



# Holston Valley Medical Center: Community Health Needs Assessment

Ballad Health

June 30, 2021

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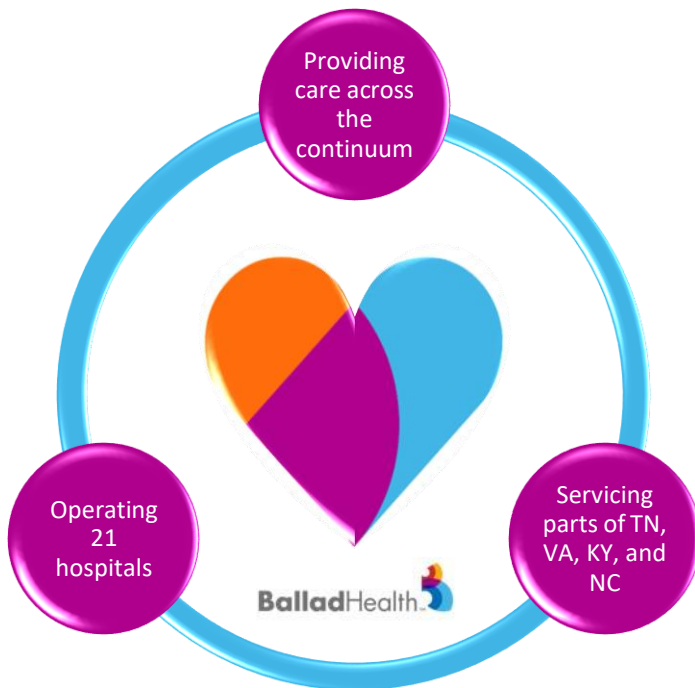
# 1 Introduction

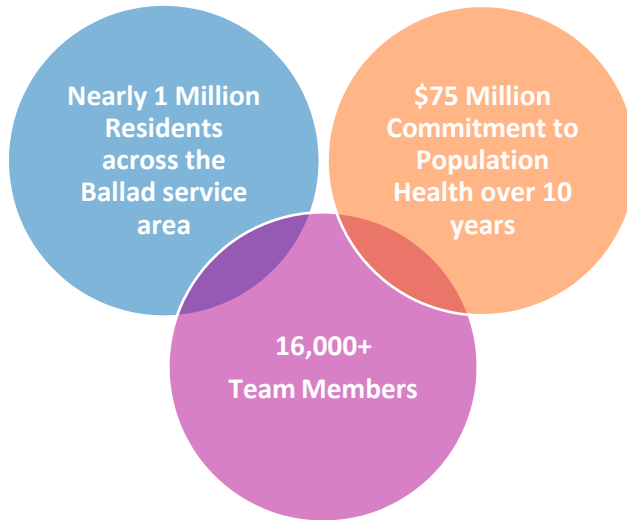
Holston Valley Medical Center, an acute care hospital in Kingsport, TN, is one of the hospitals within the Ballad Health system. Ballad Health is an integrated healthcare system serving 29 counties of Northeast Tennessee, Southwest Virginia, Northwest North Carolina, and Southeast Kentucky. Ballad was created upon the merger of two large regional health systems, Mountain States Health Alliance and Wellmont Health System, on February 1st, 2018. Through rigorous state oversight, these two competitors have been granted the ability to merge into an integrated healthcare delivery system with a simple and concise mission: to improve the health of the people we serve.

Ballad Health operates a family of 21 hospitals, including three tertiary care facilities, a dedicated children’s hospital, community hospitals, three critical access hospitals, a behavioral health hospital, an addiction treatment facility, long-term care facilities, home care and hospice services, retail pharmacies, outpatient services and a comprehensive medical management corporation.

## Ballad’s hospitals include:

- Bristol Regional Medical Center
- Dickenson Community Hospital
- Franklin Woods Community Hospital
- Greeneville Community Hospital
- Hancock County Hospital
- Hawkins County Memorial Hospital
- Holston Valley Medical Center
- Indian Path Community Hospital
- Johnson City Medical Center
- Johnson County Community Hospital
- Johnston Memorial Hospital
- Lonesome Pine Hospital
- Mountain View Regional Hospital
- Niswonger Children’s Hospital
- Norton Community Hospital
- Russell County Hospital
- Smyth County Community Hospital
- Sycamore Shoals Hospital
- Unicoi County Hospital
- Woodridge Hospital





**Ballad Health Mission:**

Ballad Health is committed to honoring those we serve by delivering the best possible care.

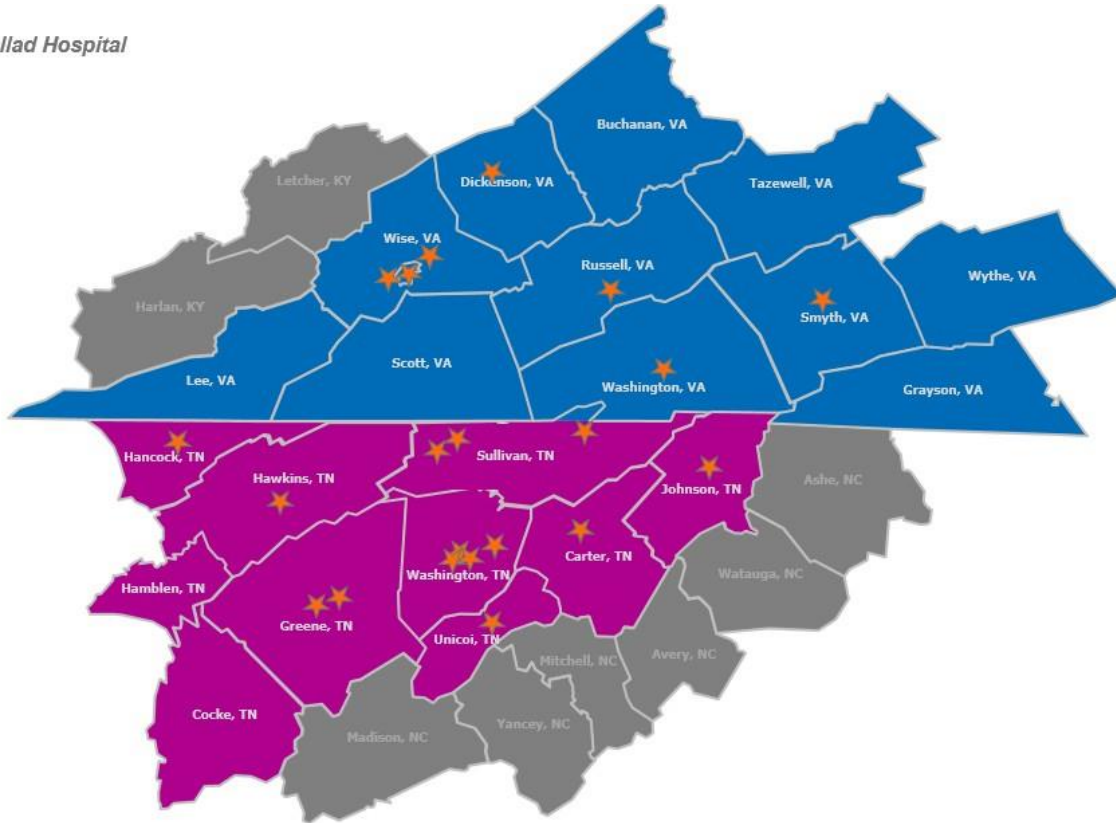
**Ballad Health Vision:**

To build a legacy of superior health by listening to and caring for those we serve.

The tagline of Ballad Health - "It's your story. We're listening." - is more than a marketing tool. Through the comprehensive state oversight and merger processes, Ballad Health system was created to meet and address local health needs. Realizing that people want to receive care from someone who really listens to them, the organization's name and tagline speak to the fact that good health is about more than healthcare - it's the story of people's lives. Located in the heart of Appalachia, Ballad Health pays homage to the traditions and stories that have shaped people's lives; yet, the organization also looks for new ways to partner with individuals and communities to make the region a healthier place to live and work.

With hospitals and services strategically placed throughout the region, Ballad Health is positioned to be the region's largest health care provider. The system's primary service area is comprised of 21 counties across Northeast Tennessee and Southwest Virginia, with a secondary service area encompassing an additional six counties in Western North Carolina and two counties in Southeastern Kentucky.

★ *Ballad Hospital*



## 2 Executive Summary

Ballad Health is heavily invested in the health and well-being of its communities. In addition to its enhanced focus on population health management through the merger of the two legacy health systems, Ballad is also the largest employer in the region and the fourth largest employer in the State of Tennessee. Being such a prominent member of the regional economic community, Ballad has a strong desire to improve the health of the region, as well as its employees and their families. Realizing that health is tied to more than just genetics, Ballad is working towards a deeper understanding of the socioeconomic issues that face the population's ability to improve their overall health status. Social determinants of health related to topics such as access to care and the ability to understand complex health conditions often times go hand in hand with people's capacity to make optimal health decisions. Nevertheless, Ballad Health views the current health disparities of the Appalachian region as the opportunity to go beyond the walls of the hospital and work hand-in-hand with communities to make sustainable change happens for generations to come.

As part of the state oversight process, Ballad Health and its hospitals and entities have committed to improving the health status of its service area counties by agreeing to focus on an index of access, quality and population health measures. The population health metrics create a platform for Ballad Health to further engage the efforts of its hospitals in partnership with the surrounding communities in order to drive change in a region that has a number of health disparities and access challenges. Leveraging the community health needs assessment (community health needs assessment) process has helped Ballad to further understand and educate on the health disparities that appear across the individual communities within its service area and has also helped the organization prioritize those issues that are most important in each hospital's community.

In order for Ballad to serve its region most effectively, it is essential to understand each community's individual needs. As such, Ballad Health conducted community health needs assessments guided by frameworks and best practices in order to successfully profile the health of the residents within its service areas. Activities associated with the development of this assessment have taken place from summer of 2020 through the spring of 2021. Primary data was obtained through key stakeholder surveys and focus groups with participants from the local communities, while secondary data was collated from national, state, regional, and county-specific data sources.

Throughout this community health needs assessment process, high priority was given to determining the health disparities and available resources within each community. Key stakeholders from each county participated in focus groups where discussion was centered around the prioritization of current health priorities and identification of potential solutions. The information gathered from a local perspective, paired with county, state, and national data, help to communicate the region's health situation in order to begin formulating solutions for improvement.

According to the 2020 America's Health Rankings, Tennessee ranked 45<sup>th</sup> and Virginia ranked 19<sup>th</sup> out of 50 states for overall health outcomes. Both states had high rates of obesity, heart disease, addiction, and mental health concerns. Though Virginia's overall ranking is significantly higher than that of Tennessee's ranking, the health outcomes in Southwest Virginia counties, where Ballard facilities are located, resembles those of Tennessee. After compiling the various sources of information and using population health index as a starting point for discussion, the top health priorities were identified for the communities that each of the hospitals serve. This effort has led to the determination of the top three priority areas for Sullivan County to include **substance abuse, mental health, and transportation**. There are certainly a number of other health challenges in this community, but these rise to the top based on the assessment.



## 3 Holston Valley Medical Center

### 3.1 Facility Description

Holston Valley Medical Center in Kingsport, Tennessee, is a not-for-profit hospital that has been serving the region for over 80 years. Holston Valley is one of the region's trauma centers and has been recognized as one of the nation's best hospitals for interventional carotid care, neurological care, orthopedics, and women's health.

Holston Valley Medical Center provides advanced facilities such as, updated intensive care units and expanded operating suites, and expanded emergency and radiology departments. Holston Valley continues to be recognized among the nation's best hospitals, most recently being named a Top 50 Cardiovascular Hospital by IBM Watson Health. This is the fifth time Holston Valley has been received this honor. Additionally, Holston Valley was the first site in Tennessee to offer transcatheter aortic valve replacement (TAVR) surgery for patients who are at higher risk for open-heart surgery. Along with the IBM Watson recognition, Holston Valley holds many accolades and recognitions for cardiac care and cardiovascular research, including:

- Gold-level recognition from the American Heart Association for heart attack treatment (2018)
- Platinum-level recognition from the American College of Cardiology for heart attack treatment quality measures (2018)
- Leader in cardiovascular research and training, with annual visits from Harvard fellows who come to learn the techniques offered by Holston Valley's prominent cardiologists



### 3.2 Scope of Services

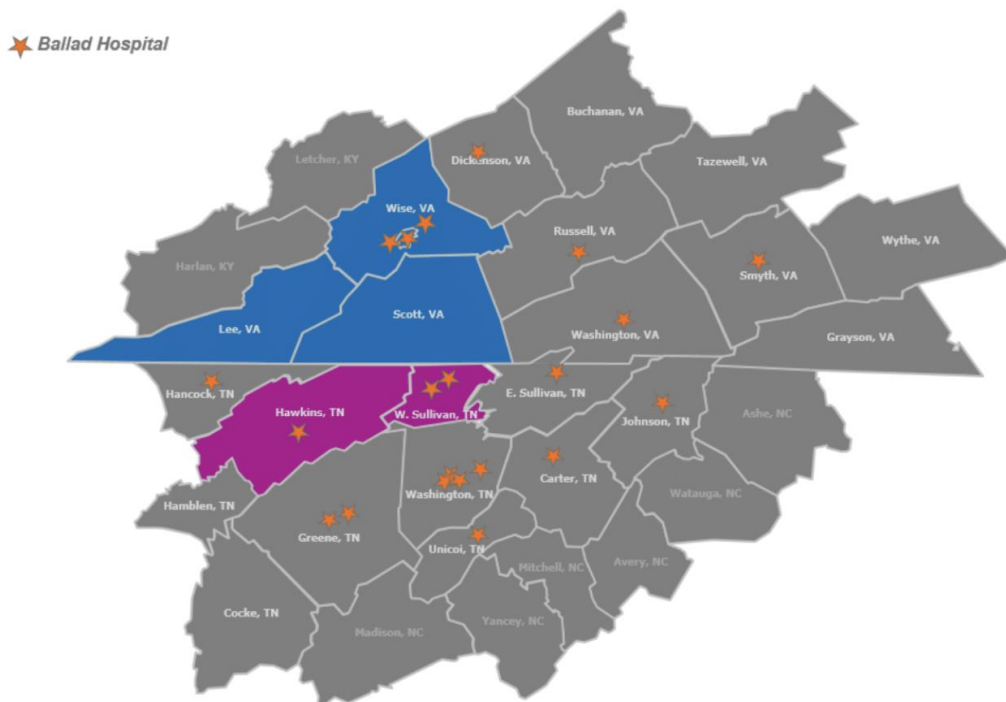
A full range of specialty and subspecialty care services and some of the most advanced diagnostic and surgical techniques are available at Holston Valley, including:

- 24/7 emergency department
- Accredited comprehensive breast center
- Advanced primary stroke center
- Cardiopulmonary rehabilitation

- Christine LaGuardia cancer center
- Comprehensive weight management center
- Every Step joint replacement center
- Heart and vascular care
- Imaging services
- Inpatient and outpatient rehabilitation
- Intensive care unit
- Orthopedics
- Pulmonology
- Surgical services (inpatient and outpatient)
  - General surgery
  - Robotic surgery
  - Minimally invasive surgery
- Trauma care
- Urology
- Wound care and hyperbarics

### 3.3 Primary Service Area

Holston Valley Medical Center’s Primary Service Area covers Western Sullivan County and Hawkins County in Northeast Tennessee, as well as Scott County, Lee County, and Wise County in Southwest Virginia.



## 4 Community Assessment Process Summary

### 4.1 Market Overview

Holston Valley Medical Center, located in Kingsport, TN, primarily serves Western Sullivan and Hawkins counties in rural Northeast Tennessee and Scott, Lee, and Wise counties in rural Southwest Virginia. In 2021, Western Sullivan County had a population of 87,367 people. The population projections for Sullivan County over the next five years show that the county will likely experience little population growth overall. However, the age 65+ population for Western Sullivan County is projected to experience the most population change over the next five years, as it moves from 23.7% of the total population in 2021 to 26.0% of the population in 2026. The aging population of the county presents opportunities for earlier identification and better management of health conditions that oftentimes affect elderly populations in rural areas.

Additionally, the median household income for Sullivan County is \$46,000, which ranks below the Tennessee state average of \$52,400. Other demographic factors influencing health status in the county also includes education levels. A large portion of Western Sullivan County residents do not have an education past high school (46.6%). The remaining portion of the population reports having some college/associates degree (30.7%) or a bachelor's degree of greater (22.7%).

According to the 2021 County Health Rankings, Sullivan County, where Holston Valley Medical Center is located, is ranked 28th in Tennessee for health outcomes and 17th for health factors out of 95 counties. Sullivan County also ranked 19th in health behaviors, 7th in clinical care, and 25th in social and economic factors. A graphical representation of the 2021 County Health Rankings for Sullivan County components can be found in the appendix.

## 4.2 Methodology for Collecting Community Input

### 4.2.1 Model/Framework Selection

In the earliest stages of the 2021 community health needs assessment process design for all Ballad Health facilities, numerous guiding frameworks, models, and toolkits were reviewed and analyzed for their potential to serve as the planning model for the assessment. Following in-depth discussions with Ballad Health leadership, it was decided the 2021 community health needs assessment process would be guided by the Mobilizing for Action Through Planning and Partnerships (MAPP) model, with an understanding that aspects of the model may have to be adapted due to the purpose of the assessment for Ballad Health and constraints related to the COVID-19 pandemic. In coordination with the MAPP model, concepts from both Community-Based Participatory Research (CBPR) and the Arkansas Center for Health Improvement (ACHI) Community Health Assessment Toolkit were also utilized for the assessments.

The MAPP model, developed by the National Association of County and City Health Officials (NACCHO) in coordination with the Centers for Disease Control and Prevention (CDC), functions as a six-phase, strategic planning process for communities with the primary aim of improving health. Broadly speaking, the MAPP model allows for the identification of pressing community issues, provides understanding of the current state of resources within a community, and provides the foundational pillars needed to develop action plans for health improvement. The completion of the process outlined in the MAPP model results in two deliverables: (1) Community Health Needs Assessment and (2) Community Health Improvement Plan. As mentioned, components of the MAPP model will be slightly adapted to meet the needs of Ballad Health's community health needs assessments. For a summary of how Ballad Health's 2021 community health needs assessment process will align with the MAPP model phases, please view Table 2 below.

As shown in Table 2, the first step in the planning process was the creation of a Regional Assessment Workgroup between Ballad Health, all local health departments in Ballad Health's geographic service area (GSA), Tennessee Department of Health County Health Councils, and local health coalitions. This regional workgroup was tasked with the creation of core indicators to be included and assessed, shared processes and practices for methodology, and the identification of synergies and paths to collaborate between Ballad Health and all other entities represented in the regional workgroup in terms of community health needs assessment efforts. The goal of this collaborative effort for the community health needs assessment process is to minimize community assessment fatigue and leverage efforts and resources utilized during the assessment process.

Ballad Health utilized a mixed-methods approach for primary and secondary data collection to gather regional information to inform the 2021 community health needs assessments. The secondary data collection entailed the compilation of secondary data pertaining to agreed upon metrics and indicators from an array of verified sources. The primary data collection component involved both a key stakeholder survey and key stakeholder focus groups. Findings from both research methods were used to prioritize the needs of the community served by each Ballad Health facility and determine priority focus areas for future improvement efforts.

<b>Table 2</b>	
<b>MAPP Model Phase</b>	<b>Ballad Health 2021 Community Health Needs Assessment Process</b>
<p><b>1. Organize for Success/Partnership Development</b></p> <p>Stakeholders within the community gather to form partnerships and foster collaboration for assessments guided by the MAPP model.</p>	<ul style="list-style-type: none"> <li>▪ Development of Regional Assessment Workgroup between Ballad Health, all local health departments in Ballad Health’s geographic service area (GSA), Tennessee Department of Health County Health Councils, and local health coalitions.</li> </ul>
<p><b>2. Visioning</b></p> <p>Individuals from Phase One determine the primary focus and vision for the MAPP process.</p>	<ul style="list-style-type: none"> <li>▪ Development of core indicators, shared processes, and practices.</li> <li>▪ Identification of synergies and paths to collaborate.</li> <li>▪ Creation of shared vision for the overall health and well-being of Northeast Tennessee and Southwest Virginia Communities.</li> </ul>
<p><b>3. MAPP Assessments</b></p> <p>Quantitative and qualitative data from both primary and secondary data sources are compiled for the purpose of understanding the current state of the overall health and well-being of the community.</p>	<ul style="list-style-type: none"> <li>▪ Development of secondary data packages for community data.</li> <li>▪ Distribution of Key Stakeholder Survey.</li> <li>▪ Facilitation of facility-based focus groups.</li> </ul>
<p><b>4. Identify Strategic Issues</b></p> <p>Data are analyzed to determine issues within the community that serve as impediments to reaching the vision detailed in Phase Two.</p>	<ul style="list-style-type: none"> <li>▪ Statistical and thematic analysis for survey results and focus group findings performed to identify issues within communities.</li> <li>▪ Further prioritization of community issues with key stakeholders from each community.</li> </ul>
<p><b>5. Formulate Goals and Strategies</b></p> <p>Goals and strategies are identified by the community to address the strategic issues identified in Phase Five.</p>	<ul style="list-style-type: none"> <li>▪ Potential goals and strategies are identified by key stakeholders in each focus group.</li> <li>▪ Facilitation of another round of focus groups for each facility to further parse out action plan components.</li> <li>▪ Potential goals and strategies inform the development of Community Health Needs Assessment Implementation Plans to be brought to leadership at each facility.</li> <li>▪ Finalization of Implementation Plans.</li> </ul>
<p><b>6. Action Cycle</b></p> <p>Based on the goals and strategies from Phase Five, action plans for the achievement of the vision outlined in Phase Two are implemented and evaluated.</p>	<ul style="list-style-type: none"> <li>▪ Community Health Needs Assessment Implementation Plans are implemented and evaluated for each facility.</li> </ul>

## 4.2.2 Secondary Data Compilation

In accordance with the MAPP model, once desired metrics were identified and agreed upon by all members of the regional workgroup, comprehensive data packages were created for all counties in Ballad Health's GSA. In knowing that research estimates that at least 80% of a person's health is related to non-medical factors, the data packages were designed to incorporate both medical and non-medical factors with equal importance in terms of their role in the overall health and well-being of the community. The data packages include approximately 60 metrics for each county in Ballad Health's GSA concerning each of the following overarching topics: health outcomes (15 metrics), health behaviors (14 metrics), health determinants (12 metrics), physical environment (3 metrics), clinical care and health resources (11 metrics), maternal and infant health (3 metrics), and adverse childhood experiences (2 metrics).

The data packages were shared with key stakeholders in the community in an excel workbook format. Two separate excel workbooks were created, one for the Northeast Tennessee counties and one for the Southwest Virginia Counties. Within each workbook, an instruction tab detailing how to interpret and utilize the data was included, as well as separate, alphabetized tabs for each county in those associated areas. Within each tab, metrics were organized into tables based on the seven topics listed above. For each metric, the following components were presented in the associated table:

- Metric name
- Metric definition
- Metric value for the associated county
- Metric value for associated state
- Hyperlink to data source where metric was found

## 4.2.3 Key Stakeholder Survey Design

Following guidance from the MAPP model, the Key Stakeholder Survey was designed with the primary aim of identifying the most-pressing community issues. In aligning with principles of CBPR, the key stakeholder survey was designed to allow key stakeholders to frame community issues in their own words through the use of open-ended questions. In addition to the identification of community issues, the key stakeholder survey was also designed to discern why survey respondents believed the community issues they selected had the greatest effect on the overall health and wellbeing of their community. Questions related to ideas and suggestions for improvement efforts, gauging the success of efforts after the previous community health needs assessments, and community struggles related to the COVID-19 pandemic were also included in the survey.

Data from the key stakeholder survey was coded and analyzed via MAXQDA Analytics Pro 2020. Data was coded and analyzed by primary and secondary coders who are team members of the Division of Population Health within Ballad Health.

#### 4.2.3.1 Key Stakeholder Survey Demographics

The survey was comprised of thirteen questions, with those being a combination of both close-ended and open-ended questions. Both statistical analysis and thematic analysis were performed on survey results dependent on the question type (statistical analysis for close-ended questions and thematic analysis for open-ended questions) in order to obtain frequencies and percentages. The survey was distributed via Survey Monkey from the Division of Population Health at Ballad Health to key stakeholders in Northeast Tennessee and Southwest Virginia that were identified by leadership at Ballad Health. Stakeholders were selected due to their involvement in the health of the community and their direct relationship to the communities served. The survey was distributed to approximately 350 stakeholders, who each represent unique organizations in Northeast Tennessee and Southwest Virginia.

One hundred and sixty-nine (n=169) organizations completed the survey, for a response rate of 48%. In terms of the geographical breakdown of survey respondents, 36% of survey respondents listed at least one county in Southwest Virginia as part of their service area, and 64% of survey respondents listed at least one county in Northeast Tennessee as part of their service area. There was some overlap in terms of the geographical breakdown of survey respondents for individuals who work in both Northeast Tennessee and Southwest Virginia; those individuals are represented in both categories. Survey respondents represented an array of different sectors in the community, which included the following:

- Law Enforcement
- Religious Communities/Churches
- School Systems
- Governmental Organizations
- Health Departments
- Non-Profit Organizations
- Academic Institutions
- Businesses
- Health Care System.

All key stakeholder survey questions and associated findings are listed in the Appendix. Findings are filtered to reflect the responses of key stakeholders in the state in which the facility is located. Because Sullivan County is located in Northeast Tennessee, survey findings presented in the report and the Appendix are from the 64% of survey respondents who listed at least one county in Northeast Tennessee as part of their service area.



#### 4.2.4 Key Stakeholder Focus Group Design

Independent focus groups were conducted for each Ballad Health facility in order to provide specific and unique information for each community being served. The MAPP model and questions from the key stakeholder survey were used to guide the development and construction of the focus groups. Because the key stakeholder survey primarily dealt with the identification of community issues, the focus groups were primarily designed to prioritize community issues identified through the key stakeholder survey and discuss actionable items around how to best address these community issues. Questions related to root causes of community issues, the current state of resources to address community issues, needed resources to initiate improvement efforts and be successful, and community struggles related to the COVID-19 pandemic were also included in the focus group facilitation guide.

The focus groups were organized into three main components as outlined below:

- **Data Presentation:** Focus group facilitators led the focus group participants through a thorough review of the secondary data compiled for each service area and the findings from the key stakeholder survey.
- **Prioritization:** Focus group facilitators led focus group participants through the prioritization of the community issues that were identified in the key stakeholder survey for their specific community.
- **Discussion:** Focus group facilitators helped engage focus group participants in rich discussion concerning the priority focus areas identified via a structured facilitation guide.

Multiple team members from the Division of Population Health within Ballad Health attended each focus group and were assigned one of the following roles:

- **Facilitator:** Present secondary data and key stakeholder survey findings, lead focus group through prioritization process, and facilitate discussion surrounding priority focus areas identified by the focus group.
- **Notetaker:** Take detailed notes on the discussion surrounding the priority areas.
- **Chat Box Moderator:** Monitor the chat box on the WebEx platform to ensure all communications were acknowledged and addressed.

Following the conclusion of the focus group, the facilitator, notetaker, and chat box monitor collectively reviewed the notes to ensure accuracy and address any areas of confusion. Once focus group notes were finalized and approved, focus group data was coded and analyzed by primary and secondary coders who are team members of the Division of Population Health within Ballad Health.

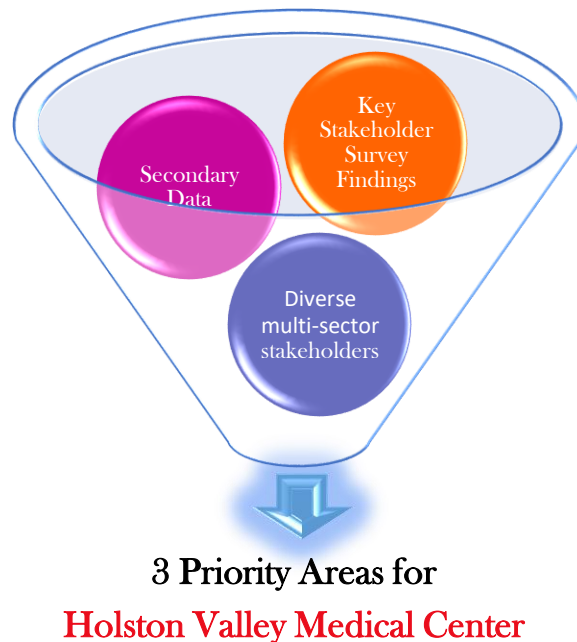


#### 4.2.4.1 Key Stakeholder Focus Group Demographics

The key stakeholder focus groups were conducted virtually via WebEx and were one hour and thirty minutes in length. For Holston Valley Medical Center, there were eighteen (n=18) focus group participants. Similar to the key stakeholder survey representation, focus group participants represented an array of different sectors in Sullivan County, which included: the school system, businesses, the health care system, and more. For stakeholders who were not able to attend the focus group in real-time, blank facilitation guide templates with questions concerning the three priority areas identified by the focus group participants were sent to them immediately after the conclusion of the focus group. This allowed key stakeholders who were not able to attend the focus group in real-time to still provide input and Ballad Health to ensure the involvement of diverse stakeholders.

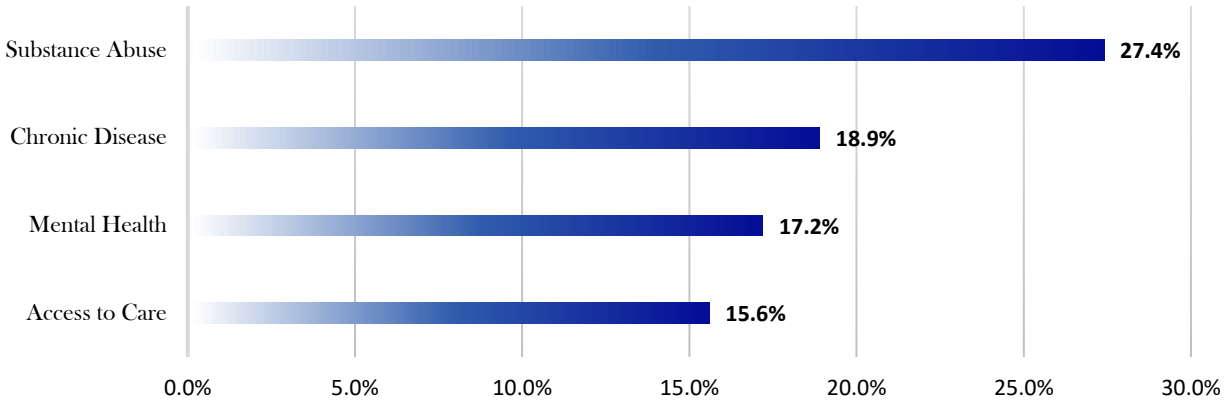
## 5 Identification of Key Priority Areas

Analysis of secondary data for Sullivan County, findings from the key stakeholder survey, and the perspectives of diverse key stakeholders led to the prioritization of community issues for Holston Valley Medical Center as depicted in the graphic below.



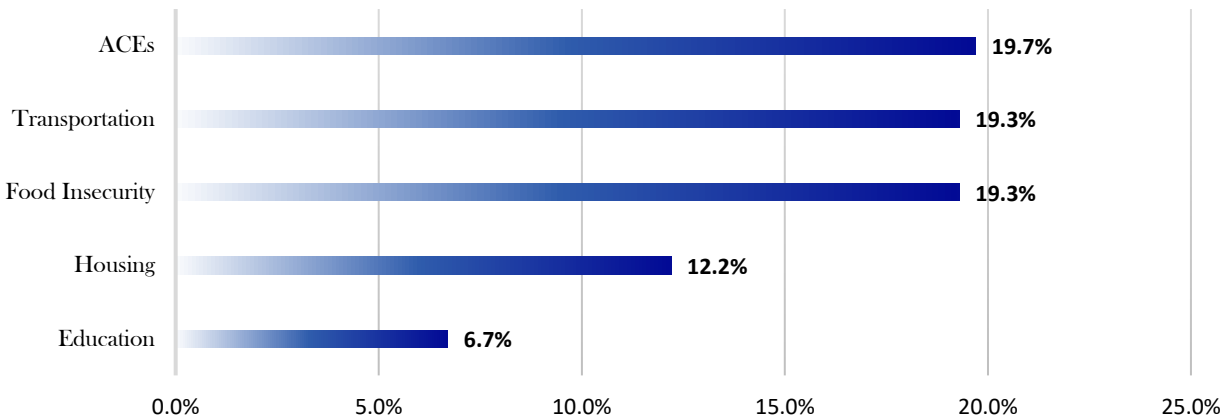
As discussed in the section concerning the design of the key stakeholder survey, three of the thirteen survey questions dealt with the identification of the most pressing community issues. The first of the three questions dealt with asking key stakeholders to frame in their own words what the top three health-related issues their community was facing. The second of the three questions was handled in the same manner as the first, except now the survey question asked key stakeholders to identify the top three social or environmental issues their community was facing. The last of the three questions sought to incorporate the voice of the community to the extent possible through asking stakeholders to identify the issues they believe residents in their community would like to see efforts prioritized around. Results of these three survey questions from respondents who work in Northeast Tennessee are shown in the graphs below. The percentages on the bar graphs represent the percentage of Northeast Tennessee respondents who mentioned a particular community issue or concern.

**PLEASE LIST THE THREE MOST IMPORTANT HEALTH-RELATED ISSUES THAT AFFECT THE OVERALL HEALTH OF YOUR COMMUNITY.**



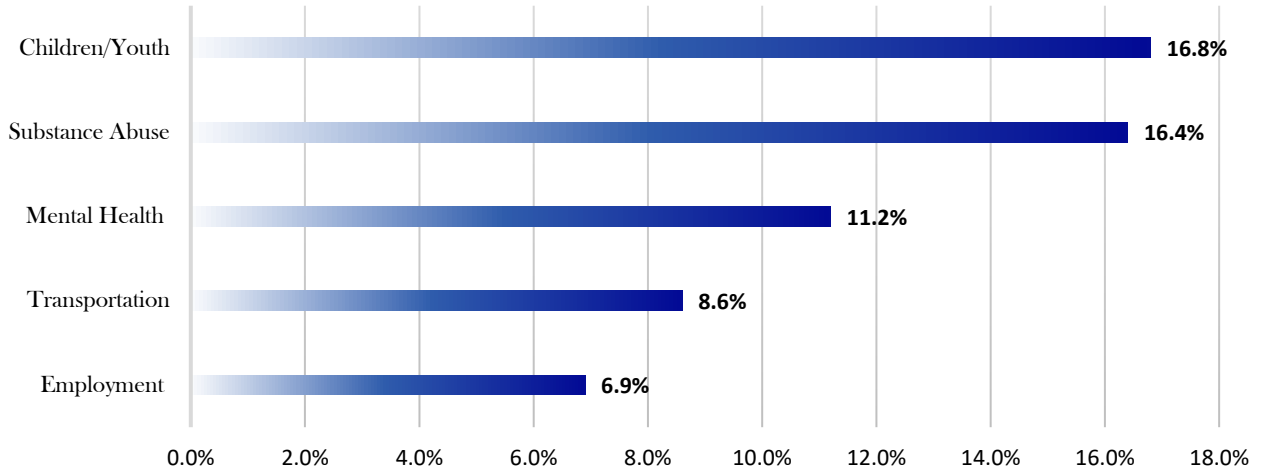
\*Other health-related issues that were mentioned by respondents were physical inactivity, unintended pregnancy, COVID-19, and dental health.

**PLEASE LIST THE THREE MOST IMPORTANT SOCIAL/ENVIRONMENTAL ISSUES THAT AFFECT THE OVERALL HEALTH OF YOUR COMMUNITY.**



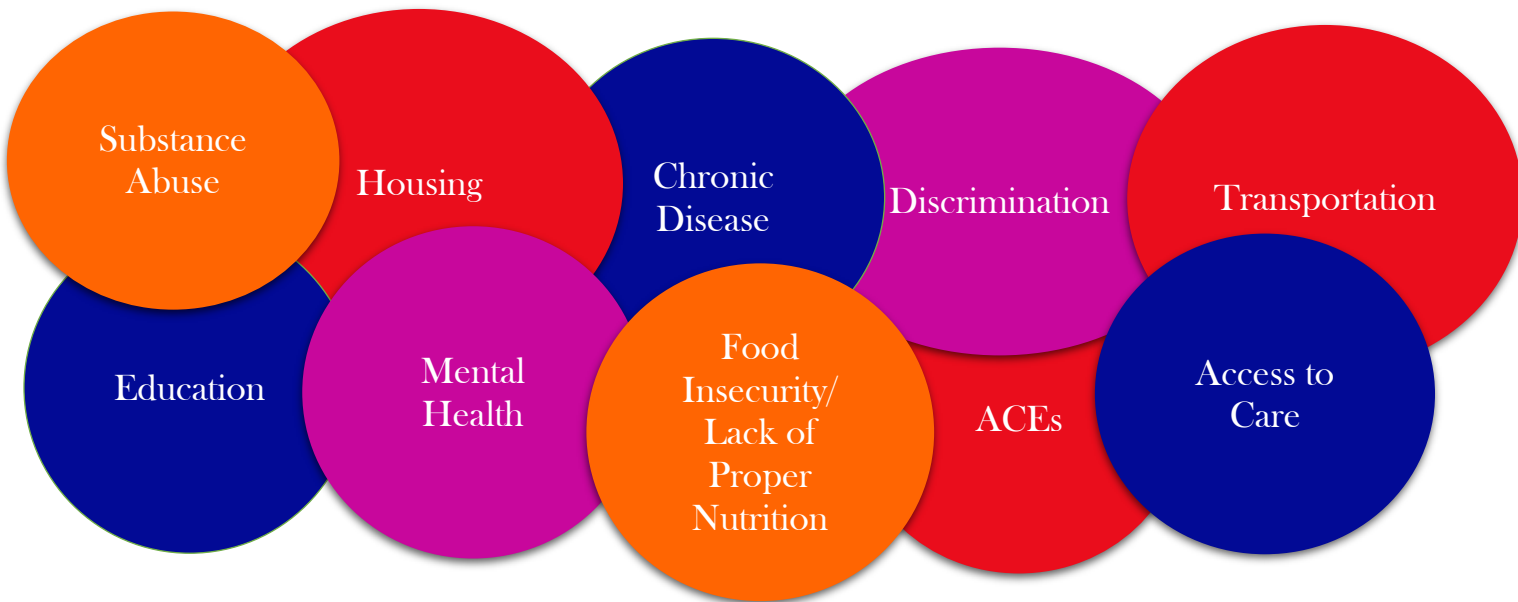
\*Other social/environmental issues that were mentioned by respondents were poverty, discrimination, and safe water sources.

## FROM THE PERSPECTIVE OF THOSE WHO LIVE IN YOUR COMMUNITY, WHAT ISSUES DO YOU BELIEVE THE RESIDENTS WOULD LIKE TO SEE EFFORTS PRIORITIZED AROUND?



\*Other community that were mentioned by respondents were childcare, ACEs, and COVID-19.

From these three survey questions, the top ten community issues identified for Northeast Tennessee communities were found to be the following:



After being presented with the secondary data specific to Sullivan County, focus group participants were asked to vote for three of the ten community issues listed above that they felt should be priority focus areas for future improvement efforts in Sullivan County. The three issues that obtained the majority of the votes were the three priority areas selected and became the focus of the facilitated discussion. For Holston Valley Medical Center, the three priority areas for future improvement efforts that were selected by key stakeholders in Sullivan County are **substance abuse, mental health, and transportation**. Table 3 below highlights some of the secondary data measures used for both gathering baseline data and measuring change for the three priority areas selected for Holston Valley Medical Center.

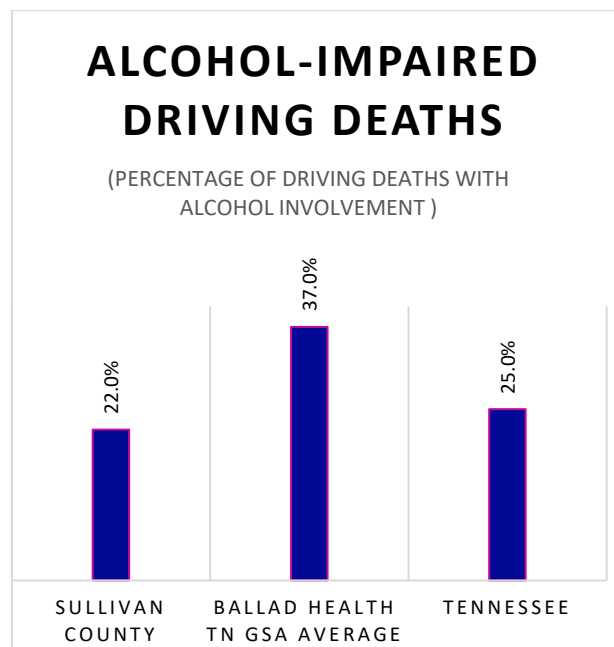
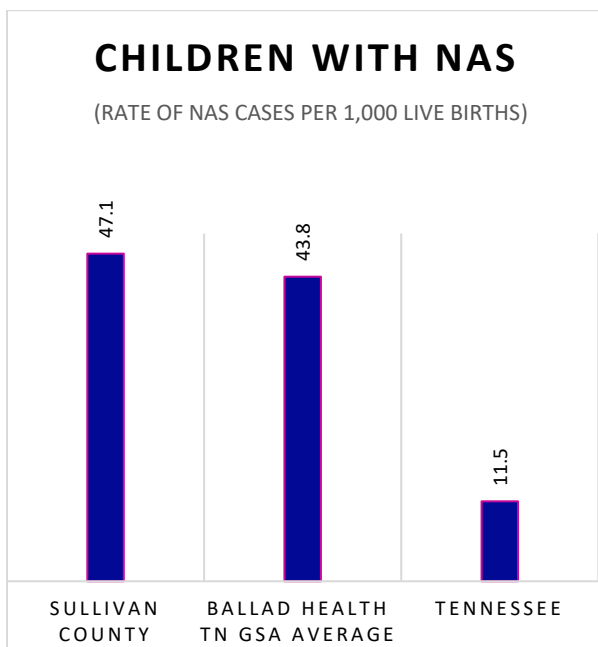
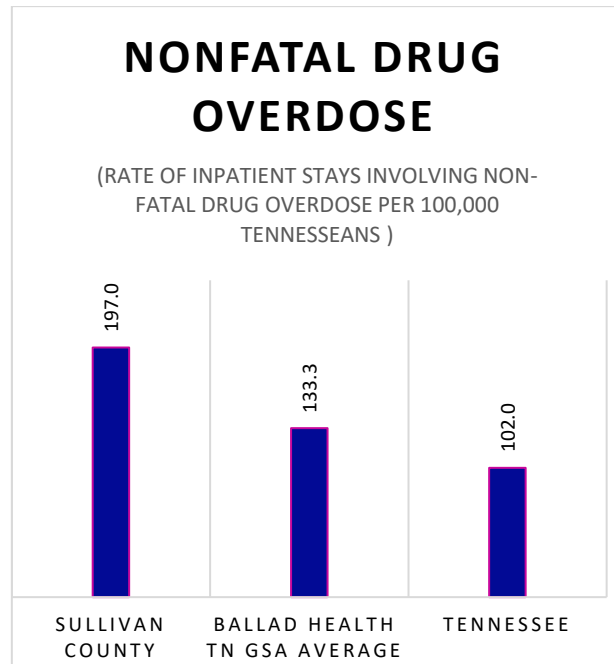
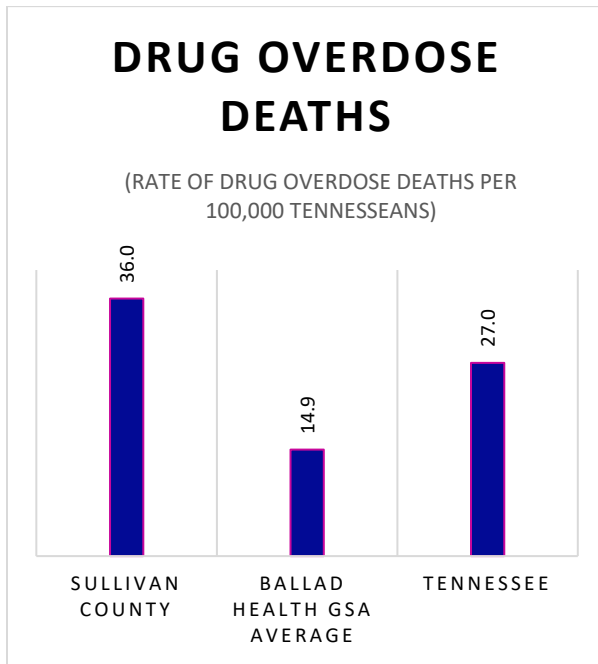
Table 3	
Priority Focus Area	Sub-Measure
Substance Abuse	<ul style="list-style-type: none"> <li>▪ Drug Overdose Deaths</li> <li>▪ Nonfatal Drug Overdose</li> <li>▪ Children with NAS</li> <li>▪ Alcohol-Impaired Driving Deaths</li> <li>▪ Excessive Drinking</li> </ul>
Mental Health	<ul style="list-style-type: none"> <li>▪ Frequent Mental Distress</li> <li>▪ Suicide Rate</li> </ul>
Transportation	*None available*

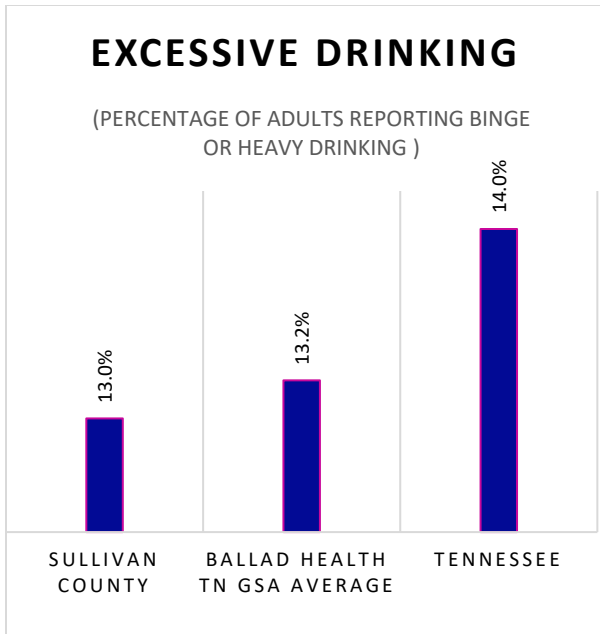
As evidenced by the county-level vs. state-level data represented for each of the priority measures selected by Sullivan County focus group participants, opportunity for improvement exists across all priority measures within the local community. Although not all metrics compare unfavorably to the overall state data, opportunity still exists, as the Tennessee data is not intended as a benchmark, but merely as a comparison. In addition to state-level comparisons, priority measures for Sullivan County are also compared to the average of the Northeast Tennessee counties in Ballad Health’s GSA.

By identifying these priority areas, Holston Valley Medical Center, in conjunction with Ballad Health and other local community organizations, can begin to implement targeted programs and efforts to improve the overall health and well-being of citizens of Sullivan County.

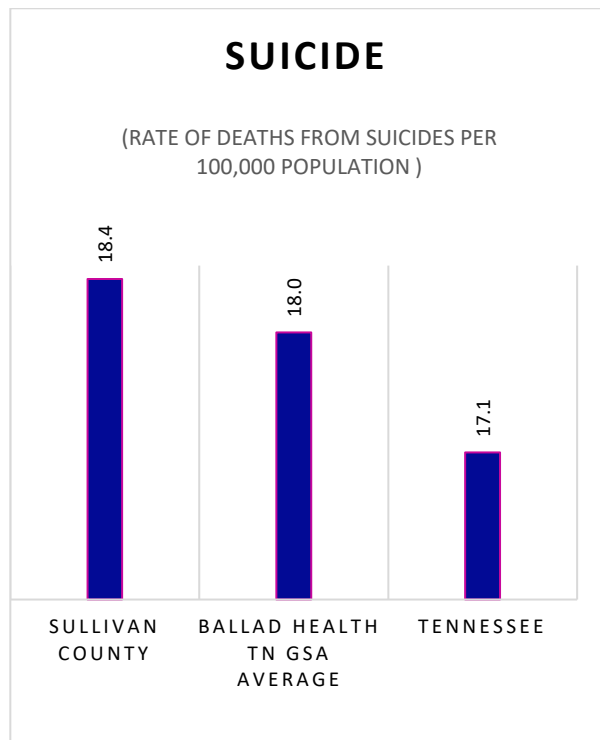
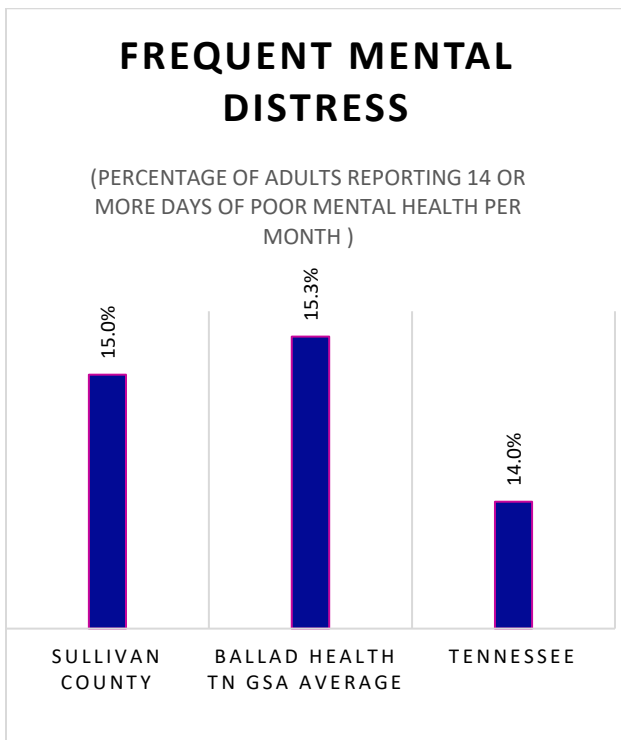
5.1 Priority Area Measures with County vs. Ballad Health GSA Average for NE TN Counties vs. State Comparisons (when applicable):

5.1.1 Substance Abuse





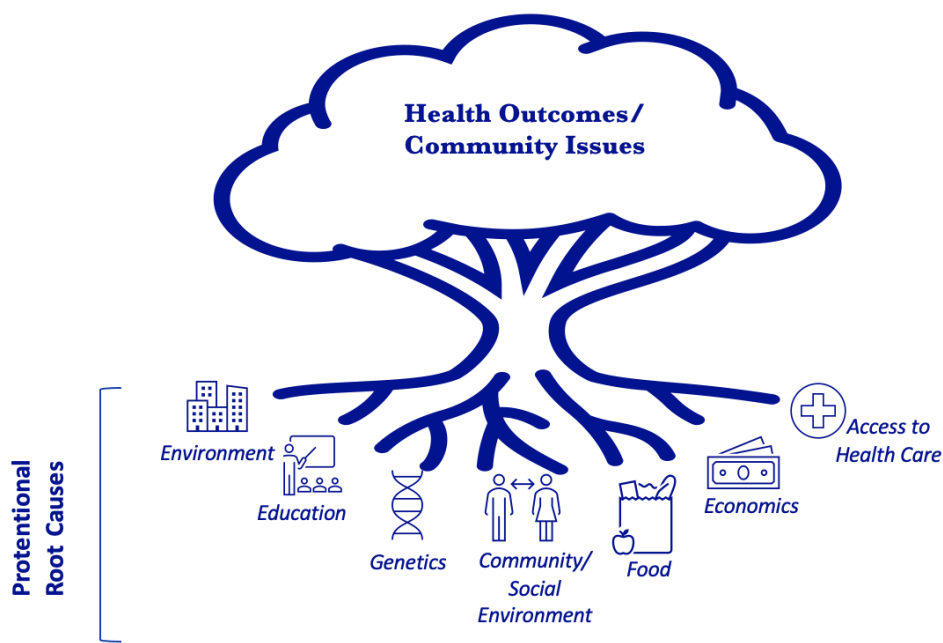
## 5.1.2 Mental Health



## 5.1.3 Transportation

## 6 Root Causes of Key Priority Areas

Because health is more than just a result of behaviors or individual pre-disposition to disease, Ballad Health realizes that it must also evaluate social determinants such as the environment and community in which people live, the access to care they have, and the policy issues that exist/are absent in order to be able to make effective strides in improvement. For this reason, **root causes** for each of three priority focus areas were discussed in the focus group to better understand the relationships between various community issues. Utilizing more upstream ways of thinking and better understanding the true root causes of community issues will allow Ballad Health to better understand how to design future efforts and determine which community partners are needed for a collective effort to truly bring about a measurable change.



To help understand the true root causes of three priority focus areas selected for Holston Valley Medical Center, participants in the focus group identified the causes they believe must be addressed and accounted for in future improvement efforts in order to truly make impactful progress and change. The identified root causes for the priority focus areas for Holston Valley Medical Center include:

### 6.1 Substance Abuse:

- ACEs
- Poverty (generational)
- Lack of transportation
- Lack of in-patient programs and education
- Cross addiction from peers
- Lack of positive parent/caregiver/mentor



## 6.2 Mental Health:

- ACEs
- Genetics
- Isolation
- Genetics
- Undiagnosed learning disabilities
- Lack of transportation
- Stigma surrounding mental health
- Limited access to mental health treatment
- Lack of cooperation between law enforcement and health care providers
- Lack of long-term treatment facilities

## 6.3 Transportation:

- Poverty
- Lack of public/rural transportation services
- Low income
- Lack of community awareness concerning available transportation options
- Lack of education
- Fear of contracting COVID-19 and desires to isolate

## 7 Community and Hospital Resources: Current and Needed

### 7.1 Current Resources

To help improve the identified health priorities for Sullivan County, focus group participants were also asked to help identify **current** programs/organizations/individuals/services from the local community that may be of assistance with the population health efforts in their county. Because multiple resources working together for the same cause can help to drive change faster, having the inventory of local resources with whom Ballad Health can partner with is key. There are many resources currently in existence in Sullivan County through both the hospital and local organizations. The current and available resources identified for each of the three priority focus areas in the focus groups are as follows:

#### 7.1.1 Substance Abuse:

- Creekside Behavioral Health Hospital for detox (only available for insured persons)
- Celebrate Recovery
- Frontier Health
- Sullivan County Anti-Drug (SCAD) Coalition
- United Way of Greater Kingsport
- AveNew
- Local churches have groups
- Sullivan County Overdose Response Team (SCORT)
- Oxford House
- Families Free
- Holston Counseling

#### 7.1.2 Mental Health:

- Frontier Health
- Comprehensive Community Services (CCS)
- Creekside Behavioral Health Hospital
- Camelot of Northeast Tennessee
- Families Free
- Covenant Counseling
- Youth Villages

#### 7.1.3 Transportation:

- Kingsport Area Transit Service (KATS)
- MyRide
- NetTrans
- UBER/Lyft/Taxi Cab
- Medicaid Transport
- 211
- Friends, Neighbors, Family

- Faith based organizations
- Pilot program in the planning stages that would coordinate network of providers pulling together services to fill gaps in smaller healthcare facilities

## 7.2 Needed Resources

In addition to identifying current resources, focus group participants were also asked to identify **needed** resources that **do not** currently exist in their local community that could be of assistance with the population health efforts in their county. The identification of needed resources will help to bridge gaps and overcome barriers to care when addressing these priority focus areas. The needed resources identified for each of the three priority focus areas in the focus groups are as follows:

### 7.2.1 Substance Abuse:

- Resources for community education (especially youth)
- Community partnerships
- Funding
- Financial assistance resources (payment assistance) for those seeking treatment

### 7.2.2 Mental Health:

- Financial assistance resources (payment assistance) for those seeking treatment
- Funding
- Increased housing options (intensive, long-term housing options and permanent supportive housing options)
- Resources in jails
- Positive mentors
- Process for juveniles to be assessed with the least amount of trauma involved
- Streamlined process for Respond/Mobile Crisis

### 7.2.3 Transportation

- Funding
- Resources to increase community awareness of transportation options

## 8 Ideas and Suggestions for Future Improvement Efforts to Address Key Priority Areas

### 8.1 Multi-Sector Ideas and Suggestions for Improvement Efforts

Foundational to any population health improvement effort is the identification of actionable priorities. Now that this has been accomplished, the hospital can begin to formulate targeted implementation plans to help address the disparities plaguing parts of its population. By identifying these priority areas, Holston Valley Medical Center in conjunction with Ballard Health and other local community organizations can begin to implement targeted programs and efforts to improve the overall health and well-being of citizens of Sullivan County. To best plan for and design improvement efforts that address the three priority focus areas, focus group participants offered ideas and suggestions for potential improvement efforts and solutions that can be incorporated into the Community Health Needs Assessment Implementation Plan for Holston Valley Medical Center. Focus group participants were not asked to formulate entire initiatives or improvement efforts, but were instead asked to offer ideas and suggestions for crucial elements to be included in a larger, overarching improvement effort. The ideas and suggestions for potential improvement efforts for each of the three priority areas are as follows:

#### 8.1.1 Substance Abuse:

- Transitional placement between detox and transitional housing
- More treatment/recovery services offered in jails
- Referring overdose patients in emergency department to Sullivan County Overdose Response Team (SCORT) and Certified Peer Recovery Specialist
- Strong programs in schools geared towards substance abuse prevention
- Needle Exchange Programs
- More engagement at touch points with the community and pointing patients in the right direction for outpatient treatment
- Warm hand-offs with community stakeholder programs
- Outreach into housing developments
- Mobilize treatment options and services (take treatment services to the patient)

#### 8.1.2 Mental Health:

- Creation of dedicated community partnerships
- Appropriate discharge from acute stabilization so that follow-up appointments can be maintained
- Easier access to medications/treatment for vulnerable populations (homeless and incarcerated)
- Supportive housing for individuals with mental health issues
- Wrap-around services
- Expansion of SAP in schools
- Transportation assistance to mental health services

### 8.1.3 Transportation:

- After hours and weekend transportation options
- Utilizing faith-based organizations more
- Education on what transportation is available and when
- Utilizing current service providers and evaluating how they can work together
- Car repair services
- Expand age range for MyRide eligibility
- Aligning employment with available transportation
- Central phone number to obtain transportation
- Mobile health for homebound

## 8.2 Ideas and Suggestions for Improvement Efforts Specific to Ballad Health and Holston Valley Medical Center

In addition to discussing ideas and suggestions for protentional improvement efforts, the focus group participants also discussed possibilities for how Holston Valley Medical Center and Ballad Health can continue or enhance programs/services to provide local resources to support the identified priorities and best be a community partner in future improvement efforts. Several of the ideas and suggestions for potential improvement efforts for each of the priority areas were repeated by focus group participants again here, signifying that the participants believe Ballad Health and Holston Valley Medical Center should either lead or be largely involved in the improvement effort. Suggestions as to how Ballad Health and Holston Valley Medical Center can improve the previously identified priority focus areas are listed below:

### 8.2.1 Substance Abuse:

- Holistic transitional housing
- Treatment-based long-term recovery (longer than one year)
- Treatment/recovery support in jails
- Avenue to enter treatment (not through emergency department)
- Referring overdose patients in emergency department to Sullivan County Overdose Response Team (SCORT) and Certified Peer Recovery Specialist
- Partner with reentry and workforce development programs

### 8.2.2 Mental Health:

- Bring together community stakeholders to have a conversation to better understand how each entity can best collaborate and work together in future improvement efforts
- Get someone trained in SSI/SSDI Outreach, Access, and Recovery (SOAR) to assess disability needs/determination

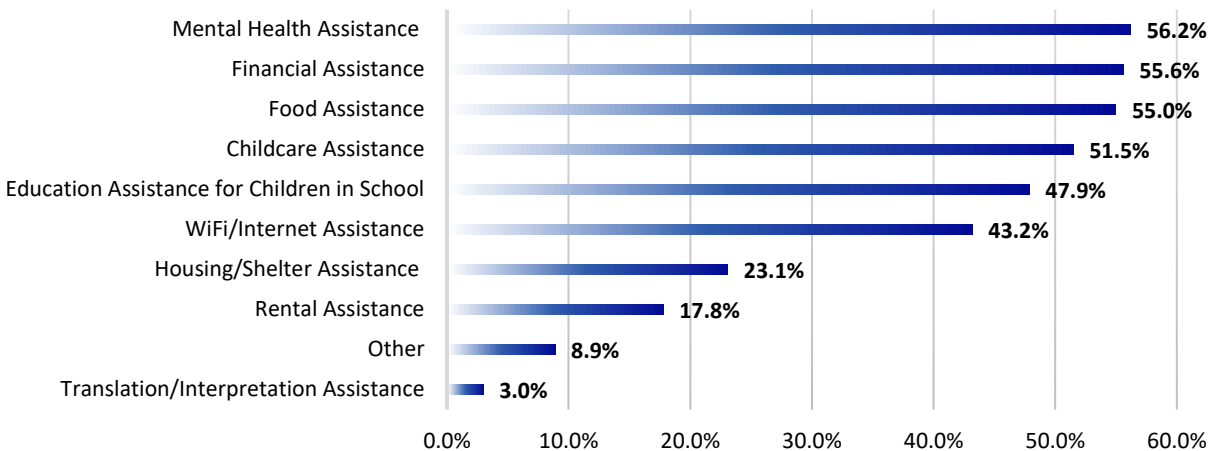
### 8.2.3 Transportation:

- Implement pilot transportation program and learn from it before branching out
- Mobile health services for homebound patients
- Creation and utilization of a transportation phone app

## 9 COVID-19 Pandemic

Ballad Health fully understands the toll the COVID-19 Pandemic had on our communities and health care system. In both the key stakeholder survey and key stakeholder focus groups, Ballad Health wanted to reflect and better understand how communities have struggled in light of the pandemic through understanding what types of services and assistance were needed most by communities. This information obtained by the community will allow Ballad Health to best plan for barriers to future improvement efforts, as communities are still suffering from the effects of the pandemic. From the key stakeholder survey, the types of assistance needed most by communities due to COVID-19 are shown below. The percentages on the bar graphs represent the percentage of Northeast Tennessee respondents who selected that particular type of assistance.

### AS A RESULT OF COVID-19, WHICH OF THE FOLLOWING SERVICES OR TYPES OF ASSISTANCE HAVE BEEN NEEDED MOST BY THE THOSE WITHIN YOUR COMMUNITY? (PLEASE SELECT YOUR TOP 3)



In the key stakeholder focus groups, participants were asked to detail how they felt the COVID-19 pandemic would affect the community's ability to address any of the three priority areas. Focus group participants mentioned the following negative consequences that arose from the pandemic:

- Lack of face-to-face interaction with a case manager from a therapeutic standpoint/lack of engagement
- Widening income gap and wealth inequality - more lives are affected
- Fear of COVID-19 exposure led to fear of connection, engagement, and offers for help
- More strain on the health system post COVID-19 (need to seek as much funding for grants as possible)
- Fear and isolation led to depression, resulting in drug/alcohol abuse and mental health issues
- Depression of our young people

In future efforts to address each of the priority areas, focus group participants believe special attention to the above list of negative consequences should be given as a result of the pandemic. Focus group participants also mentioned the fact that telehealth services were utilized more because of the pandemic, which is a service they hope to continue to utilize in order to enhance the accessibility of services offered.


## 10 Conclusion

As hospitals and health systems continue to work to make the communities they serve healthier, the identification of prioritized population health issues has become an area of strategic importance. Because Holston Valley Medical Center is located in a region with many health and social challenges, that prioritization becomes even more important so that focused actions can be developed and implemented with strategic purpose. The allocation of hospital resources to the prioritized issues, coupled with partnerships with other community organizations, will continue to build momentum toward the building of a healthier Sullivan County.

# 11 Appendix

## 11.1 Sg2 2021 Population Profile

The table below highlights key demographic statistics for Western Sullivan County, TN:

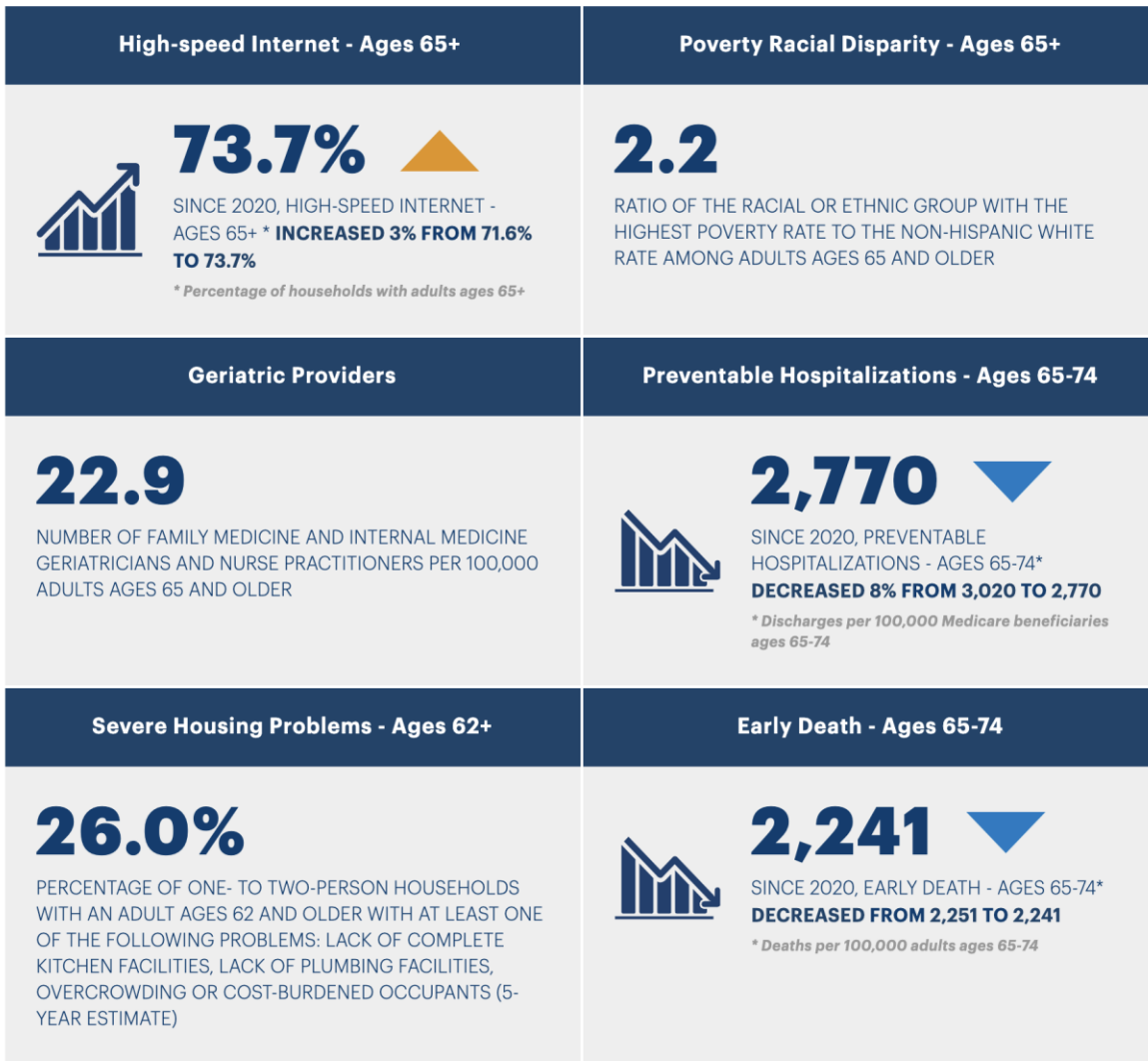
Sg2 MARKET SNAPSHOT						
						
Market Snapshot						
Sullivan W, TN						
Population and Gender	Market 2021 Population	Market 2021 % of Total	Market 2026 Population	Market 2026 % of Total	Market Population % Change	National 2021 % of Total
Female Population	45,511	52.09%	46,380	52.02%	1.91%	50.75%
Male Population	41,856	47.91%	42,772	47.98%	2.19%	49.25%
Total	87,367	100.00 %	89,152	100.00 %	2.04 %	100.00 %
Age Groups	Market 2021 Population	Market 2021 % of Total	Market 2026 Population	Market 2026 % of Total	Market Population % Change	National 2021 % of Total
00-17	16,947	19.40%	16,674	18.70%	(1.61 %)	22.17%
18-44	25,997	29.76%	26,647	29.89%	2.50%	35.64%
45-64	23,723	27.15%	22,647	25.40%	(4.54 %)	25.13%
65-UP	20,700	23.69%	23,184	26.01%	12.00%	17.06%
Total	87,367	100.00 %	89,152	100.00 %	2.04 %	100.00 %
Ethnicity/Race	Market 2021 Population	Market 2021 % of Total	Market 2026 Population	Market 2026 % of Total	Market Population % Change	National 2021 % of Total
Asian & Pacific Is. Non-Hispanic	929	1.06%	1,095	1.23%	17.87%	6.05%
Black Non-Hispanic	2,291	2.62%	2,406	2.70%	5.02%	12.40%
Hispanic	2,229	2.55%	2,622	2.94%	17.63%	19.24%
White Non-Hispanic	79,922	91.48%	80,728	90.55%	1.01%	58.97%
All Others	1,996	2.28%	2,301	2.58%	15.28%	3.34%
Total	87,367	100.00 %	89,152	100.00 %	2.04 %	100.00 %
Language*	Market 2021 Population	Market 2021 % of Total	Market 2026 Population	Market 2026 % of Total	Market Population % Change	National 2021 % of Total
Chinese at Home	1,016	1.22%	1,044	1.23%	2.76%	1.25%
Germanic Lang at Home	342	0.41%	350	0.41%	2.34%	0.74%
Only English at Home	77,310	93.20%	78,903	93.20%	2.06%	76.50%
Slavic Lang at Home	498	0.60%	514	0.61%	3.21%	0.64%
Spanish at Home	2,726	3.29%	2,777	3.28%	1.87%	14.95%
All Others	1,059	1.28%	1,075	1.27%	1.51%	5.92%
Total	82,951	100.00 %	84,663	100.00 %	2.06 %	100.00 %
Household Income	Market 2021 Households	Market 2021 % of Total	Market 2026 Households	Market 2026 % of Total	Market Households % Change	National 2021 % of Total
<\$15K	5,529	14.66%	5,234	13.57%	(5.34 %)	9.67%
\$15-25K	4,605	12.21%	4,455	11.55%	(3.26 %)	8.29%
\$25-50K	9,909	26.27%	10,008	25.95%	1.00%	20.27%
\$50-75K	6,493	17.21%	6,396	16.58%	(1.49 %)	16.57%
\$75-100K	4,165	11.04%	4,359	11.30%	4.66%	12.46%
\$100K-200K	5,564	14.75%	6,273	16.27%	12.74%	23.23%
>\$200K	1,462	3.88%	1,841	4.77%	25.92%	9.51%
Total	37,727	100.00 %	38,566	100.00 %	2.22 %	100.00 %
Education Level**	Market 2021 Population	Market 2021 % of Total	Market 2026 Population	Market 2026 % of Total	Market Population % Change	National 2021 % of Total
Less than High School	2,601	4.07%	2,655	4.05%	2.08%	5.05%
Some High School	4,657	7.29%	4,809	7.34%	3.26%	6.83%
High School Degree	22,504	35.24%	23,180	35.37%	3.00%	26.95%
Some College/Assoc. Degree	19,595	30.69%	20,074	30.63%	2.44%	31.05%
Bachelor's Degree or Greater	14,498	22.70%	14,817	22.61%	2.20%	30.12%
Total	63,855	100.00 %	65,535	100.00 %	2.63 %	100.00 %

\*Excludes population age<5, \*\*Excludes population age<25



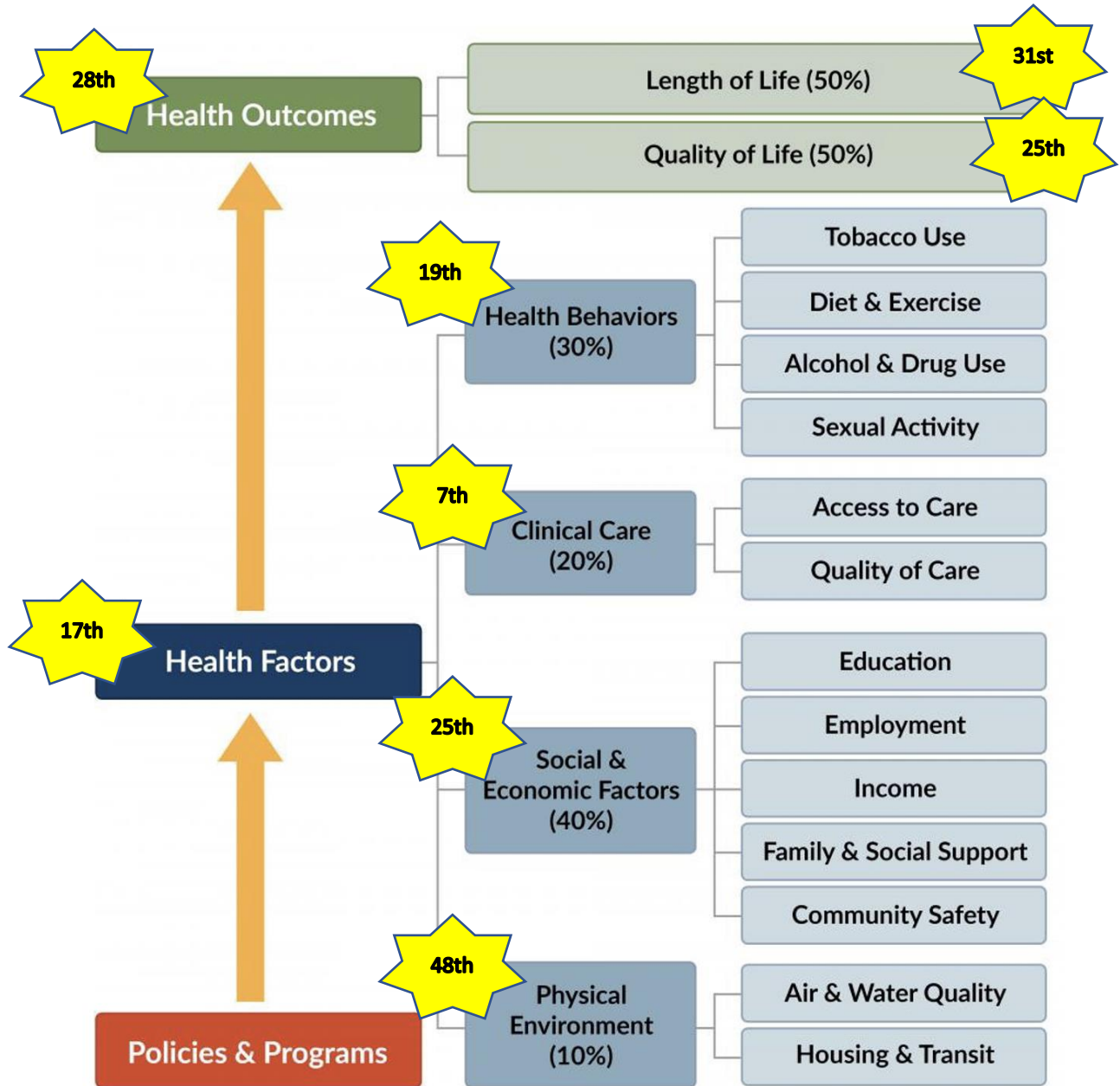
## 11.2 America's Health Rankings Graphic

The infographic below summarizes strength and challenges for the state of Tennessee in 2020:



### 11.3 County Health Rankings Graphic

The infographic below shows the 2021 rankings for Sullivan County for each of the County Health Ranking model components out of the 95 Tennessee counties.



County Health Rankings model © 2014 UWPHI

## 11.4 Secondary Data Tables

The seven data tables below showcase the secondary data metrics compiled for Sullivan County, TN. Metric definitions, the associated metric value for Tennessee, and data source reference are also included in the tables.

Health Outcomes						
Metric	Metric Definition	Sullivan County	Ballad Health GSA Average	Ballad Health TN GSA Average	Tennessee	Reference
Infant Mortality	Number of infant deaths (under one year of age) per 1,000 live births	4.6	6.9	7.2	6.9	<a href="#">Tennessee Commission on Children &amp; Youth</a>
Low Birthweight	Percentage of live born infants with birth weight less than 5 pounds, 8 ounces	8.2%	9.3%	8.3%	9.3%	<a href="#">Kids Count</a>
Children with NAS	Rate of NAS cases per 1,000 live births	47.1	64.4	43.8	11.5	<a href="#">Tennessee Commission on Children &amp; Youth</a>
Poor or Fair Health	Percentage of adults reporting fair or poor health (age-adjusted)	21.0%	18.7%	22.4%	20.0%	<a href="#">County Health Rankings</a>
Cardiovascular Deaths	Rate of deaths from diseases of the heart per 100,000 population	348.2	527.8	347.7	242.5	<a href="#">Tennessee Department of Health</a>
Cancer Deaths	Number of cancer deaths (all sites) per 100,000 population	177.8	192.7	189.6	177.4	<a href="#">CDC</a>
Diabetes Mellitus Deaths	Rate of deaths from diabetes per 100,000 population	24.7	32.4	33.6	29.9	<a href="#">Tennessee Department of Health</a>
Cerebrovascular Deaths	Rate of deaths from cerebrovascular disease per 100,000 population	67.2	73.2	55.5	51.7	<a href="#">Tennessee Department of Health</a>
Suicide Rate	Rate of deaths from suicides per 100,000 population	18.4	22.5	18.0	17.1	<a href="#">Tennessee Department of Health</a>
Lung Cancer Deaths	Number of lung and bronchus cancer deaths per 100,000 population	51.9	57.8	58.7	51.3	<a href="#">CDC</a>
Female Breast Cancer Deaths	Number of female breast cancer deaths per 100,000 women	21.5	21.7	20.7	22.0	<a href="#">CDC</a>
Prevalence of Diabetes	Percentage of adults aged 20 and above with diagnosed diabetes	15.0%	15.2%	17.1%	13.0%	<a href="#">County Health Rankings</a>
Mammography Screening	Percentage of female Medicare enrollees ages 65-74 that received an annual mammography screening	45.0%	40.1%	41.5%	41.0%	<a href="#">County Health Rankings</a>
Frequent Mental Distress	Percentage of adults reporting 14 or more days of poor mental health per month	15.0%	13.8%	15.3%	14.0%	<a href="#">County Health Rankings</a>
Premature Deaths	Number of deaths among residents under age 75 per 100,000 population (age-adjusted)	470.0	526.4	535.0	450.0	<a href="#">County Health Rankings</a>

## Health Behaviors

Metric	Metric Definition	Sullivan County	Ballad Health GSA Average	Ballad Health TN GSA Average	Tennessee	Reference
<b>Alcohol-Impaired Driving Deaths</b>	Percentage of driving deaths with alcohol involvement	22.0%	22.0%	37.0%	25.0%	<a href="#">County Health Rankings</a>
<b>Excessive Drinking</b>	Percentage of adults reporting binge or heavy drinking	13.0%	16.4%	13.2%	14.0%	<a href="#">County Health Rankings</a>
<b>Adult Smoking</b>	Percentage of adults who are current smokers	22.0%	19.0%	22.8%	23.0%	<a href="#">County Health Rankings</a>
<b>Adult Obesity</b>	Percentage of the adult population (age 20 and older) that reports a body mass index (BMI) greater than or equal to 30 kg/m2	34.0%	33.6%	33.8%	33.0%	<a href="#">County Health Rankings</a>
<b>TN Public School Students Measured as Overweight or Obese</b>	Percentage of public school students who were measured as overweight or obese	36.6%		45.3%	39.3%	<a href="#">Tennessee Commission on Children &amp; Youth</a>
<b>Physical Inactivity</b>	Percentage of adults age 20 and over reporting no leisure-time physical activity	30.0%	60.3%	30.1%	27.0%	<a href="#">County Health Rankings</a>
<b>Access to Exercise Opportunities</b>	Percentage of population with adequate access to locations for physical activity	78.0%	33.3%	63.8%	70.0%	<a href="#">County Health Rankings</a>
<b>Teen Births</b>	Number of live births per 1,000 females aged 15-17 years old	7.3	8.9	11.2	9.6	<a href="#">Kids Count</a>
<b>Drug Overdose Deaths</b>	Rate of drug overdose deaths per 100,000 Tennesseans	36.0	14.9		27.0	<a href="#">Tennessee Department of Health</a>
<b>Nonfatal Drug Overdose</b>	Rate of inpatient stays involving non-fatal drug overdose per 100,000 Tennesseans	197.0	162.9	133.3	102.0	<a href="#">Tennessee Department of Health</a>
<b>Opioid Prescription</b>	Rate of opioid prescriptions per 1,000 Tennesseans (at least one opioid for pain prescription)	972.0	17.6	1091.8	793.0	<a href="#">Tennessee Department of Health</a>
<b>Violent Crime</b>	Number of reported violent crime offenses per 100,000 population	484.0	14.5	376.3	621.0	<a href="#">County Health Rankings</a>
<b>Firearm Fatalities</b>	Number of deaths due to firearms per 100,000 population	14.0		15.8	17.0	<a href="#">County Health Rankings</a>
<b>Motor Vehicle Crash Deaths</b>	Number of motor vehicle crash deaths per 100,000 population	15.0		18.2	15.0	<a href="#">County Health Rankings</a>

## Health Determinants

Metric	Metric Definition	Sullivan County	Ballad Health GSA Average	Ballad Health TN GSA Average	Tennessee	Reference
<b>Uninsured Adults</b>	Percentage of adults under age 65 without health insurance	13.0%	13.6%	14.6%	14.0%	<a href="#">County Health Rankings</a>
<b>Uninsured Children</b>	Percent of uninsured children under the age of 19	4.1%	5.3%	4.7%	5.1%	<a href="#">Kids Count</a>
<b>Median Household Income</b>	The income where half of households in a county earn more and half of households earn less	\$46,000	\$40,863	\$41,140	\$52,400	<a href="#">County Health Rankings</a>
<b>Children Eligible for Free or Reduced Lunch</b>	Percentage of students who are eligible for the free or reduced-price meals program during a school year	57.7%	56.8%	71.6%	62.1%	<a href="#">Kids Count</a>
<b>Children in Single-Parent Household</b>	Percentage of children that live in a household headed by single parent	34.0%	34.8%	34.5%	35.0%	<a href="#">County Health Rankings</a>
<b>Children In Poverty</b>	Percent of children under age 18 living with an income below the official poverty threshold	23.0%	25.3%	28.0%	19.4%	<a href="#">Kids Count</a>
<b>High School Graduation</b>	Percentage of students graduating within four years of entering high school, and graduation in more than four years for students with an Individual Education Plan	94.6%	55.1%	89.7%	89.6%	<a href="#">Kids Count</a>
<b>College Going Rate</b>	Percentage of high school students who were part of the high school freshman cohort and graduated during the winter, spring, or summer preceding the summer or fall they enrolled in higher education	71.8%	94.4%	59.4%	61.8%	<a href="#">Kids Count</a>
<b>College Enrollment/Completion</b>	Exact data definition not provided by source	68.1%	4.0%	64.0%	62.5%	<a href="#">Tennessee Commission on Children &amp; Youth</a>
<b>Unemployment</b>	Percentage of population ages 16 and older unemployed but seeking work	3.7%	11.9%	4.2%	3.5%	<a href="#">County Health Rankings</a>
<b>Food Insecurity</b>	Percentage of population who lack adequate access to food	12.0%	80.4%	13.9%	14.0%	<a href="#">County Health Rankings</a>
<b>TNReady English Language Arts for 3rd to 8th graders</b>	Percentage of students from 3rd to 8th grade who achieved on-track or mastered score in English Language Arts (ELA) during a school year	37.0%	5.0%	31.9%	33.7%	<a href="#">Kids Count</a>

## Clinical Care and Health Resources

Metric	Metric Definition	Sullivan County	Ballad Health GSA Average	Ballad Health TN GSA Average	Tennessee	Reference
<b>Hospital Staffed Beds</b>	Total number of hospital staffed beds available (in the Ballad Health system for county data)	<b>626</b>			<b>19,756</b>	Tennessee Department of Health
<b>Licensed Beds</b>	Total number of licensed beds available (in the Ballad Health system for county data)	<b>1,056</b>			<b>24,649</b>	Tennessee Department of Health
<b>Medical Doctors</b>	Rate of medical doctors per 100,000 residents	<b>237.2</b>		<b>103</b>	<b>229.1</b>	<a href="#">Tennessee Commission on Children &amp; Youth</a>
<b>Mental Health Providers</b>	Ratio of population to mental health providers	<b>830:1</b>			<b>660:1</b>	<a href="#">County Health Rankings</a>
<b>Dentists</b>	Rate of dentists per 100,000 residents	<b>60.3</b>		<b>26</b>	<b>50.1</b>	<a href="#">Tennessee Commission on Children &amp; Youth</a>
<b>Preventable Hospital Stays</b>	Rate of hospital stays for ambulatory-care sensitive conditions per 100,000 Medicare enrollees	<b>5,497</b>	<b>5,829</b>	<b>5,064</b>	<b>5,320</b>	<a href="#">County Health Rankings</a>
<b>Flu Vaccinations</b>	Percentage of fee-for-service (FFS) Medicare enrollees that had an annual flu vaccination	<b>50.0%</b>	<b>43.8%</b>	<b>41%</b>	<b>49.0%</b>	<a href="#">County Health Rankings</a>
<b>Medicaid Enrollees</b>	Percent of population enrolled in TennCare	<b>20.5%</b>	<b>34.8%</b>	<b>24%</b>	<b>20.7%</b>	<a href="#">Kids Count</a>
<b>Food Stamp Eligible Participants</b>	Percent of population who receive food stamps under SNAP	<b>13.9%</b>		<b>18%</b>	<b>13.4%</b>	<a href="#">Kids Count</a>
<b>Children on SNAP</b>	Percent of children on SNAP out of total child population	<b>29.9%</b>		<b>35%</b>	<b>28.2%</b>	<a href="#">Tennessee Commission on Children &amp; Youth</a>
<b>Infants and Children on WIC</b>	Percent of infants on WIC out of total infant population	<b>34.8%</b>		<b>48%</b>	<b>30.6%</b>	<a href="#">Tennessee Commission on Children &amp; Youth</a>

Physical Environment						
Metric	Metric Definition	Sullivan County	Ballad Health GSA Average	Ballad Health TN GSA Average	Tennessee	Reference
Severe Housing Problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen facilities, or lack of plumbing facilities	11.0%	11.6%	13.1%	15.0%	<a href="#">County Health Rankings</a>
Median Home Sale Price	The home sale price where half of homes in a county sell for more and half of homes sell for less	\$144,250	\$132,548	\$128,501	\$146,000	<a href="#">Tennessee Commission on Children &amp; Youth</a>
Air Pollution - particulate matter	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5)	10.2	9.4	9.7	10.0	<a href="#">County Health Rankings</a>

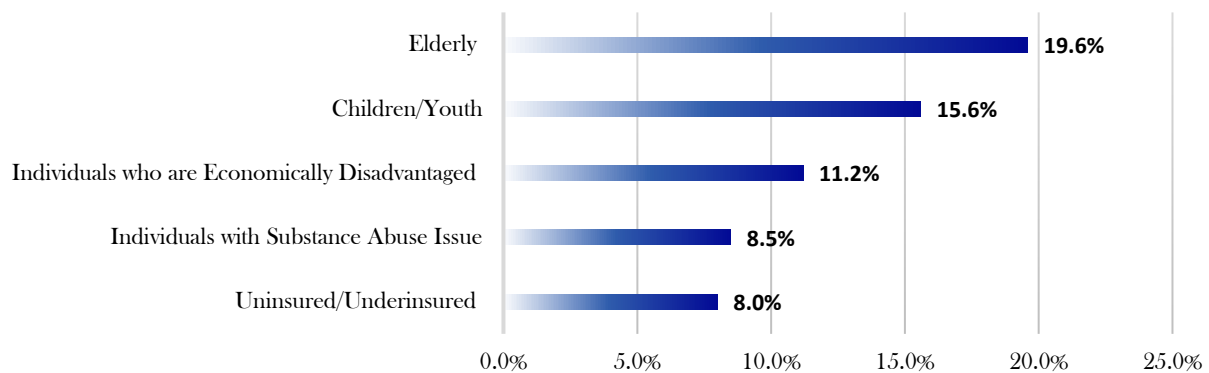
Adverse Childhood Experiences						
Metric	Metric Definition	Sullivan County	Ballad Health GSA Average	Ballad Health TN GSA Average	Tennessee	Reference
Reported Child Abuse Cases	Percentage of reported child abuses cases out of total child population	8.0%		6.7%	4.7%	<a href="#">Tennessee Commission on Children &amp; Youth</a>
Commitment to State Custody	Rate of commitment to state custody per 1,000 children	4.8	4.4	6.0	4.1	<a href="#">Tennessee Commission on Children &amp; Youth</a>

Maternal Infant Health						
Metric	Metric Definition	Sullivan County	Ballad Health GSA Average	Ballad Health TN GSA Average	Tennessee	Reference
Birth Rate	Number of births per 1,000 women ages 15-44	9.6	58.8	10.2	11.9	<a href="#">Tennessee Commission on Children &amp; Youth</a>
Adequate Prenatal Care	Percent of live births in a given calendar year where mother received adequate prenatal care	55.8%	41.0%	56.1%	58.8%	<a href="#">Tennessee Commission on Children &amp; Youth</a>
Mothers Who Smoke During Pregnancy	Percent of total births for which the mother indicated she smoked while pregnant	20.3%		25.2%	12.1%	<a href="#">Tennessee Commission on Children &amp; Youth</a>

## 11.5 Survey Question Data

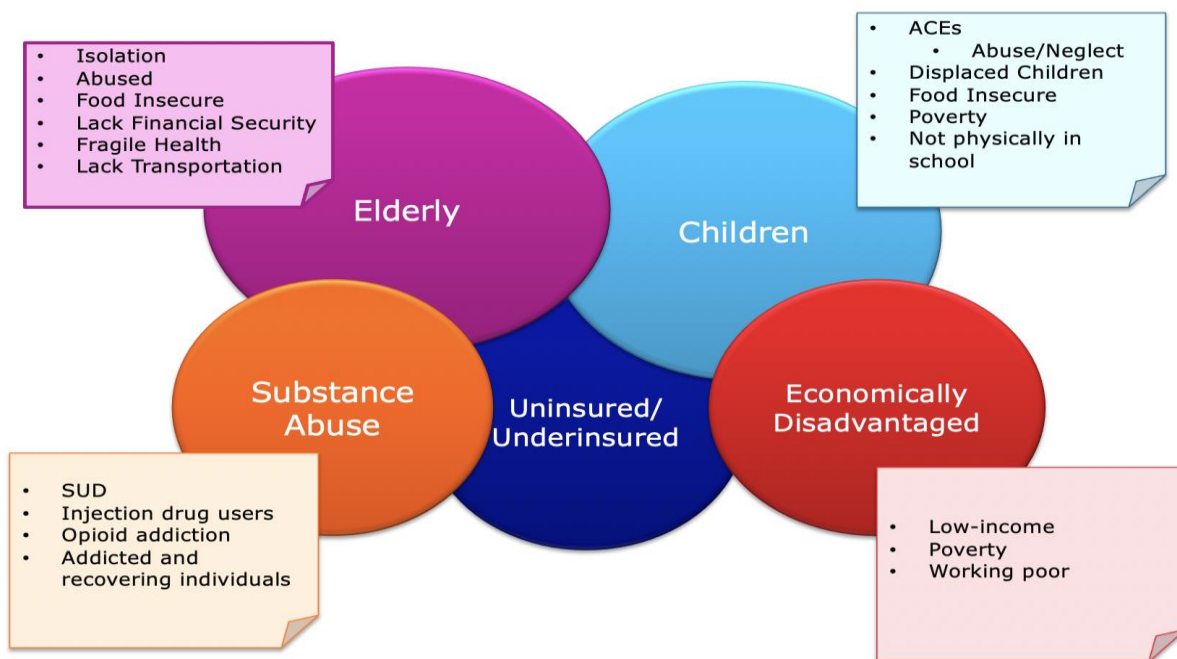
The first two questions (Q1 and Q2) on the key stakeholder survey were used to identify the service area of the respondent and determine what organization they were representing. Findings from Northeast Tennessee respondents for questions three through thirteen (Q1 - Q13) are given below:

### Q3) WHEN THINKING OF THE HEALTH OF YOUR COMMUNITY, WHAT VULNERABLE POPULATIONS DO YOU THINK DESERVE OUR PARTICULAR ATTENTION?



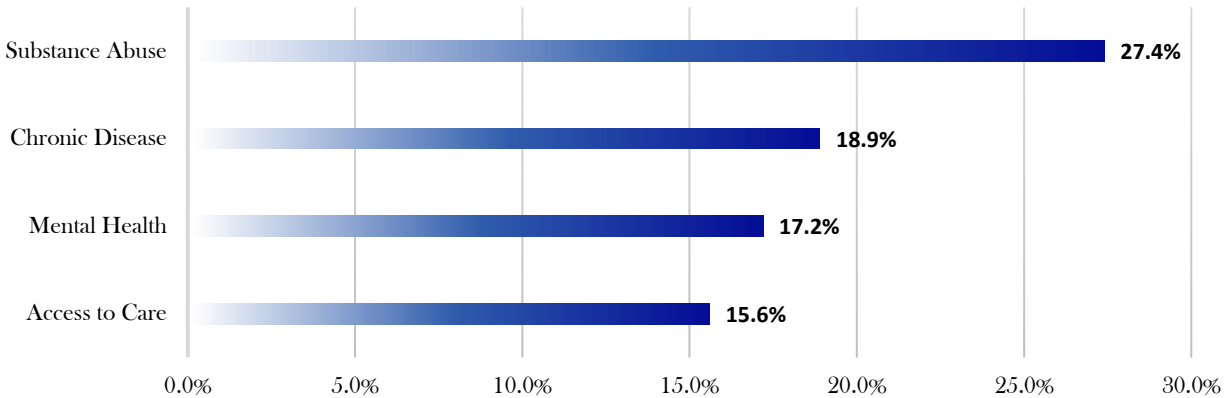
\*Other vulnerable populations that were mentioned by respondents were homeless individuals, veterans, maternal women, and marginalized populations.

Below are some of the specifics given by survey respondents for each of the vulnerable populations listed above:



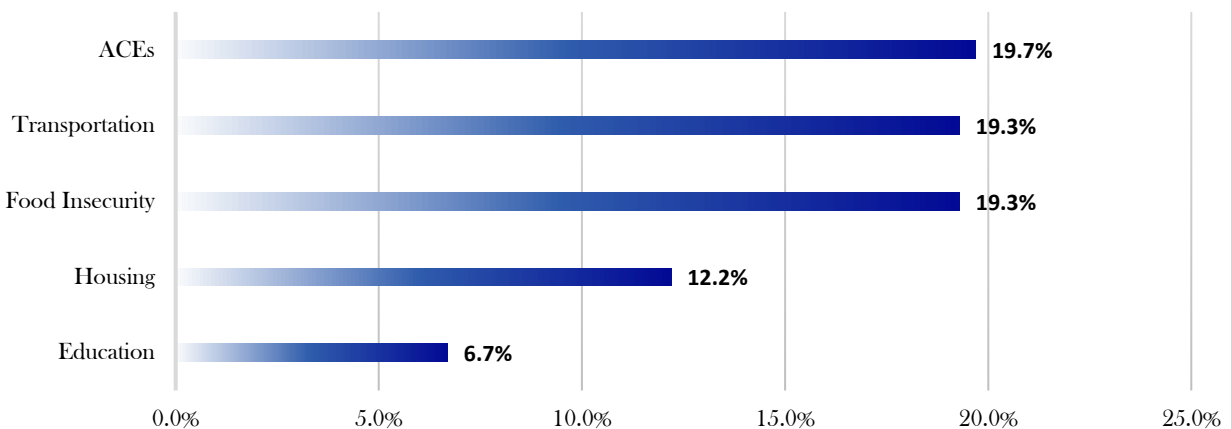


### Q4) PLEASE LIST THE THREE MOST IMPORTANT HEALTH-RELATED ISSUES THAT AFFECT THE OVERALL HEALTH OF YOUR COMMUNITY.



\*Other health-related issues that were mentioned by respondents were physical inactivity, unintended pregnancy, COVID-19, and dental health.

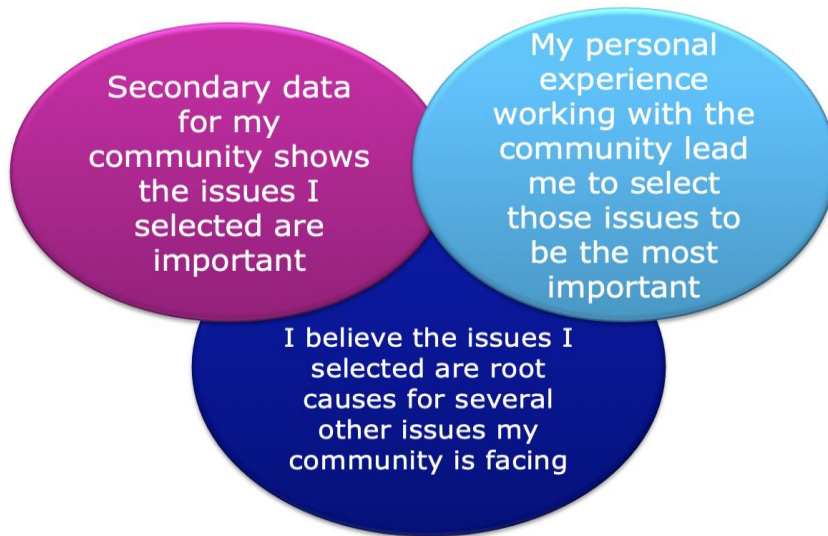
### Q6) PLEASE LIST THE THREE MOST IMPORTANT SOCIAL/ENVIRONMENTAL ISSUES THAT AFFECT THE OVERALL HEALTH OF YOUR COMMUNITY.



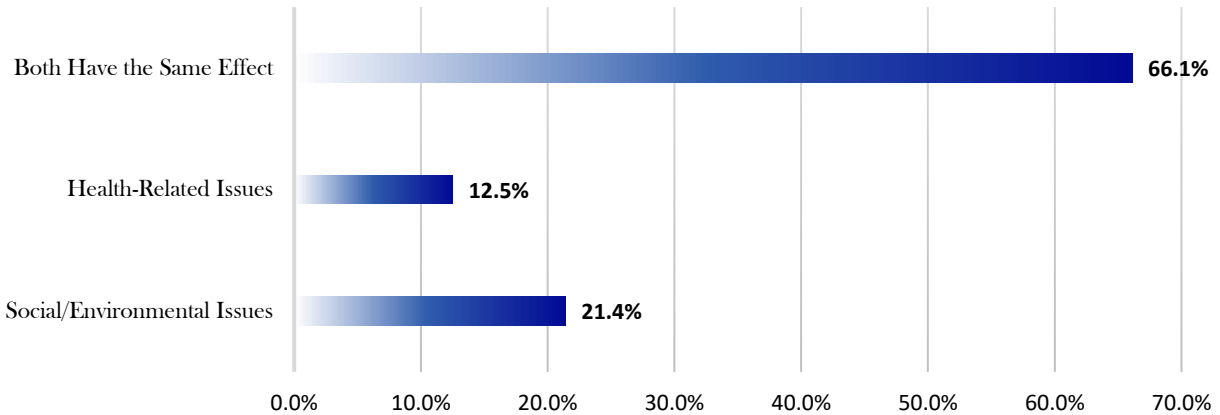
\*Other social/environmental issues that were mentioned by respondents were poverty, discrimination, and safe water sources.

**Q5 and Q7) PLEASE ELABORATE ON WHY YOU SELECTED THOSE THREE HEALTH-RELATED AND SOCIAL/ENVIRONMENTAL ISSUES TO BE THE MOST IMPORTANT.**

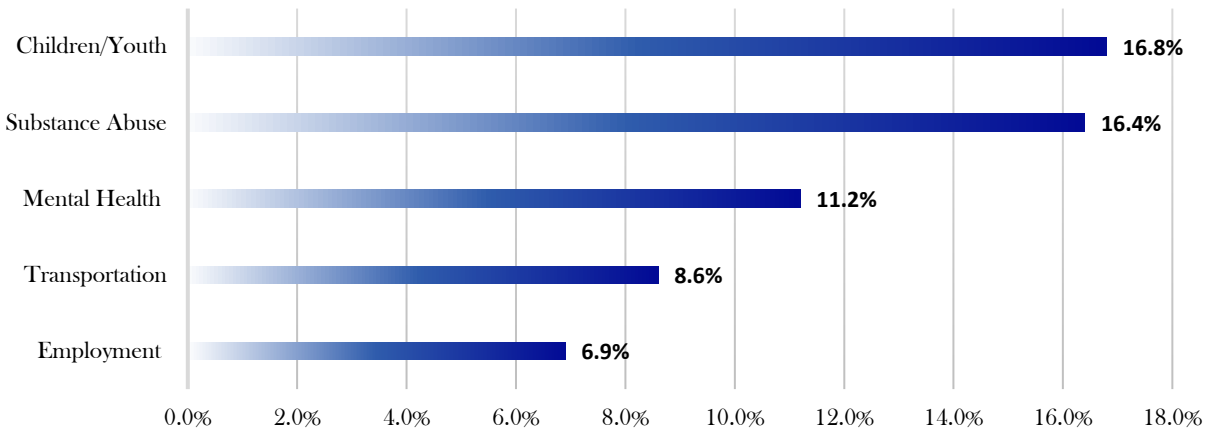
Three overarching themes were identified:



**Q8) BASED ON YOUR ANSWERS TO BOTH QUESTION 4 AND QUESTION 6, WHICH DO YOU FEEL HAS A GREATER EFFECT ON THE OVERALL HEALTH OF YOUR COMMUNITY?**



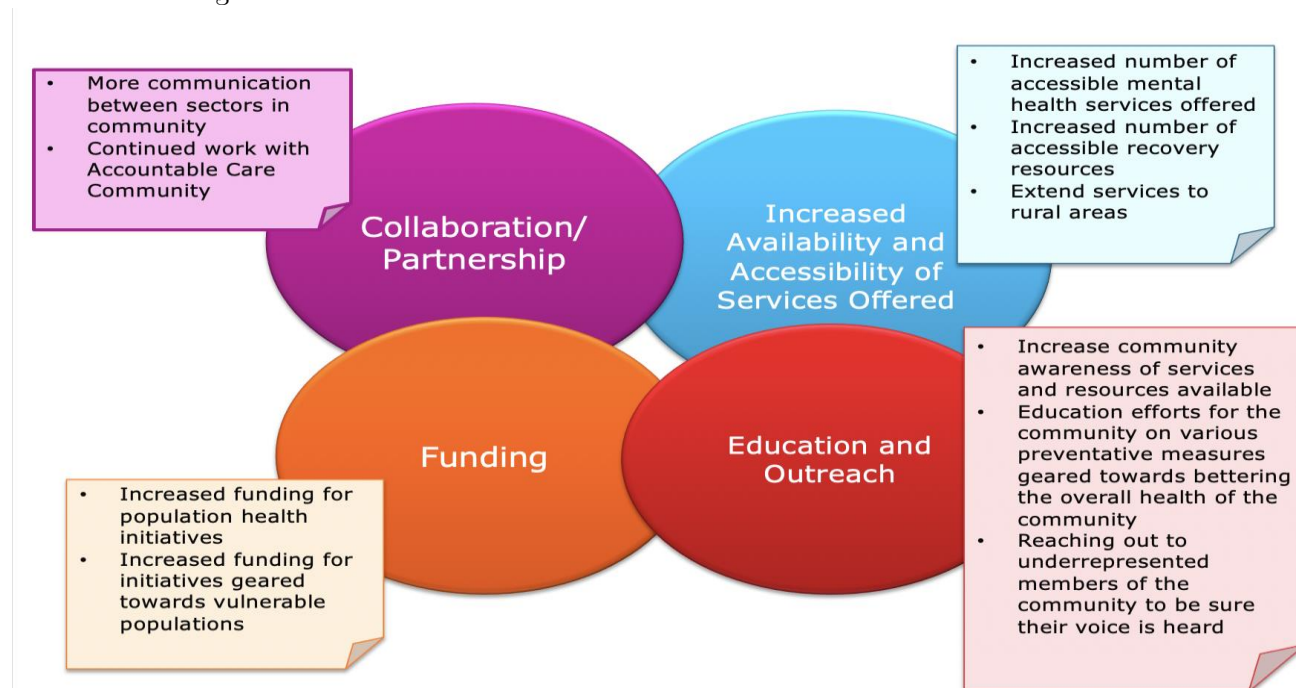
**Q9) FROM THE PERSPECTIVE OF THOSE WHO LIVE IN YOUR COMMUNITY, WHAT ISSUES DO YOU BELIEVE THE RESIDENTS WOULD LIKE TO SEE EFFORTS PRIORITIZED AROUND?**



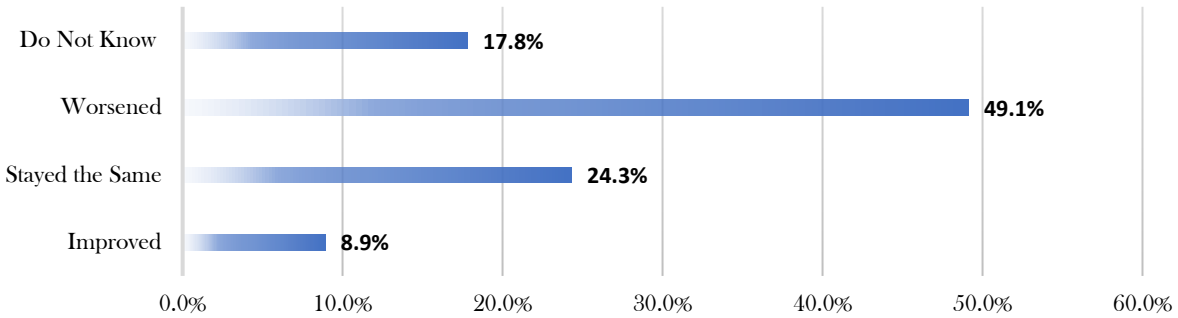
\*Other community concerns that were mentioned by respondents were education, housing, ACEs, COVID-19, and food insecurity.

# Q10) WHAT IDEAS OR SUGGESTIONS DO YOU HAVE TO IMPROVE THE OVERALL HEALTH OF YOUR COMMUNITY?

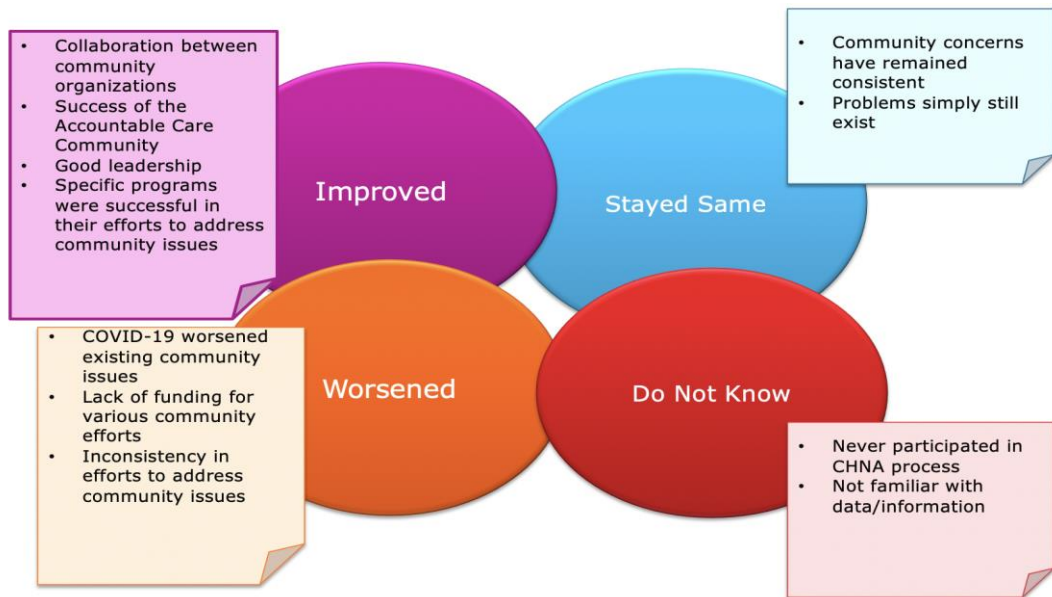
Four overarching themes were identified:



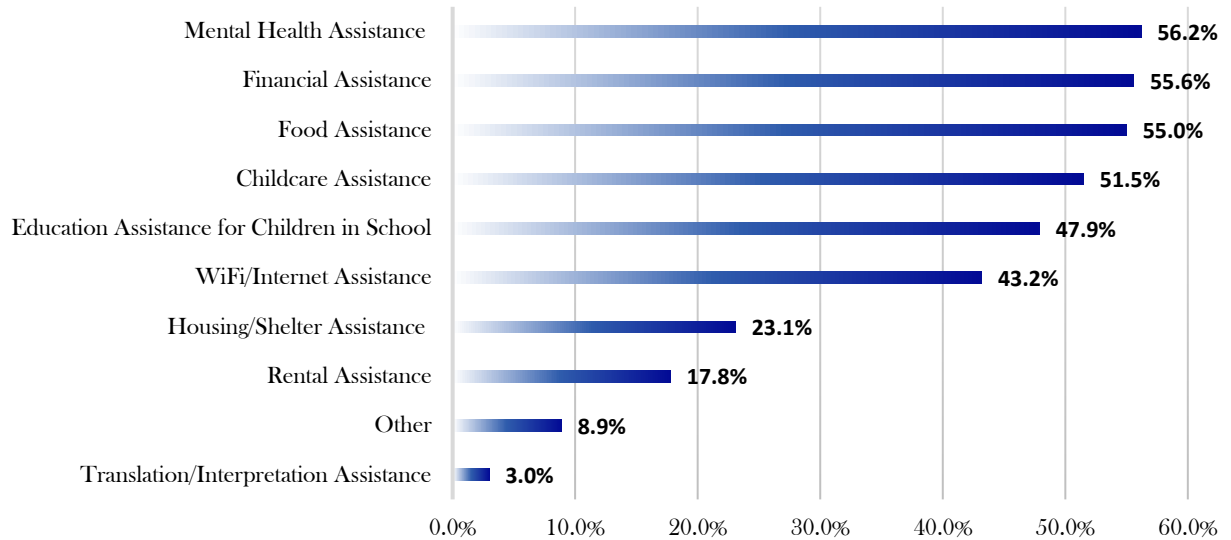
**Q11) BASED ON THE PRIORITIES IDENTIFIED IN PREVIOUS COMMUNITY ASSESSMENTS, DO YOU FEEL AS THOUGH THINGS HAVE IMPROVED, STAYED THE SAME, OR WORSENERD?**



**Q12) BASED ON YOUR ANSWER TO THE PREVIOUS QUESTION, PLEASE ELABORATE ON WHY YOU SELECTED THE ANSWER YOU CHOSE.**



**Q13) AS A RESULT OF COVID-19, WHICH OF THE FOLLOWING SERVICES OR TYPES OF ASSISTANCE HAVE BEEN NEEDED MOST BY THE THOSE WITHIN YOUR COMMUNITY? (PLEASE SELECT YOUR TOP 3)**



## 11.6 Focus Group Facilitation Guide

### **Top 10 Community Issues Identified via Community Stakeholder Survey (in no particular order):**

\*Both health-related and social/environmental issues are listed.

Transportation  
Adverse Childhood Experiences (ACEs)  
Food Insecurity/Lack of Proper Nutrition  
Housing  
Education  
Discrimination  
Access to Care  
Substance Abuse  
Mental Health  
Chronic Disease

### **Prioritization of Community Issues:**

\*Attendees will be asked to vote on which 3 community issues they believe should have priority. Selection of the top 3 community issues will be based on majority of votes.

**Question:** *Out of 10 community issues listed above, which 3 do you believe should be priority focus areas for improvement efforts moving forward?*

### **Focus Group Discussion Questions:**

\*These discussions will be tailored to the 3 focus areas selected by the group.

#### **Questions for Focus Area #1, #2, and #3:**

\*Each of the 7 questions below will be asked independently for each of the 3 focus areas identified. One focus area will be discussed at a time, meaning Questions 1-7 will be asked for Focus Area #1 before moving on to Focus Area #2, and so on.

- 1) *What do you believe the potential root causes are for this focus area?*
- 2) *What resources currently exist in your community to address this focus area? (programs, services, etc.)*
- 3) *What are some possible solutions to address this focus area?*
- 4) *What resources are needed that don't currently exist in your community to address this focus area?*
- 5) *Who should lead the effort to address this focus area?*
- 6) *Who else should be involved in the effort to address this focus area?*  
*If not already mentioned,*
- 7) *What ideas do you have for the health system to address this focus area?*

#### **Question for ALL 3 Focus Areas:**

\*Question is for any or all of the 3 focus areas identified.

- 8) *How will COVID-19 affect the community's ability to address any of the focus areas identified?*

## 11.7 Data Sources and References

- Centers for Disease Control and Prevention
- America's Health Rankings
- County Health Rankings
- Sg2 Analytics
- Kids Count
- Tennessee Department of Health
- Tennessee Commission on Children & Youth
- National Association of County and City Health Officials