the age of 18 that have limited or uncertain access to food

### 9. American Community Survey

**Description:** The American Community Survey (ACS) is an annual survey conducted by the U.S. Census Bureau. The ACS collects information related to demographics, housing, and economic, and social factors for multiple geographic areas.

**Time Period:** ACS data were first collected in 2005 with 1-year, 3-year, and 5-year estimates available as well. The 5-year estimates associated with 2011-2015 data were used for 2017 Index metrics, and the 5-year estimates associated with 2010-2014 data were used for the 2016 baseline Index metrics.

#### **Metrics Used:**

Domain: Social & Economic Environment

• Income Inequality - a measurement of the distribution of income in Tennessee. It is measured by the Gini index, which quantifies the distribution on a scale of 0 to 1. At 0, all Tennesseans would have the same income. At 1, the difference between the highest incomes and the lowest would be greatest. 5-year estimates were used because they are more accurate than 1-year estimates when analyzing small populations and geographies.

### **Data Sources Used for National Averages**

- 1. National Center for Education Statistics; The Condition of Education At a Glance. LINK
- 2. Bureau of Labor Statistics. Labor Force Statistics from the Current Population Survey. LINK
- 3. Feeding America, Hunger and Poverty Facts and Statistics LINK
- 4. Office of Policy Development and Research (PD&R), U.S. Department of Housing and Urban Development, CHAS Data Query Tool. LINK
- 5. National Health Interview Survey (NHIS); Centers for Disease Control and Prevention, National Center for Health Statistics (CDC/NCHS) LINK
- 6. National Center for Health Statistics, final natality data. LINK
- 7. Kotelchuck M. An evaluation of the Kessner Adequacy of Prenatal Care Index and a proposed Adequacy of Prenatal Care Utilization Index. Am J Public Health 1994; 84: 1414-1420. LINK
- 8. Centers for Disease Control and Prevention. Current Cigarette Smoking Among Adults–United States, 2005-2014. Morbidity and Mortality Weekly Report 2015;64(44):1233-40. LINK
- 9. Moore, Latetia V., Thompson, Frances E; Adults Meeting Fruit and Vegetable Intake Recommendations-United States, 2013. MMWR Morb Mortal Wkly Rep 2015;64: 709-713. LINK
- 10. Jessica Smith and Carla Medalia. Health Insurance Coverage in the United States: 2014. Current Population Reports, 2015 LINK
- 11. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. BRFSS Prevalence & Trends Data. 2015. <u>LINK</u>
- 12. Kaiser Family Foundation, Key Facts about the Uninsured Population LINK
- 13. Centers for Disease Control and Prevention, National Center for Health Statistics, Health E-Stats LINK
- 14. American Community Survey, American FactFinder<u>LINK</u>
- 15. John R. Logan and Brian Stults. 2011. "The Persistence of Segregation in the Metropolis: New Findings from the 2010 Census" Census Brief prepared for Project US2010. LINK
- 16. Iceland, John, and Gregory Sharp. "White residential segregation in US metropolitan areas: Conceptual issues, patterns, and trends from the US census, 1980 to 2010." Population research and policy review 32, no. 5 (2013): 663-686. LINK
- 17. Small Area Health Insurance Estimates (SAHIE), U.S. Census Bureau LINK

## REFERENCES

- The World Health Organization. Preamble to the Constitution of WHO as adopted by the International Health Conference, New Yowrk, 19 June-22 July 1946; signed on 11 July 1946 by the representatives of 61 States (Official Records of WHO, no. 2, p. 100). [Online] April 7, 1948. <u>LINK</u>
- 2. Centers for Disease Control and Prevention. Well-Being Concepts. CDC Division of Population Health, Health Related Quality of Life. LINK
- 3. Arora, Anita, et al. Population Well-Being Measures Help Explain Geographic Disparities in Life Expectancy at the County Level. Health Affairs, 35(11) 2075-2082. November 2016. LINK
- U.S. Department of Health and Human Services. The Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020. Phase I report: Recommendations for the framework and format of Healthy People 2020. Section IV: Advisory Committee findings and recommendations. <u>LINK</u>
- 5. McGovern, Laura, Miller, George and Hughes-Cromwick, Paul. Health Policy Brief: The Relative Contribution of Multiple Determinants to Health Outcomes. Health Affairs. August 21, 2014. LINK
- 6. Woolf, Steven H, et al. The Health of the States: How the U.S. States Compare in Health Status and the Factors that Shape Health, Summary Report. Center on Society and Health, Virginia Commonwealth University; Urban Institute. October 2016. <u>LINK</u>
- 7. Goldman, Dana and Smith, James P. The Increasing Value of Education to Health. Social Science & Medicine; 72(10): 1728-1737. May 2011. LINK
- 8. Woolf, Steven H, et al. How are Income and Wealth Linked to Health and Longevity? Urban Institute and Center on Society and Health, Virginia Commonwealth University. 2015. LINK
- 9. Galea, Sandro, et al. Estimated Deaths Attributable to Social Factors in the United States. American Journal of Public Health; 101:1456-65. 2011. LINK
- 10. Mozaffarian, Dariush, et al. Population Approaches to Improve Diet, Physical Activity, and Smoking Hbaits. Circulation, 126(12), 1514-1563. 2012. <u>LINK</u>
- 11. Gulliford, Martin, Jose Figueroa-Munoz, Myfanwy Morgan, David Hughes, Barry Gibson, Roger Beech, and Meryl Hudson. "What does' access to health care mean?." Journal of health services research & policy 7, no. 3 (2002): 186-188. LINK
- 12. Northridge, Mary E, Sclar, Elliott D and Biswas, Padmini. Sorting Out the Connections Between the Built Environment and Health: A Conceptual Framework for Navigating Pathways and Planning Healthy Cities. Journal of Urban Health; 80(4). December 2003. LINK
- 13. Robert Wood Johnson Foundation, Braveman, Paula, and Egerter, Susan. Overcoming Obstacles to Health: Report from the Robert Wood Johnson Foundation to the Commission to Build a Healthier America. Robert Wood Johnson Foundation. 2011. LINK
- 14. Colorado Access to Care Index  $\underline{\text{LINK}}$
- 15. National Health Security Preparedness Index LINK
- 16. Park, Hyojun, Anne M. Roubal, Amanda Jovaag, Keith P. Gennuso, and Bridget B. Catlin. "Relative Contributions of a Set of Health Factors to Selected Health Outcomes." American journal of preventive medicine 49, no. 6 (2015): 961-969. <u>LINK</u>
- 17. Heiman, Harry J., and Samantha Artiga. "Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity." Health 20: 10. <u>LINK</u>

## **ABOUT THE SYCAMORE INSTITUTE**

Launched in 2015, The Sycamore Institute is an independent, nonpartisan public policy research center for Tennessee. The Institute's mission is to provide accessible, reliable data and research in pursuit of sound, sustainable policies that improve the lives of all Tennesseans.

### **BOARD OF DIRECTORS**

Jim Bryson, Board President, is the President of 20|20 Research, Inc. He served four years as a Tennessee State Senator and was his party's nominee for Governor of Tennessee in 2006.

Stewart Clifton, Board Secretary, is an attorney and government relations specialist who specializes in representing Tennessee nonprofits at the state level.

James W. White, Board Treasurer, is a managing member of the law firm of Farmer Purcell White & Lassiter, PLLC. He previously served as Executive Director of the Tennessee General Assembly's Fiscal Review Committee, Counsel to the Speaker of the Tennessee House of Representatives, and Counsel to the Tennessee House Finance, Ways & Means Committee.

**Brenda Gadd**, Board Member, is the Public Policy Coordinator for the Tennessee Bar Association. She has over 15 years of experience in Tennessee politics that includes statewide campaign management and legislative and executive branch service.

**Kristen Keely-Dinger**, Board Member, is the President and CEO of the Healing Trust, a private foundation created to provide grants and support to nonprofits that foster healing and health for vulnerable populations in Middle Tennessee.

**Sumita Keller** is the Director of the Home Visiting Leadership Alliance at the Tennessee Commission on Children and Youth. She has also served on the Executive Team at the Tennessee Department of Human Services and as the Policy Advocate for the Tennessee Commission on Children and Youth.

**Lewis Lavine**, Board Member, is a Senior Strategist with the Ingram Group, a Nashville and Washington business consulting firm. He previously served for 12 years as the President of the Center for Nonprofit Management. He has held a number of state and federal government positions and received the Ned McWherter Leadership Award from the Tennessee Center for Performance Excellence.

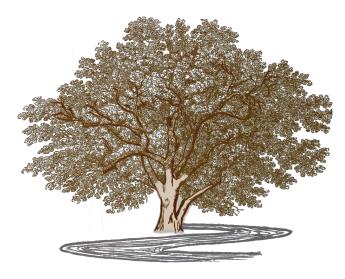
Jason B. Rogers, Board Member, is an attorney and the Vice President for Administration and University Counsel at Belmont University.

#### **STAFF**

Laura Berlind, Executive Director Mandy Pellegrin, Director of Health Policy Brian Straessle, Communications Director Courtnee Melton, PhD, Policy Analyst

### **SUGGESTED CITATION:**

The Sycamore Institute, "Tennessee Health and Well-Being Index," 2017.



## THE SYCAMORE INSTITUTE

**BUILDING A STRONGER TENNESSEE THROUGH DATA AND RESEARCH** 

# **TENNESSEE** HEALTH & WELL-BEING INDEX 2017

## APPENDIX

### Table 1. Statewide Tennessee Metrics

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	58.2%	46.1%	BETTER
Black-White Residential Segregation Index (2014)	67	59	WORSE
Childless household that are food insecure (2014)	16.9%	13.0%	WORSE
Children who are food insecure (2014)	24.0%	17.0%	WORSE
Children who live in poverty (2014)	25.9%	19.7%	WORSE
High School Graduation rate (2015)	87.7%	82.0%	BETTER
Income Inequality Index (2015)	47.7	47.9	SAME
Individuals who live in poverty (2014)	18.2%	12.4%	WORSE
Unemployment rate (2014)	6.7%	6.2%	WORSE
White-Non-White Residential Segregation Index (2014)	59	41	WORSE
Health Behavior Domain			
Adults currently smoking cigarettes (2013)	24.3%	16.8%	WORSE
Adults who are physically inactive (2012)	32.0%	29.6%	WORSE
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	9.2%	13.1% fruit	-
	combined	8.9% vegetables	
Clinical Care Domain			
Adults who are uninsured (2014)	17.4%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	17.6%	15.3%	WORSE
Adults with a primary care physician (2013)	77.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	86.6%	84.9%	BETTER
Children who are uninsured (2013)	5.3%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	17.9%	18.0%	SAME
Pregnant women who receive adequate prenatal care (2015)	56.6%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	80.1%	75.2%	BETTER
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	73.3%	73.0%	SAME
Physical Environment Domain		•	
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of	16.6%	19.0%	BETTER
kitchen, or lack of plumbing facilities (2012)			
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	69.3%	77.0%	WORSE

## **Table 2. Northeast Region Metrics**

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	46.7%	46.1%	SAME
Black-White Residential Segregation Index (2014)	58	59	BETTER
Childless household that are food insecure (2014)	15.7%	13.0%	WORSE
Children who are food insecure (2014)	27.2%	17.0%	WORSE
Children who live in poverty (2014)	30.7%	19.7%	WORSE
High School Graduation rate (2015)	89.7%	82.0%	BETTER
Income Inequality Index (2015)	45.8	47.9	BETTER
Individuals who live in poverty (2014)	22.1%	12.4%	WORSE
Unemployment rate (2014)	7.9%	6.2%	WORSE
White-Non-White Residential Segregation Index (2014)	32	41	BETTER
Health Behavior Domain			-
Adults currently smoking cigarettes (2013)	27.5%	16.8%	WORSE
Adults who are physically inactive (2012)	36.0%	29.6%	WORSE
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	7.3% combined	13.1% fruit 8.9% vegetables	-
Clinical Care Domain			
Adults who are uninsured (2014)	17.8%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	16.9%	15.3%	WORSE
Adults with a primary care physician (2013)	78.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	85.9%	84.9%	BETTER
Children who are uninsured (2013)	5.0%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	20.1%	18.0%	WORSE
Pregnant women who receive adequate prenatal care (2015)	47.8%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	83.4%	75.2%	BETTER
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	72.3%	73.0%	WORSE
Physical Environment Domain	·		
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	13.1%	19.0%	BETTER
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	61.6%	77.0%	WORSE

## **Table 3. East Region Metrics**

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	43.0%	46.1%	WORSE
Black-White Residential Segregation Index (2014)	56	59	BETTER
Childless household that are food insecure (2014)	15.2%	13.0%	WORSE
Children who are food insecure (2014)	26.9%	17%	WORSE
Children who live in poverty (2014)	29.6%	19.7%	WORSE
High School Graduation rate (2015)	91.3%	82.0%	BETTER
Income Inequality Index (2015)	45.9	47.9	BETTER
Individuals who live in poverty (2014)	20.4%	12.4%	WORSE
Unemployment rate (2014)	8.0%	6.2%	WORSE
White-Non-White Residential Segregation Index (2014)	32	41	BETTER
Health Behavior Domain		-	
Adults currently smoking cigarettes (2013)	28.3%	16.8%	WORSE
Adults who are physically inactive (2012)	36.4%	29.6%	WORSE
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	8.3% combined	13.1% fruit 8.9% vegetables	-
Clinical Care Domain			
Adults who are uninsured (2014)	18.7%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	21.7%	15.3%	WORSE
Adults with a primary care physician (2013)	80.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	86.8%	84.9%	BETTER
Children who are uninsured (2013)	5.6%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	17.7%	18.0%	SAME
Pregnant women who receive adequate prenatal care (2015)	52.7%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	71.9%	75.2%	WORSE
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	64.1%	73.0%	WORSE
Physical Environment Domain			· · · · · · · · · · · · · · · · · · ·
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	13.8%	19.0%	BETTER
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	57.5%	77.0%	WORSE

## **Table 4. Knox Region Metrics**

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	70.4%	46.1%	BETTER
Black-White Residential Segregation Index (2014)	54	59	BETTER
Childless household that are food insecure (2014)	14.4%	13.0%	WORSE
Children who are food insecure (2014)	20.7%	17.0%	WORSE
Children who live in poverty (2014)	23.0%	19.7%	WORSE
High School Graduation rate (2015)	90.0%	82.0%	BETTER
Income Inequality Index (2015)	48.0	47.9	SAME
Individuals who live in poverty (2014)	20.6%	12.4%	WORSE
Unemployment rate (2014)	5.5%	6.2%	BETTER
White-Non-White Residential Segregation Index (2014)	42	41	WORSE
Health Behavior Domain		-	
Adults currently smoking cigarettes (2013)	23.2%	16.8%	WORSE
Adults who are physically inactive (2012)	29.7%	29.6%	SAME
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	11.3% combined	13.1% fruit 8.9% vegetables	-
Clinical Care Domain		<u>U</u>	
Adults who are uninsured (2014)	14.9%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	12.0%	15.3%	BETTER
Adults with a primary care physician (2013)	81.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	88.3%	84.9%	BETTER
Children who are uninsured (2013)	5.0%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	16.4%	18.0%	BETTER
Pregnant women who receive adequate prenatal care (2015)	47.8%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	80.1%	75.2%	BETTER
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	77.6%	73.0%	BETTER
Physical Environment Domain			
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	14.7%	19.0%	BETTER
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	79.5%	77.0%	BETTER

## Table 5. Upper-Cumberland Region Metrics

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	40.9%	46.1%	WORSE
Black-White Residential Segregation Index (2014)	54	59	BETTER
Childless household that are food insecure (2014)	13.9%	13.0%	SAME
Children who are food insecure (2014)	26.4%	17.0%	WORSE
Children who live in poverty (2014)	29.5%	19.7%	WORSE
High School Graduation rate (2015)	92.0%	82.0%	BETTER
Income Inequality Index (2015)	45.8	47.9	BETTER
Individuals who live in poverty (2014)	20.2%	12.4%	WORSE
Unemployment rate (2014)	7.8%	6.2%	WORSE
White-Non-White Residential Segregation Index (2014)	34	41	BETTER
Health Behavior Domain		• •	
Adults currently smoking cigarettes (2013)	25.0%	16.8%	WORSE
Adults who are physically inactive (2012)	36.1%	29.6%	WORSE
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	7.8% combined	13.1% fruit 8.9% vegetables	-
Clinical Care Domain		<u> </u>	
Adults who are uninsured (2014)	19.6%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	18.7%	15.3%	WORSE
Adults with a primary care physician (2013)	78.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	86.7%	84.9%	BETTER
Children who are uninsured (2013)	6.1%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	19.9%	18.0%	WORSE
Pregnant women who receive adequate prenatal care (2015)	64.5%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	72.2%	75.2%	WORSE
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	70.1%	73.0%	WORSE
Physical Environment Domain			
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	13.9%	19.0%	BETTER
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	34.8%	77.0%	WORSE

## **Table 6. Southeast Region Metrics**

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	41.0%	46.1%	WORSE
Black-White Residential Segregation Index (2014)	42	59	BETTER
Childless household that are food insecure (2014)	15.2%	13.0%	WORSE
Children who are food insecure (2014)	26.4%	17.0%	WORSE
Children who live in poverty (2014)	29.3%	19.7%	WORSE
High School Graduation rate (2015)	87.3%	82.0%	BETTER
Income Inequality Index (2015)	45.4	47.9	BETTER
Individuals who live in poverty (2014)	20.8%	12.4%	WORSE
Unemployment rate (2014)	7.9%	6.2%	WORSE
White-Non-White Residential Segregation Index (2014)	27	41	BETTER
Health Behavior Domain			-
Adults currently smoking cigarettes (2013)	30.3%	16.8%	WORSE
Adults who are physically inactive (2012)	37.1%	29.6%	WORSE
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	7.1% combined	13.1% fruit 8.9% vegetables	-
Clinical Care Domain			
Adults who are uninsured (2014)	18.5%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	20.8%	15.3%	WORSE
Adults with a primary care physician (2013)	80.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	85.4%	84.9%	BETTER
Children who are uninsured (2013)	5.7%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	18.2%	18.0%	SAME
Pregnant women who receive adequate prenatal care (2015)	55.9%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	75.7%	75.2%	SAME
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	69.3%	73.0%	WORSE
Physical Environment Domain	·		
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	15.2%	19.0%	BETTER
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	50.7%	77.0%	WORSE

## **Table 7. Hamilton Region Metrics**

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	65.6%	46.1%	BETTER
Black-White Residential Segregation Index (2014)	63	59	WORSE
Childless household that are food insecure (2014)	16.1%	13.0%	WORSE
Children who are food insecure (2014)	21.8%	17.0%	WORSE
Children who live in poverty (2014)	22.0%	19.7%	WORSE
High School Graduation rate (2015)	85.4%	82.0%	BETTER
Income Inequality Index (2015)	47.7	47.9	SAME
Individuals who live in poverty (2014)	15.9%	12.4%	WORSE
Unemployment rate (2014)	6.3%	6.2%	SAME
White-Non-White Residential Segregation Index (2014)	57	41	WORSE
Health Behavior Domain			
Adults currently smoking cigarettes (2013)	23.5%	16.8%	WORSE
Adults who are physically inactive (2012)	30%	29.6%	SAME
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	15.2% combined	13.1% fruit 8.9% vegetables	-
Clinical Care Domain		U	
Adults who are uninsured (2014)	16.2%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	16.3%	15.3%	WORSE
Adults with a primary care physician (2013)	79.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	84.4%	84.9%	SAME
Children who are uninsured (2013)	4.2%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	16.2%	18.0%	BETTER
Pregnant women who receive adequate prenatal care (2015)	60.5%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	79.4%	75.2%	BETTER
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	76.2%	73.0%	BETTER
Physical Environment Domain	·	·	
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	16.2%	19.0%	BETTER
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	81.5%	77.0%	BETTER

## Table 8. Davidson Region Metrics

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	67.0%	46.1%	BETTER
Black-White Residential Segregation Index (2014)	49	59	BETTER
Childless household that are food insecure (2014)	17.3%	13.0%	WORSE
Children who are food insecure (2014)	21.6%	17.0%	WORSE
Children who live in poverty (2014)	31.5%	19.7%	WORSE
High School Graduation rate (2015)	81.5%	82.0%	SAME
Income Inequality Index (2015)	48.8	47.9	SAME
Individuals who live in poverty (2014)	19.9%	12.4%	WORSE
Unemployment rate (2014)	5.1%	6.2%	BETTER
White-Non-White Residential Segregation Index (2014)	43	41	WORSE
Health Behavior Domain		• •	
Adults currently smoking cigarettes (2013)	20.9%	16.8%	WORSE
Adults who are physically inactive (2012)	25.8%	29.6%	BETTER
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	11.6% combined	13.1% fruit 8.9% vegetables	-
Clinical Care Domain		<u> </u>	
Adults who are uninsured (2014)	19.7%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	16.8%	15.3%	WORSE
Adults with a primary care physician (2013)	72.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	86.5%	84.9%	BETTER
Children who are uninsured (2013)	6.6%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	18.8%	18.0%	SAME
Pregnant women who receive adequate prenatal care (2015)	54.0%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	81.7%	75.2%	BETTER
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	82.5%	73.0%	BETTER
Physical Environment Domain	•		
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	18.8%	19.0%	SAME
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	86.4%	77.0%	BETTER

## Table 9. Mid-Cumberland Region Metrics

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	57.3%	46.1%	BETTER
Black-White Residential Segregation Index (2014)	42	59	BETTER
Childless household that are food insecure (2014)	13.3%	13.0%	SAME
Children who are food insecure (2014)	21.8%	17.0%	WORSE
Children who live in poverty (2014)	19.6%	19.7%	SAME
High School Graduation rate (2015)	94.0%	82.0%	BETTER
Income Inequality Index (2015)	42.6	47.9	BETTER
Individuals who live in poverty (2014)	14.0%	12.4%	WORSE
Unemployment rate (2014)	6.6%	6.2%	SAME
White-Non-White Residential Segregation Index (2014)	31	41	BETTER
Health Behavior Domain			
Adults currently smoking cigarettes (2013)	22.9%	16.8%	WORSE
Adults who are physically inactive (2012)	33.2%	29.6%	WORSE
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	8% combined	13.1% fruit 8.9% vegetables	-
Clinical Care Domain			
Adults who are uninsured (2014)	15.8%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	10.8%	15.3%	BETTER
Adults with a primary care physician (2013)	77.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	85.9%	84.9%	BETTER
Children who are uninsured (2013)	5.6%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	18.2%	18.0%	SAME
Pregnant women who receive adequate prenatal care (2015)	61.9%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	77.0%	75.2%	BETTER
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	72.0%	73.0%	WORSE
Physical Environment Domain			
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	13.2%	19.0%	BETTER
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	58.7%	77.0%	WORSE

## **Table 10. South Central Region Metrics**

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	43.8%	46.1%	WORSE
Black-White Residential Segregation Index (2014)	42	59	BETTER
Childless household that are food insecure (2014)	14.6%	13.0%	WORSE
Children who are food insecure (2014)	25.1%	17.0%	WORSE
Children who live in poverty (2014)	26.8%	19.7%	WORSE
High School Graduation rate (2015)	91.2%	82.0%	BETTER
Income Inequality Index (2015)	44.1	47.9	BETTER
Individuals who live in poverty (2014)	18.5%	12.4%	WORSE
Unemployment rate (2014)	7.0%	6.2%	WORSE
White-Non-White Residential Segregation Index (2014)	26	41	BETTER
Health Behavior Domain			
Adults currently smoking cigarettes (2013)	23.0%	16.8%	WORSE
Adults who are physically inactive (2012)	36.3%	29.6%	WORSE
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	10.4% combined	13.1% fruit 8.9% vegetables	-
Clinical Care Domain			
Adults who are uninsured (2014)	18.8%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	20.9%	15.3%	WORSE
Adults with a primary care physician (2013)	82.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	85.0%	84.9%	SAME
Children who are uninsured (2013)	6.2%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	18.6%	18.0%	SAME
Pregnant women who receive adequate prenatal care (2015)	62.0%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	74.0%	75.2%	WORSE
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	67.4%	73.0%	WORSE
Physical Environment Domain	·	·	·
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	13.8%	19.0%	BETTER
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	40.0%	77.0%	WORSE

## Table 11. Northwest Region Metrics

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	44.9%	46.1%	WORSE
Black-White Residential Segregation Index (2014)	37	59	BETTER
Childless household that are food insecure (2014)	17.5%	13.0%	WORSE
Children who are food insecure (2014)	26.6%	17.0%	WORSE
Children who live in poverty (2014)	30.6%	19.7%	WORSE
High School Graduation rate (2015)	92.3%	82.0%	BETTER
Income Inequality Index (2015)	45.7	47.9	BETTER
Individuals who live in poverty (2014)	22.8%	12.4%	WORSE
Unemployment rate (2014)	8.9%	6.2%	WORSE
White-Non-White Residential Segregation Index (2014)	33	41	BETTER
Health Behavior Domain			
Adults currently smoking cigarettes (2013)	25.6%	16.8%	WORSE
Adults who are physically inactive (2012)	36.9%	29.6%	WORSE
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	9.1% combined	13.1% fruit 8.9% vegetables	-
Clinical Care Domain		<u> </u>	
Adults who are uninsured (2014)	17.8%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	22.9%	15.3%	WORSE
Adults with a primary care physician (2013)	80.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	88.4%	84.9%	BETTER
Children who are uninsured (2013)	5.4%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	17.8%	18.0%	SAME
Pregnant women who receive adequate prenatal care (2015)	67.4%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	81.4%	75.2%	BETTER
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	64.4%	73.0%	WORSE
Physical Environment Domain			
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	13.1%	19.0%	BETTER
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	44.9%	77.0%	WORSE

## Table 12. Southwest Region Metrics

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	44.2%	46.1%	WORSE
Black-White Residential Segregation Index (2014)	39	59	BETTER
Childless household that are food insecure (2014)	18.2%	13.0%	WORSE
Children who are food insecure (2014)	25.8%	17.0%	WORSE
Children who live in poverty (2014)	28.0%	19.7%	WORSE
High School Graduation rate (2015)	90.6%	82.0%	BETTER
Income Inequality Index (2015)	46.5	47.9	BETTER
Individuals who live in poverty (2014)	20.9%	12.4%	WORSE
Unemployment rate (2014)	9.0%	6.2%	WORSE
White-Non-White Residential Segregation Index (2014)	34	41	BETTER
Health Behavior Domain			-
Adults currently smoking cigarettes (2013)	32.8%	16.8%	WORSE
Adults who are physically inactive (2012)	36.6%	29.6%	WORSE
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	5.3% combined	13.1% fruit 8.9% vegetables	-
Clinical Care Domain			
Adults who are uninsured (2014)	17.5%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	20.5%	15.3%	WORSE
Adults with a primary care physician (2013)	84.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	85.5%	84.9%	SAME
Children who are uninsured (2013)	5.2%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	18.1%	18.0%	SAME
Pregnant women who receive adequate prenatal care (2015)	63.9%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	76.1%	75.2%	BETTER
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	63.2%	73%	WORSE
Physical Environment Domain			
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	15.4%	19.0%	BETTER
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	40.6%	77.0%	WORSE

## Table 13. Shelby Region Metrics

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	62.3%	46.1%	BETTER
Black-White Residential Segregation Index (2014)	67	59	WORSE
Childless household that are food insecure (2014)	22.4%	13.0%	WORSE
Children who are food insecure (2014)	22.9%	17.0%	WORSE
Children who live in poverty (2014)	34.5%	19.7%	WORSE
High School Graduation rate (2015)	77.2%	82.0%	WORSE
Income Inequality Index (2015)	50.5	47.9	WORSE
Individuals who live in poverty (2014)	23.0%	12.4%	WORSE
Unemployment rate (2014)	7.9%	6.2%	WORSE
White-Non-White Residential Segregation Index (2014)	63	41	WORSE
Health Behavior Domain			
Adults currently smoking cigarettes (2013)	20.4%	16.8%	WORSE
Adults who are physically inactive (2012)	30.2%	29.6%	SAME
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	11.1% combined	13.1% fruit 8.9% vegetables	-
Clinical Care Domain			
Adults who are uninsured (2014)	19.3%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	20.0%	15.3%	WORSE
Adults with a primary care physician (2013)	76.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	84.3%	84.9%	SAME
Children who are uninsured (2013)	4.7%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	18.6%	18.0%	SAME
Pregnant women who receive adequate prenatal care (2015)	51.6%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	89.4%	75.2%	BETTER
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	76.2%	73.0%	BETTER
Physical Environment Domain		·	
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	21.8%	19.0%	WORSE
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	90.1%	77.0%	BETTER

## **Table 14. Madison Region Metrics**

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE			
Social & Economic Environment Domain						
Adults with some college education (2014)	56.9%	46.1%	BETTER			
Black-White Residential Segregation Index (2014)	47	59	BETTER			
Childless household that are food insecure (2014)	19.5%	13.0%	WORSE			
Children who are food insecure (2014)	23.1%	17.0%	WORSE			
Children who live in poverty (2014)	29.2%	19.7%	WORSE			
High School Graduation rate (2015)	91.0%	82.0%	BETTER			
Income Inequality Index (2015)	47.2	47.9	WORSE			
Individuals who live in poverty (2014)	20.9%	12.4%	WORSE			
Unemployment rate (2014)	6.9%	6.2%	WORSE			
White-Non-White Residential Segregation Index (2014)	44	41	WORSE			
Health Behavior Domain						
Adults currently smoking cigarettes (2013)	21.5%	16.8%	WORSE			
Adults who are physically inactive (2012)	31.0%	29.6%	WORSE			
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	6.4% combined	13.1% fruit 8.9% vegetables	-			
Clinical Care Domain						
Adults who are uninsured (2014)	15.9%	10.4%	WORSE			
Adults who avoided medical care in the last 12 months due to cost (2013)	16.7%	15.3%	WORSE			
Adults with a primary care physician (2013)	76.0%	69.9%	BETTER			
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	87.6%	84.9%	BETTER			
Children who are uninsured (2013)	4.5%	7.5%	BETTER			
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	18.4%	18.0%	SAME			
Pregnant women who receive adequate prenatal care (2015)	66.9%	74.4%	WORSE			
Women who have received a pap test within the past 3 years (2013)	84.1%	75.2%	BETTER			
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	65.4%	73.0%	WORSE			
Physical Environment Domain						
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	18.5%	19.0%	SAME			
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	74.4%	77.0%	WORSE			

## **Table 15. Sullivan Region Metrics**

	MOST RECENT TENNESSEE DATA	NATIONAL AVERAGE	BETTER/WORSE THAN NATIONAL AVERAGE
Social & Economic Environment Domain			
Adults with some college education (2014)	56.6%	46.1%	BETTER
Black-White Residential Segregation Index (2014)	54	59	BETTER
Childless household that are food insecure (2014)	14.2%	13.0%	WORSE
Children who are food insecure (2014)	25.6%	17.0%	WORSE
Children who live in poverty (2014)	28.2%	19.7%	WORSE
High School Graduation rate (2015)	92.9%	82.0%	BETTER
Income Inequality Index (2015)	46.8	47.9	BETTER
Individuals who live in poverty (2014)	18.5%	12.4%	WORSE
Unemployment rate (2014)	6.7%	6.2%	WORSE
White-Non-White Residential Segregation Index (2014)	34	41	BETTER
Health Behavior Domain			
Adults currently smoking cigarettes (2013)	28.4%	16.8%	WORSE
Adults who are physically inactive (2012)	36.3%	29.6%	WORSE
Adults who eat 5 or more servings of fruits and vegetables each day (2013)	5.6% combined	13.1% fruit 8.9% vegetables	-
Clinical Care Domain			
Adults who are uninsured (2014)	17.3%	10.4%	WORSE
Adults who avoided medical care in the last 12 months due to cost (2013)	15.5%	15.3%	SAME
Adults with a primary care physician (2013)	82.0%	69.9%	BETTER
Adults with diabetes receiving at least 2 HbA1c measurements in the last year (2013)	91.2%	84.9%	BETTER
Children who are uninsured (2013)	4.9%	7.5%	BETTER
Medicare enrollees readmitted within 30 days of a hospital discharge (2013)	18.4%	18.0%	SAME
Pregnant women who receive adequate prenatal care (2015)	55.8%	74.4%	WORSE
Women who have received a pap test within the past 3 years (2013)	84.4%	75.2%	BETTER
Women, 40 and older, who have received a mammogram in the past 2 years (2013)	73.3%	73.0%	SAME
Physical Environment Domain		·	
Adults with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities (2012)	11.8%	19.0%	BETTER
Individuals with access to exercise opportunities (e.g. parks, gyms, YMCAs, community centers, dance studios, pools) (2014)	76.9%	77.0%	SAME

### Table 16. Comparison of 2017 and 2016 Index and Domain Scores

	Health & Well-Being Index			En	& Econe vironme Domain	ent		lth Beha Domain		Domain Env			Physical vironment Domain		
	2016	2017		2016	2017		2016	2017		2016	2017		2016	2017	
Tennessee	6.5	6.6		6.5	6.8		5.0	5.1		8.0	8.0	A	7.7	7.7	A
Northeast	6.5	6.5	A	6.9	7.0		4.8	4.8		7.7	7.7	▼	7.5	7.4	▼
East	6.6	6.4	▼	6.9	7.0		4.8	4.8	A	8.1	7.5	▼	7.4	7.2	▼
Knox	7.0	6.9	▼	7.3	7.3	A	5.4	5.3	▼	8.2	7.9	▼	8.2	8.2	A
Upper- Cumberland	6.5	6.4	▼	6.9	7.0		5.1	4.9		7.9	7.7		6.6	6.0	▼
Southeast	6.5	6.5		7.1	7.1	A	4.8	4.7		7.8	7.6		7.0	6.8	
Hamilton	6.7	6.8		6.9	7.0		5.1	5.4		7.8	7.9		8.2	8.3	
Davidson	6.9	6.9	A	7.1	7.1	<b>A</b>	5.5	5.5		7.8	7.8	A	8.4	8.4	A
Mid-Cumberland	6.8	6.9		7.3	7.6		5.1	5.1	A	8.1	7.9	▼	7.3	7.3	<b>A</b>
South Central	6.5	6.6		7.2	7.3		4.7	5.0		7.8	7.6	▼	6.6	6.3	▼
Northwest	6.5	6.5	A	7.1	7.1	A	4.8	4.9		7.6	7.8		6.8	6.6	▼
Southwest	6.4	6.4	A	7.1	7.1	A	4.7	4.5	▼	7.8	7.7	▼	6.3	6.3	A
Shelby	6.5	6.6		6.5	6.5	A	5.4	5.4	A	7.6	7.8		8.4	8.4	A
Madison	6.7	6.7	A	7.1	7.1	A	5.2	5.1		8.0	7.9	▼	7.5	7.8	
Sullivan	6.8	6.7	▼	7.2	7.2	A	4.8	4.7		8.0	7.9		8.3	8.3	A