Tennessee

State Health Plan

2017-2018 Edition

TN Department of Health

Foreword: A Message from the Commissioner

Health is the thread that binds all of the other threads of our lives life together. A healthy person is free to pursue all of the good things that provide meaning and purpose. A healthy community is free to invest in all of the good things that help a community prosper and grow. And a healthy Tennessee is a state where people and communities thrive because we prevent disease before it can start. Getting to a healthy Tennessee is a long journey, but it is certainly an attainable destination. We, including prior generations, have covered much ground to date, and while there will always be more ground to cover, today we are able to see that more than just better health care is needed to shape a path towards health. In fact, every aspect of society, not to mention our own genes and human nature, play a role in influencing our health. What we need is a framework to help us start anywhere on the map and find the path to a healthy destination. With this update to the State Health Plan, I am eager to build onto a framework that is already proving critical to our progress in making Tennessee a healthy state.

The 2015 Edition of the State Health Plan recast the plan from a limited set of directions few could take advantage of to a resource helpful for navigating anyone in Tennessee to a healthier place. In developing the Three Guiding Questions, anyone, anywhere in Tennessee now has a simple formula to follow to improve health. Whether the issue at hand deals with education, transportation, housing, health care, or any other setting, following the Three Guiding Questions will align people across Tennessee in efforts to reduce health disparities, prevent disease, and leverage the knowledge of others. The Tennessee Department of Health (TDH) is now using the Three Guiding Questions in all levels of our strategic planning process, and we are excited to work with others throughout Tennessee in applying these questions to their decisions as well.

Another exciting aspect of this edition of the State Health Plan is the recognition of 12 Vital Signs. There are a lot of things that shape and influence our health: the circumstances of our birth, decisions and behaviors, our families and friends, our society and community, our culture, our careers, our spiritual center, our natural and built environment, and our laws, among other things. So when it comes to measuring how healthy people in Tennessee are, is it as simple as choosing one or two statistics or as complicated as the annual America's Health Rankings with dozens of indicators? How do we answer the question, "How healthy is Tennessee?" within the context of what matters and resonates with our community of 6.6 million souls?

Several years ago, TDH set off on a journey to answer this question. Beginning early with a consultation with the National Academy of Medicine that included Governor Haslam, our own staff, and other state and national leaders, ideas began to take shape. Over several years, through a lot of engagement with outside partners, the public, and internal TDH team members, we have developed a scoreboard for Tennessee made by people in Tennessee: Tennessee's Vital Signs.

Simple in concept, complicated in the making, Tennessee's Vital Signs are 12 metrics meant to measure the pulse of Tennessee's population health. Taken together, they provide an at-a-glance view of leading indicators of health and prosperity in Tennessee. In the doctor's office, blood pressure or heart rate are indicators of patient health. In a roughly similar way, Tennessee's Vital Signs can provide a clearer answer to our question, "How healthy is Tennessee?" Vital Signs are and will continue to play an important role in shaping the policies, programs, and initiatives of TDH. I want to thank all of the State Health Plan stakeholders who participated in and contributed to the development of these Vital Signs.

Finally, another central aspect of this edition of the State Health Plan is a deep dive into the interplay between health and faith in Tennessee. The human spirit and our bodily health are profoundly linked. Considering that, according the Pew Research Center, in 2017 75 percent of adults in Tennessee reported going to religious ceremonies at least a few times a year (51 percent every week), spirituality plays an important role in Tennesseans' lives.[1] As the first of several deep dives into specific stakeholder communities across our state, our engagement with faith communities in Tennessee represents a new path forward in making this document *Tennessee's* State Health Plan. This plan was not written by government officials disconnected from the real needs of real people. Rather, it was built through a collaborative process that engaged people from many walks of life across our state. We take the recommendations developed through this process seriously, and I offer my leadership to help realize the potential of these ideas reflected in this plan.

I am excited to see where future additions of the State Health Plan can take this level of public engagement. The next deep dive will focus on issues of healthy aging, engaging families, health care and service providers, and other stakeholders in issues that will shape public policy for years

[1] "Religious composition of adults in Tennessee." Pew Research Center, *Religious Landscape Study*, 2018, Accessed Online at: http://www.pewforum.org/religious-landscape-study/state/tennessee/.

to come. The kind of input that we receive when we engage deeply and broadly benefits the entire state of Tennessee with a plan that accurately reflects the conditions, concerns, ideas, and desires of people in our state. I'm grateful for the thought, time, and involvement of so many in helping to craft this plan. My hope is that this plan will serve as a foundation and unifying framework for many other plans and strategies that will lead our state into greater health and prosperity.

John J. Dreyzehner, MD, MPH, FACOEM
Tennessee Commissioner of Health

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Executive Summary

The 2017-2018 Edition of the State Health Plan serves to support the mission of the Tennessee Department of Health (TDH), "to protect, promote, and improve the health and prosperity of people in Tennessee". The State Health Plan utilizes an overarching framework, comprised of three components, that offers a blueprint for improving the health of the people of Tennessee through the use of "upstream" primary prevention efforts. The framework not only directs the efforts of the Department at the state level but also allows organizations and engaged citizens across the state to align with TDH's vision and priorities. The framework was first released in the 2015 Edition of the State Health Plan. The Department finalized the metrics to be utilized for Tennessee Vital Signs in this 2017-2018 Edition of the State Health Plan.

State Health Plan Framework

Three Guiding Questions

1. Are we creating and improving opportunities for optimal health for all?
2. Are we moving upstream?
3. Are we learning from or teaching others?

Tennessee Vital Signs

The Tennessee Vital Signs are 12 metrics selected by the Department through an extensive public engagement process to measure the pulse of Tennessee's population health. Taken together, they provide an at-a-glance view of leading indicators of health and prosperity.

Tennessee Vital Signs
Youth Obesity
Physical Activity
Youth Nicotine Use
Drug Overdose
Infant Mortality
Teen Pregnancy
Community Water Fluoridation
Frequent Mental Distress
3rd Grade Reading Level
Preventable Hospitalizations
Per Capita Personal Income
Access to Parks and Greenways

Vital Signs Actions

The State Health Plan will feature Vital Signs Actions which is a set of opportunities and recommendations to be used by groups and individuals to directly address Vital Signs indicators and improve health in their communities.

The Big Four

The Department continues to emphasize and focus efforts to address the Big Four: smoking, obesity, physical inactivity, and substance abuse. The Big Four directly influence at least six of the top ten leading causes of death in the state and also influence numerous health conditions including heart disease, cancer, and diabetes. Each of these will continue to be monitored by the state and are reflected in the Tennessee Vital Signs.

Tracking Tennessee Health

While future Editions of the State Health Plan will rely on the Tennessee Vital Signs to track health in the State, this Edition, as with previous Editions, relies on America's Health Rankings to monitor progress in the state. In 2017, Tennessee ranked 45th in the nation for overall health and well-being.

Smoking
22.1%
Rank: 43rd

Obesity
34.8%
Rank: 45th

Physical Inactivity
28.4%
Rank: 40th

Substance Abuse
19.9%
Rank: 39th

State Health Plan Deep Dive: Faith-Based Communities

This 2017-2018 Edition of the State Health Plan includes a "deep-dive" into faith-based organizations. The purpose of the "deep-dive" is to explore specific places and spaces in the state where health is being addressed. The goal is to build significant and meaningful relationships across the state with the people working on the ground to improve the health of their communities. The faith-based groups that were engaged through this process included leaders within places of worship, safety-net providers, community leaders, and congregants, among others. The Department hosted a series of six focus groups across the state with these stakeholders, and through these meetings a series of recommendations was developed that the Department will execute in the coming years to better support the work of these organizations.

Recommendations:

1. In partnership with the Tennessee Charitable Care Network, the Department of Health's Division of Health Disparities, and other provider stakeholders, develop an accessible, easy to use inventory of safety net providers in the state, including services provided, hours of operation, and payment policies.
2. In partnership with the Department of Health's Division of Health Disparities, convene one or more summits for faith-based leaders.
3. In partnership with the Department of Health's Division of Health Disparities, develop and sustain a health ambassadors program to support faith-based organizations and faith leaders with information and tools to improve the health of their communities.
4. Develop a new State Health Plan webpage that is a one-stop shop for health education materials, TDH priorities, toolkits, and other resources to assist leaders, community members, health care representatives, and others in their efforts to align with the State and increase their impact on health.

Certificate of Need

Tennessee's Certificate of Need (CON) program seeks to deliver improvements in access, quality, and cost effectiveness through orderly growth management of the state's health care system. In accordance with Tennessee law, the annual updates to the State Health Plan contain revisions to specific CON Standards and Criteria that are used by the Health Services Development Agency (HSDA) as guidelines when issuing CONs. Certificate of Need Standards and Criteria for Acute Care Beds and Non-Residential Opioid Treatment Programs were updated in 2017.

State of Tennessee

2017-2018 Edition of the

State Health Plan

Division of Health Planning

Introduction to the State Health Plan

Recognizing the need for the state to coordinate its efforts to improve the health and welfare of the people of Tennessee, the General Assembly passed Public Chapter 0942 in 2004. This act created the Division of Health Planning that was charged with developing a State Health Plan. The Public Chapter required the State Health Plan to be annually revised and approved and adopted by the Governor. The law states that the State Health Plan:

- "Shall include clear statements of goals, objectives, criteria and standards to guide the development of health care programs administered or funded by the state of Tennessee through its departments, agencies or programs;"
- Is to be considered "as guidance by the Health Services and Development Agency when issuing certificates of need;"
- "Shall guide the state in the development of health care programs and policies in the allocation of health care resources in the state".

State Health Plan Purpose and Use

The State Health Plan offers a blueprint for improving the health of people in Tennessee. Since 2009, the Division of Health Planning has developed annual updates to the Plan in order to better serve the people of Tennessee and to uphold the mission of the Department of Health:

> *"To Protect, Promote, and Improve the health and prosperity of people in Tennessee".*

Health impacts every aspect of our lives. From our ability to learn to our ability to work, the quality of our lives and our ability to meaningfully contribute to our communities depends heavily on how healthy we are. The State Health Plan exists to contemplate the factors that determine health, consider the resources we can utilize to improve health, and coordinate the people who lead the way in making Tennessee healthier. The State Health Plan has been designed to organize resources, prioritize recommendations, and align and coordinate efforts to efficiently and effectively address persistent health challenges the state faces.

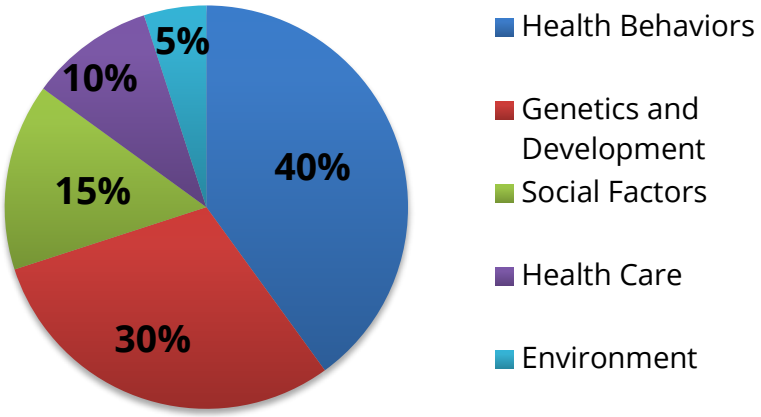
The State Health Plan emphasizes the importance of primary prevention and population health in the efforts of the TDH to provide the opportunities that are necessary for every individual to

achieve optimal health. Optimal health is a personal state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity.[2]

State Health Plan Guiding Principles

The State Health Plan intentionally emphasizes improving population health through the use of programs and policies that address social determinants of health and utilize primary prevention initiatives. The Department of Health recognizes that health care plays, and will continue to play, a crucial role in the health of Tennesseans. However, numerous factors outside of the health care system directly impact health, including personal choices and behaviors, culture, the environment, and social and socio-economic factors. The State Health Plan encourages the use of approaches for improving health and well-being that target these underlying factors that directly impact the occurrence of poor health outcomes like chronic disease. By moving upstream and addressing population health, primary prevention, and social determinants of health, the State Health Plan aims to equip Tennesseans with the knowledge, tools, and resources necessary to prevent health issues from ever developing instead of managing these conditions after they become present.

Figure 1 – What Impacts our Health?



Sources: McGinnis JM & Foege WH. Actual causes of death in the United States. JAMA 4993: 270(18):2207-12 (Nov. 10) McGinnis JM, Williams-Russo P, & Kinckman JR. The case for more active policy attention to health promotion. Health Affairs 2002: 21(2):78-93 (Mar).

[2] Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.

History of the State Health Plan

The State Health Plan is updated annually to ensure it evolves to reflect and address the current needs of the state. The health status and health challenges of the state are ever-changing, and it is the responsibility of the Department to continually research, learn, and improve to better serve the people of the State.

2009 and 2010 Editions

The first edition of the State Health Plan was developed and published in 2009. This document served as the beginning of a comprehensive and participatory health planning process aimed at coordinating efforts to improve health across the state. The 2010 edition of the State Health Plan was the result of an extensive public process comprised of regional public meetings and collaborative efforts that gathered the input of many stakeholders, health experts, and the people of Tennessee. That edition, for the first time, adopted the Five Principles for Achieving Better Health that has served as the Framework for the State Health Plan. The Five Principles, drawn from policy set forth in Tennessee law, are as follows.[3]

1. **Healthy Lives:** The purpose of the State Health Plan is to improve the health of the people in Tennessee.
2. **Access:** People in Tennessee should have access to health care and the conditions to achieve optimal health.
3. **Economic Efficiencies:** Health resources in Tennessee, including health care, should be developed to address the health of people in Tennessee while encouraging value and economic efficiencies.
4. **Quality of Care:** People in Tennessee should have confidence that the quality of care is continually monitored and standards are adhered to by providers.
5. **Workforce:** The state should support the development, recruitment, and retention of a sufficient and quality health workforce.

The 2010 edition also outlined key determinants of health and developed the first set of Goals for Achieving Better Health. Subsequent editions identified key strategies for improving the health in Tennessee and reported on the ongoing status of specific health outcomes and determinants.

[3] Tennessee Code Annotated § 68-11-1625(b), see Appendix A.

2014 Edition

The 2014 Edition of the State Health Plan retained the Five Principles for Achieving Better Health Framework, but expanded the principles to promote an emphasis on health protection and primary prevention. In this edition, "health protection and promotion" was identified as the best way to accelerate improvements in population health while still recognizing the role health care plays in improving individual health.

During the development of this Plan, an analysis of Tennessee's health rankings and measures resulted in the understanding that four behavioral factors significantly impact a majority of the causes of excessive deaths in the state. These four behaviors are **smoking, obesity, physical inactivity, and substance abuse**. Labeled the "**Big Three plus One**"[4], these factors became the target of department-wide primary prevention initiatives[5] and a focal point for departmental interactions with community partners and other state departments. At the time of publishing the 2015 Edition, the Big Three plus One directly impacted at least six of the top ten leading causes of death in Tennessee, and also affected other public health threats in the state such as heart disease, cancer, and diabetes.

2015 Edition

The 2015 Edition of the State Health Plan utilized the Centers for Medicare and Medicaid Services (CMS) State Innovation Model (SIM) Grant to develop a State Population Health Improvement Plan.

The State Population Health Improvement plan developed under this grant built upon the prioritization of health protection and primary prevention in the 2014 Edition of the State Health Plan by creating a detailed, actionable plan to improve population health across the state. The Plan was developed through a partnership with five academic public health institutions in Tennessee.[6] Each academic partner developed a regional population health improvement plan for one of five health areas identified by CMS: perinatal health, child health, tobacco use, diabetes, and obesity. These schools engaged in regional, grassroots, community-focused

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[4] Now referred to as the "Big 4"

[5] According to the Centers for Disease Control and Prevention, primary prevention is designed to prevent a disease or condition from occurring in the first place. The Primary Prevention Initiative was established by the TDH Commissioner Dr. Dreyzehner in 2012. The goal is to focus the Department's energy on primary prevention. For more information visit: https://www.tn.gov/health/health-program-areas/fhw/ppi.html.

[6] East Tennessee State University, Meharry Medical College, Tennessee State University, University of Memphis, and University of Tennessee- Knoxville

campaigns, coupled with statistical analysis, to identify the key factors causing these health problems. After this work was complete, recommendations for how to improve health in these areas were developed. These regional population health improvement plans were then utilized to develop a State Population Health Improvement Plan; the combination of these efforts comprised the majority of the content for the 2015 State Health Plan.

The 2015 Edition of the State Health Plan featured key changes to the traditional framework of the State Health Plan. The Plan shifted away from using the Five Principles for Achieving Better Health and instead provided three guiding questions to highlight key factors to consider when developing initiatives to address health in Tennessee. These questions encourage primary prevention, use of evidence-based approaches or evaluation of new efforts, and efforts to improve the health of all Tennesseans.

State Health Plan's Guiding Questions:

1. Are we creating and improving opportunities for optimal health for all?
2. Are we moving upstream?
3. Are we learning from or teaching others?

State Health Plan Framework

The framework of the State Health Plan was modified in 2015 with the primary goal of creating a living document that can be used throughout the state to guide health improvement efforts. The new framework allows diverse actors, including residents, community leaders, health care representatives, and state employees, to align their efforts with the priorities of the State Department of Health. The framework provides guidance without being prescriptive to support efficiencies while also maintaining flexibility for expertise and innovation. The framework is comprised of the following three key pieces.

1. Three Guiding Questions
2. Tennessee's Vital Signs
3. Vital Signs Actions

The three pieces of the framework support and interact with one another to create a comprehensive guide for improving health in the state, from planning to implementation to evaluation and results.

Guiding Questions

The State Health Plan is driven by three guiding questions that outline the themes and key factors to consider when planning efforts to improve health in Tennessee. These questions serve to reflect the direction of policies and programs instituted and promoted by TDH and its partners in their mission to improve health across the state. The questions are designed for not only internal use by TDH, but also to aid all people and organizations throughout the state in aligning with the Department as they work to improve the health of their communities. By answering these questions, an individual, group, or organization can determine if they are aligned with the mission of the department and its approach to improving population health. The guiding questions are intended to be broad enough to be applicable to all stakeholders while also providing specific direction to increase alignment and efficiencies among those working to improve health across the state.

Figure 2 – Guiding Questions of the State Health Plan

Question One: Are We Creating and Improving Opportunities for Optimal Health for All?

Optimal health is a state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity.[7] In order to help each individual in the state achieve optimal health, it is important that policies, programs, and interventions focus on improving health on a broad scale. TDH encourages initiatives to move beyond the traditional boundaries of health care and instead seek to improve population health by addressing community and environmental factors that impact health outcomes and social determinants of health.

[7] Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.

Social Determinants of Health are the conditions in which people are born, grow, live, work, and age. These circumstances are shaped by the distribution of money, power, and resources at global, national, and local levels. The social determinants of health are mostly responsible for health inequities - the unfair and avoidable differences in health status seen within and between countries, states, or other populations.

Source: World Health Organization, http://www.who.int/social_determinants/sdh_definition/en/

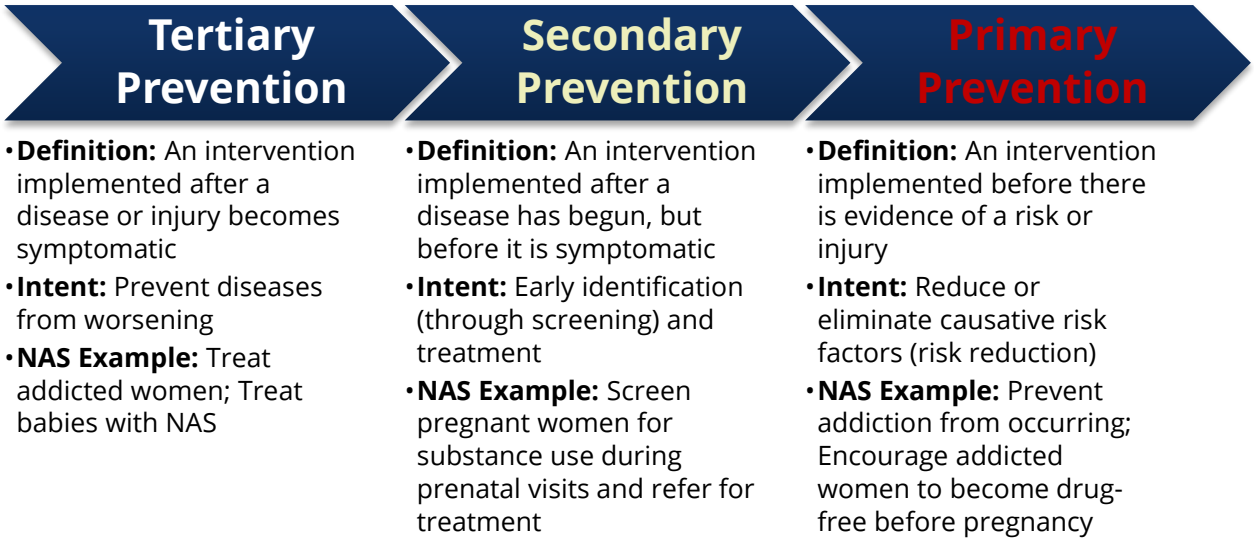
Improving health outcomes by addressing social determinants of health provides an opportunity to engage diverse stakeholders. Examples include investing in social services, transportation infrastructure, food access, and environmental projects. These investments and partnerships are in addition to those specifically related to health and health care. This holistic approach to health improvement can be used to prevent chronic disease, design healthy communities, create social, mental, and emotional support structures, and minimize barriers to accessing care and achieving optimal health.

Question Two: Are We Moving Upstream?

The goal of the second question, "Are we moving upstream?", is to guide health improvement efforts in the direction of primary prevention. Primary prevention, in practice, addresses root causes of health issues rather than treating symptoms as they become present. Figure 3 outlines the differences between the three main levels of prevention, using examples related to Neonatal Abstinence Syndrome (NAS).[8]

[8] According to the National Library of Medicine, Neonatal abstinence syndrome (NAS) is a group of problems that occur in a newborn who was exposed to addictive opiate drugs while in the mother's womb.

Figure 3 – The Levels of Prevention



Source: Adapted from: Centers for Disease Control and Prevention. A Framework for Assessing the Effectiveness of Disease and Injury Prevention. MMWR. 1992; 41(RR-3); 001. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/00016403.htm

As the underlying factors that contribute to the onset of chronic illnesses and other health issues are successfully addressed, the likelihood that people develop these chronic illnesses and other health issues decreases. In the development of future policies, programs, and initiatives, efforts should be made to move further upstream along the continuum of treatment and continue to progress towards a primary prevention focus.

Question Three: Are We Learning From or Teaching Others?

"Are We Learning From or Teaching Others" aims to increase in efficiencies through improved alignment and ensure individuals and organizations have the resources and support needed to be successful in their efforts to improve health in their communities. This question encourages learning from and building partnerships with groups that have a proven track record of success, while also encouraging the evaluation of new and innovative initiatives to add to the evidence base.

There are many successful evidence-based initiatives already being implemented around the state, like BABY & ME - Tobacco Free[9], which has been shown to decrease smoking rates among pregnant women. For local recommendations that are tailored to improving the health of people in Tennessee, the State Health Plan is available, offering state-specific opportunities and recommendations. Additionally, local health departments, providers, schools, businesses, and communities can provide guidance and resources on what has worked in different areas of the state. Evidenced-based programs and best practice recommendations are available through published academic and professional journals, as well as national outlets such as the Centers for Disease Control and Prevention[10], American Heart Association[11], National Association of County & City Health Officials[12], United States Public Health Service Task Force[13], and other similar groups.

If a new policy, program, or intervention is unique, innovative, or a pilot, it is helpful to build an evaluation plan into the program design. The experiment can then be analyzed and can contribute to scientific knowledge. Also available are many outside resources and partnerships to aid in the design and evaluation of the implementation of new policies, programs and interventions. Documenting and sharing the success of initiatives throughout the state will allow innovation to serve as a building block for others to leverage as they seek to improve health in their own communities.

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[9] BABY & ME – Tobacco Free is an incentives-based smoking cessation program targeted towards reducing smoking among pregnant and post-partum women by providing vouchers for diapers to those who prove to be smoke-free. For more information, visit: http://www.babyandmetobaccofree.org/

[10] Access the Centers for Disease Control and Prevention's Recommendations, Best Practices, and Guidelines for Chronic Disease Prevention and Health Promotion here: http://www.cdc.gov/chronicdisease/resources/guidelines.htm

[11] Access the American Heart Association's Best Practice Center here: http://www.heart.org/HEARTORG/HealthcareResearch/GetWithTheGuidelines/Best-Practices-Center-Overview_UCM_305211_Article.jsp#.V0dkDfkrKCg

[12] Access the National Association of County & City Health Officials' Model Practice Database here: http://archived.naccho.org/topics/modelpractices/database/

[13] Access the United States Public Health Service Task Force here: http://www.uspreventiveservicestaskforce.org/Page/Name/recommendations

Tennessee Vital Signs

Tennessee's Vital Signs are 12 metrics, selected through an extensive public engagement process, designed to measure the pulse of Tennessee's population health. Collectively, these metrics provide an at-a-glance view of leading indicators of health and prosperity. Tennessee's Vital Signs seek to provide an objective answer to the question, "How healthy is Tennessee?".

Development of the Tennessee Vital Signs

In 2015, the National Academy of Medicine (NAM) published a report entitled *Vital Signs: Core Metrics for Health and Health care Progress*. This report sought to provide a consistent set of metrics for an objective and systematic comparison of health-related metrics, and it inspired TDH to adapt the report's approach to serve as a method for tracking health status in Tennessee. TDH gathered feedback on the use of NAM's approach in Tennessee through an extensive public engagement process throughout 2015, including nine public meetings, one in each of the state's congressional districts. Throughout this process, participants expressed concerns with aspects of the NAM's selected metrics, voicing a desire to give greater emphasis to measures such as oral health and behavioral health in order to better reflect the specific needs and opportunities in Tennessee.

As a result, TDH determined that a second round of public engagement was needed to develop a scoreboard that would more accurately reflect the perspectives and priorities of people in Tennessee. In 2016, TDH held eight additional forums across the state to solicit feedback on two questions: how should population health be defined, and, based on that definition, how should population health be measured. Through these meetings participants generated hundreds of suggested metrics to be considered for a set of Tennessee-specific Vital Signs.

TDH staff synthesized, researched, and considered all suggested metrics, evaluating them for final inclusion in Tennessee's Vital Signs based on the following criteria:

1. **Data availability**. Data are available, at minimum, on a state level. If data aren't available for a desired metric, TDH could pursue a course to collect that data in the future, but a different metric would need to serve as an initial Vital Sign. For example, the best currently available data for oral health at a statewide level is *access to fluoridated community water systems*. TDH hopes to develop and move to a future Vital Sign measuring dental caries in children, though the data to support such a Vital Sign are not currently available.
2. **Meaningfully upstream outcomes**. Metrics demonstrate meaningful outcomes that likewise influence multiple other outcomes. For example, the metric *drug overdose deaths*

is a final outcome. A preferred metric is *drug overdoses*, which is an understandable outcome to most people while also helping to inform the likelihood of future drug overdose deaths. It is also closely linked with doctor shopping and other risky behaviors. By focusing on efforts to reduce the number of drug overdoses, drug overdose deaths should decrease over time while quality of life metrics should increase.

3. **Collective assessment of health and prosperity**. Taken together, the selected metrics present a balanced and easily understood dashboard of Tennessee's health and prosperity. Because health and prosperity are linked, economic metrics such as *median income* will have an effect on Tennessee's population health. Similarly, *youth obesity* and *physical activity* will have an effect on Tennessee's economic performance.

Through this extensive external and internal process, 12 metrics were selected to serve as the state's Vital Signs.

Figure 4 – Tennessee Vital Signs

Vital Sign	Data Source
Youth Obesity	Coordinated School Health: Tennessee Department of Health
Physical Activity	Behavioral Risk Factor Surveillance System: Tennessee Department of Health
Youth Nicotine Use	Youth Risk Behavior Surveillance System: Tennessee Department of Health
Drug Overdose	Informatics & Analytics: Tennessee Department of Health
Infant Mortality	Death Statistics: Tennessee Department of Health
Teen Pregnancy	Birth Statistics: Tennessee Department of Health
Community Water Fluoridation	Centers for Disease Control and Prevention Water Fluoridation Reporting System
Frequent Mental Distress	Behavioral Risk Factor Surveillance System: Tennessee Department of Health
3rd Grade Reading Level	Tennessee Department of Education
Preventable Hospitalizations	Hospital Discharge Data System: Tennessee Department of Health
Per Capita Personal Income	United States Bureau of Economic Analysis
Access to Parks and Greenways	Behavioral Risk Factor Surveillance System: Tennessee Department of Health*

*Source for Access to Parks and Greenways will be County Health Rankings data until mid-2019

Making Use of the Tennessee Vital Signs

TDH intends to use Vital Signs as a core element in planning for community-level action and state-level support of local efforts. Beginning in the summer of 2018, a growing number of counties throughout the state will begin conducting community health assessments (CHA). These assessments will engage members of the community to understand needs and identify assets and resources. Members of the assessment teams will also review and analyze data for their community. After considering all community input and data analysis, the assessment teams will identify priority issues in CHA reports. Various community organizations, including local governments, chambers of commerce, United Way agencies, YMCAs, and civic clubs may be interested in utilizing the CHA reports for their own planning purposes, especially as TDH works to engage these groups while conducting the CHA.

County health departments will also use the CHA reports in their strategic planning process. Each county develops an annual County Performance Plan, or CPP. The CPP will identify the strategies the health department plans to pursue to address the priority issues identified through the CHA. To assist counties in using evidence-based strategies, the National Academy of Medicine is partnering with TDH to develop logic models for each vital sign with pre-populated resources, activities, and locally available metrics, among others. From these logic model items, health departments can select the most relevant and appropriate goals and objectives to focus on in their CPP. If a county has no resources to address a priority issue, the CPP goal would be to seek and obtain resources listed in the logic model. If a community already has resources but does not yet have a plan on how to use them, a county could select evidence-based activities from the logic model to pursue as goals in the CPP. Through the CHA and CPP processes, each county will have available a ready-made menu of evidence-based resources and strategies to address the priority issues identified through community engagement and data analysis. The CHA process will ensure that a county health department is focusing on the right issues, and the CPP process will ensure that a county health department is utilizing the best strategies for that community to address those issues.

Vital Signs Actions

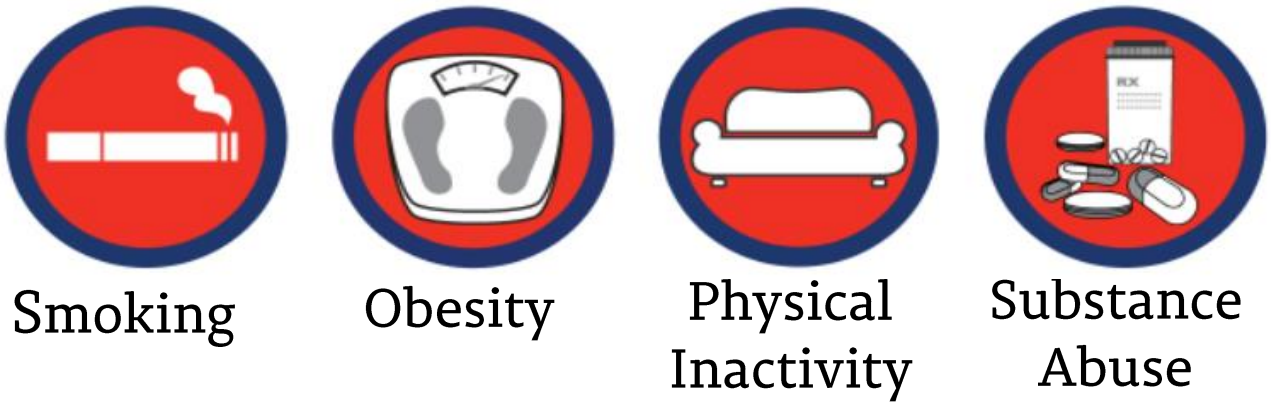
The Vital Signs Actions will be an easy-to-use searchable database of opportunities and recommendations that can be used by groups and individuals seeking to improve health in their communities by directly targeting identified Vital Signs indicators. The database will include a series of Tennessee specific program and policies that have been proven to be effective. The Actions provide an opportunity to learn from and replicate existing promising programs, build

partnerships with successful health influencers in the state, and find resources to assist new or growing efforts.

The Big Four

The State Health Plan identified the "Big Four" behaviors that greatly impact a majority of the causes of excessive death in Tennessee. The Big Four directly influence at least six of the top ten leading causes of death in the state and also influence numerous health conditions including heart disease, cancer, and diabetes. These behaviors include ***smoking, obesity, physical inactivity, and substance abuse***.

Figure 5 – The Big Four

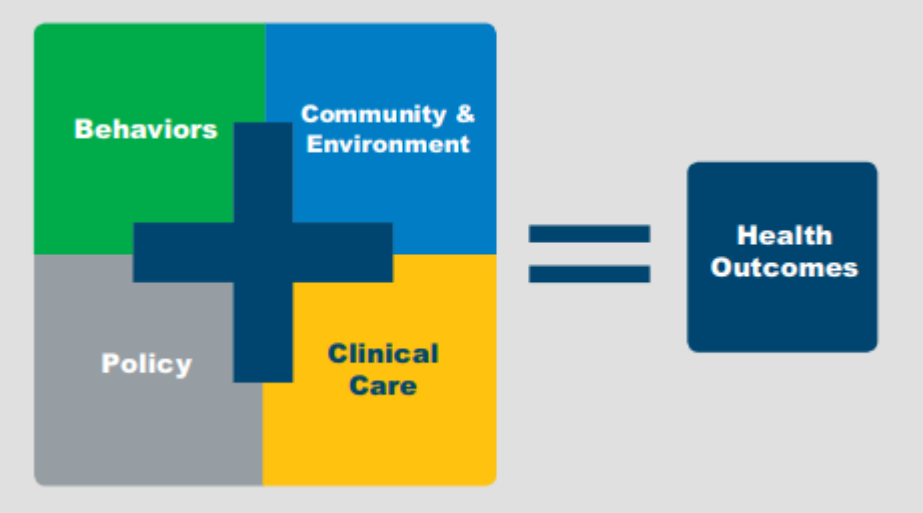


The Department works to develop and implement policies, programs, and initiatives that will positively affect these behaviors across the state. TDH actively engages partners to play a role in supporting and advancing these efforts. The work done by community and industry stakeholders, local and metro health departments, and other state agencies is essential to the efforts conducted to address these behavioral patterns and improve the health of Tennesseans. The State Health Plan serves as vehicle for increasing partnerships, building collaboration, and improving alignment and efficiencies to better address these key underlying factors that are directly influencing the health of the State.

Tracking Health in Tennessee

America's Health Rankings provides an annual analysis of health on a state-by-state basis. This report analyzes behaviors, community and environmental conditions, policies, and clinical care data to provide a comprehensive picture of health.[14]

Figure 6 – America's Health Rankings Model



Source: America's Health Rankings, 2016 Annual Report, https://assets.americashealthrankings.org/app/uploads/ahr16-complete-v2.pdf.

The State Health Plan utilizes America's Health Rankings Annual Report to monitor the State's health status and track any changes in the Big Four. The most recent report, used in this 2017 Edition of the State Health Plan, is the America's Health Rankings 2017 Annual Report.[15]

The report utilizes 27 core measures and 25 supplemental measures that are divided into five categories: Behaviors, Community and Environment, Policy, Clinical Care, and Outcomes.[16] Each state is analyzed individually with the intended purpose of providing a "benchmark for states" and "stimulating action".[17] The report provides states with an opportunity to monitor health over

[14] For more information visit: https://www.americashealthrankings.org/about/page/about-the-annual-report.
[15] To access this report visit: https://www.americashealthrankings.org/learn/reports/2016-annual-report.
[16] For a complete list of the measures see appendix B. For descriptions of the five categories see appendix B.
[17] America's Health Rankings, 2016 Annual Report, https://assets.americashealthrankings.org/app/uploads/ahr16-complete-v2.pdf.

time and understand how their rates compare to the rates of other states and the nation as a whole.

The Health Status of Tennessee

In 2017 Tennessee ranked 45th in the nation for overall health and well-being. Massachusetts ranked 1st, while Mississippi ranked 50th. Tennessee ranked 44th in 2016.

Figure 7 – Tennessee's Health Status over Time

Year	***Overall***	***Physical Inactivity***	***Obesity***	***Smoking***	***Drug Deaths***
	Rank	*Value* % of Adults	*Value* % of Adults	*Value* % of Adults	*Value* Deaths per 100,000 Population
2017	*45*	*28.4%*	*34.8%*	*22.1%*	*19.9*
2016	*44*	*30.4%*	*33.8%*	*21.9%*	*18.3*
2015	*43*	*26.8%*	*31.2%*	*24.2%*	*17.6*
2014	*45*	*37.2%*	*33.7%*	*24.3%*	*17.2*
2013	*42*	*28.6%*	*31.1%*	*24.9%*	*15.7*
2012	*42*	*35.1%*	*29.2%*	*23.0%*	*16.4*
2011	*41*	*29.9%*	*31.7%*	*20.1%*	*16.7*
2010	*42*	*31.0%*	*32.8%*	*22.0%*	*N/A*
2009	*44*	*28.9%*	*31.2%*	*23.1%*	*N/A*

Source: America's Health Rankings, 2017 Annual Report, https://assets.americashealthrankings.org/app/uploads/ahrannual17_complete-121817.pdf.

Smoking

Rate: 22.1%
Rank: 43rd

Smoking has serious implications for the health of the state's population. It is the leading preventable cause of death in the United States, causing more than 480,000 deaths each year in the United States.[18] Additionally, more than 16 million Americans are living with a disease caused by smoking, and nearly 170 billion dollars in medical expenses are directly linked to smoking annually in the United States.[19]

In 2017, the percentage of adults who smoke in Tennessee was 22.1, resulting in a ranking of 43rd in the nation. By comparison, Utah ranked 1st with a smoking value of 8.8 percent. The smoking rate is defined as the percentage of adults who self-reported smoking at least 100 cigarettes in their lifetime and who currently smoke. America's Health Rankings utilizes self-reported data from the Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS).[20] The rate of smoking steadily declined in Tennessee from 2009-2016. However, in 2017 the rate increased from 21.9% to 22.1%. The state consistently has a higher smoking rate than the United States as a whole.

Obesity

Rate: 34.8%
Rank: 5th

Obesity is a cause of preventable diseases which result in an estimated 200,000 deaths per year. Obesity is linked to a number of conditions including heart disease, type 2 diabetes, stroke, certain cancers, hypertension, liver disease, kidney disease, Alzheimer's disease,

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[18] Centers for Disease Control and Prevention, "Health Effects of Cigarette Smoking." Centers for Disease Control and Prevention: Smoking & Tobacco Use. May 15, 2017. https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/index.htm.
[19] America's Health Rankings, "Annual Report." Smoking in United States in 2017. https://www.americashealthrankings.org/explore/2016-annual-report/measure/Smoking/state/ALL#_ftn1.
[20] America's Health Rankings, "Annual Report." Smoking in United States in 2017. https://www.americashealthrankings.org/explore/2016-annual-report/measure/Smoking/state/ALL#_ftn1.

dementia, respiratory conditions, and osteoarthritis. An estimated 190.2 billion dollars is spent on obesity-related health issues annually.[21]

With an obesity rate of 34.8 percent, Tennessee ranked 45th in the nation in 2017. Colorado ranked 1st in the nation with a rate of 22.3 percent. Obesity rates are measured as the percentage of adults who are estimated to be obese, defined as having a body mass index (BMI) of 30.0 or higher. America's Health Rankings utilizes self-reported data from the Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS).[22] Tennessee's obesity rates have regularly increased from 1990-2017. Tennessee's obesity rate has nearly tripled since 1990 when the rate was 11.6 percent.

Physical Inactivity

Rate: 28.4%
Rank: 40th

Physical inactivity increases the risk of cardiovascular disease, type 2 diabetes, hypertension, obesity, certain cancers, depression, and premature death. In 2014, less than 21 percent of US adults met the 2008 physical activity guidelines developed by the US department of Health and Human Services. 11 percent of total health care expenditures, approximately 117 billion dollars annually, are associated with physical inactivity.[23]

In 2017, Tennessee's rate of physical inactivity was 28.4 percent, leading to a ranking of 40th nationally. The top ranked state, Utah, had a rate of 15.7 percent. Physical inactivity rates are the percentage of adults who report doing no physical activity or exercise other than their regular job in the last 30 days. America's Health Rankings utilizes self-reported data from the Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS).[24] Tennessee's rates have gradually improved overtime. However, there is significant inconsistency in recent years.

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[21] America's Health Rankings, "Annual Report." Obesity in Tennessee in 2017. https://www.americashealthrankings.org/explore/2016-annual-report/measure/Obesity/state/TN.
[22] America's Health Rankings, "Annual Report." Obesity in United States in 2017. https://www.americashealthrankings.org/explore/annual/measure/Obesity/state/ALL.
[23] America's Health Rankings, "Annual Report." Physical Inactivity in Tennessee in 2017. https://www.americashealthrankings.org/explore/2016-annual-report/measure/Sedentary/state/TN.
[24] America's Health Rankings, "Annual Report." Physical Inactivity in 2017. https://www.americashealthrankings.org/explore/annual/measure/Sedentary/state/ALL.

Substance Abuse

Rate: 19.9
Rank: 39th

In 2014, an estimated 27 million Americans aged 12 and older used an illicit drug in the previous month, including marijuana, cocaine, heroin, and prescription drugs. Additionally, approximately 21.5 million people aged 12 and older had a substance use disorder.[25] Substance use disorders occur "when the recurrent use of alcohol and/or drugs causes clinically and functionally significant impairment, such as health problems, disability, and failure to meet major responsibilities at work school, or home".[26]

Deaths from drug overdose are the leading cause of accidental injury death in the United States. These deaths reached a record high of 47,055 in 2014, and 61 percent of these deaths involved an opioid.[27]

Annual prescription opioid abuse costs upwards of 55 billion dollars in terms of lost productivity, health care costs, drug treatment, and criminal justice expenses. The total cost of illicit drug use is estimated at 193 billion dollars per year.[28]

In the 2017 report, Tennessee ranked 39th in the nation for drug deaths with a rate of 19.9 per 100,000 population. North Dakota was ranked 1st with a rate of 5.7. "Drug deaths" is defined as the three-year average, age-adjusted number of deaths due to drug overdoses of any intent (unintentional, suicide, homicide, or undetermined) per 100,000 population. America's Health Rankings utilized 2012 to 2014 data from the National Vital Statistics System's multiple cause of death data reported by the CDC's National Center for Health Statistics. Drug death rates in Tennessee have significantly increased during the available reported years, 2011-2017. In 2011, the rate in Tennessee was 16.7.

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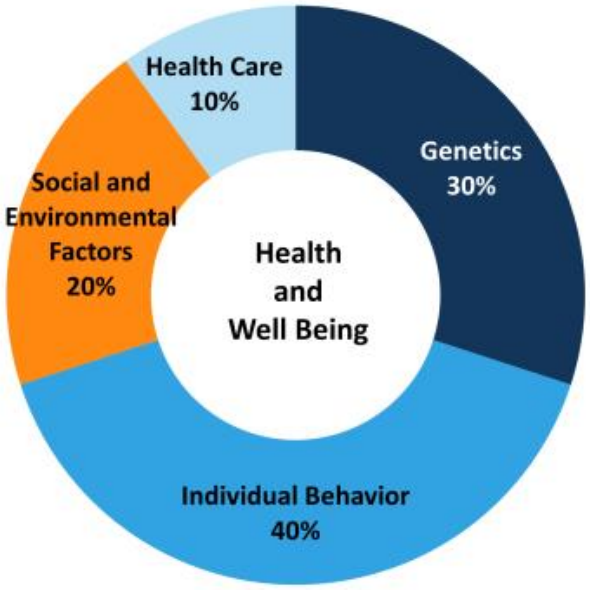
[25] Center for Behavioral Health Statistics and Quality. (2015). Behavioral health trends in the United States: Results from the 2014 National Survey on Drug Use and Health (HHS Publication No. SMA 15-4927, NSDUH Series H-50). https://www.samhsa.gov/data/sites/default/files/NSDUH-FRR1-2014/NSDUH-FRR1-2014.pdf
[26] Substance Abuse and Mental Health Services Administration. "Substance Use Disorders." October 27, 2015. https://www.samhsa.gov/disorders/substance-use.
[27] Centers for Disease Control and Prevention. "Increases in Drug and Opioid-Involved Overdose Deaths – United States, 2010-2015." Centers for Disease Control and Prevention: Morbidity and Mortality Weekly Report. December 30, 2016. https://www.cdc.gov/mmwr/volumes/65/wr/mm655051e1.htm.
[28] America's Health Rankings, "Annual Report." Drug Deaths in 2017. https://www.americashealthrankings.org/explore/2016-annual-report/measure/Drugdeaths/state/ALL.

The Status of Social Determinants of Health in Tennessee

In order to make a positive impact on Tennessee's health status, TDH is increasing its focus on the social, economic, and environmental factors that directly influence the health status of the people of Tennessee. Public health has recognized that a number of complex factors influence an individual's ability to engage in healthy behaviors. Health care and genetics continue to play integral roles in the health status of Tennessean's. However, it is essential to recognize and address the underlying factors that directly influence the opportunities and barriers that people across the state experience when working to engage in healthy behaviors.[29]

Figure 8 – Impact of Different Factors on Risk of Premature Death



SOURCE: Schroeder, SA. (2007). We Can Do Better — Improving the Health of the American People. *NEJM*. 357:1221-8.

[29] Artiga, Samantha and Elizabeth Hinton, "Beyond Health Care: The Role of Social Determinants in Promoting Health and Healthy Equity," Kaiser Family Foundation. May 10, 2018. https://www.kff.org/disparities-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/.

Social determinants of health are "the structural determinants and conditions in which people are born, grow, live work and age".[30] Health is directly influenced by individual behaviors such as eating well, staying active, and getting the recommended immunizations. Health is also influenced by our homes, neighborhoods, education, and social interactions. By addressing these underlying and upstream influencers, TDH hopes to support social and physical environments that allow every Tennessean throughout the state the opportunity and resources necessary to achieve his or her own personal state of optimal health.[31]

Figure 9 – Social Determinants of Health

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment Income Expenses Debt Medical bills Support	Housing Transportation Safety Parks Playgrounds Walkability	Literacy Language Early childhood education Vocational training Higher education	Hunger Access to healthy options	Social integration Support systems Community engagement Discrimination	Health coverage Provider availability Provider linguistic and cultural competency Quality of care

Health Outcomes
Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

THE HENRY J. KAISER FAMILY FOUNDATION

Tennessee

In Tennessee, social determinants of health have more impact in some communities than others, differing for urban and rural areas and for neighborhoods with higher unemployment and low socioeconomic status. While many counties are thriving economically, providing robust

[30] Michael Marmot et al., "Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health," *The Lancet* 372, no. 9650 (Nov. 8, 2008):1661–1669.
[31] Centers for Disease Control and Prevention. "Social Determinants of Health: Know What Affects Health." January 29, 2018. https://www.cdc.gov/socialdeterminants/.
Office of Disease Prevention and Health Promotion. "Social Determinants of Health." Healthy People 2020. https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health.

health care, developing safe and supportive neighborhoods, and providing high-quality K-12 education, others are struggling to provide their citizens with these resources that make optimal health attainable. Future editions of the State Health Plan will utilize the Tennessee Vital Signs to track specific factors that have been recognized as having a significant impact on health. These will be tracked at the county level, where available, and will allow the TDH, Local Health Departments, and communities to target efforts and resources to support improvement in these areas.[32] This Edition of the State Health Plan relies on the indicators used by America's Health Rankings to track the status of social determinants of health. Tennessee's status for each indicator utilized by America's Health Rankings is outlined in Figure 10.

Figure 10– America's Health Rankings: Tennessee

Measure	Definition	TN Value 2016	TN Value 2017	TN Rank 2017
Determinants				
Behaviors				
Drug Deaths(Big 4)	Deaths per 100,000 population	18.3	19.9	39
Excessive Drinking	% of adults	11.2	14.4	6
High School Graduation	% of students	87.9	87.9	9
Obesity(Big 4)	% of adults	33.8	34.8	45
Physical Inactivity(Big 4)	% of adults	30.4	28.4	40
Smoking (Big 4)	% of adults	21.9	22.1	43
Community and Environment				
Air Pollution	Micrograms of fine particles per cubic meter	8.6	8.2	32
Children in Poverty	% of children	22.0	21.9	42
Infectious Disease	Mean z score of chlamydia, pertussis, and Salmonella	-0.170	-0.380	15
Occupational Fatalities	Deaths per 100,000 workers	4.9	5.1	33
Violent Crime	Offenses per 100,000 population	612	633	47
Policy				
Immunizations – Adolescents	Mean z score of HPV, meningococcal, and Tdap	-0.803*	-0.373	37

[32] For more information on Tennessee Vital Signs, see page 17.

Immunizations- Children	% of children aged 19 to 35 months	70.1	67.4	40
Public Health Funding	Dollars per person	89	94	23
Uninsured	% of population	11.2	9.7	34
Clinical Care				
Dentists	Number per 100,000 population	49.6	49.2	40
Low Birthweight	% of live births	8.9	9.1	41
Mental Health Providers	Number per 100,000 population	n/a	138.2	43
Preventable Hospitalizations	Discharges per 1,000 Medicare enrollees	59.9	59.3	43
Primary Care Physicians	Number per 100,000 population	135.1	138.5	27
Outcomes				
Cancer Deaths	Deaths per 100,000 population	215.6	216.5	44
Cardiovascular Deaths	Deaths per 100,000 population	302.7	308.0	45
Diabetes	% of adults	12.7	12.7	44
Disparity in Health Status	% difference by high school education	20.5	24.6	13
Frequent Mental Distress	% of adults	14.0	13.7	42
Frequent Physical Distress	% of adults	16.5	15.0	47
Infant Mortality	Deaths per 1,000 live births	6.9	6.9	38
Premature Death	Years lost before age 75 per 100,000 population	9,369	9,467	43

*Methodology changed from 2016 to 2017: 2016 Immunizations – Adolescents is "mean z score of the percentage of adults aged 13 to 17 years who received >=1 dose of Tdap since age 10 years, >=1 dose of meningococcal conjugate vaccine, and >= 3 does of HPV vaccine (females and males)"; 2017 Immunizations – Adolescents is "mean z score of adolescents aged 13 to 17 who received >=1 dose of Tdap vaccine since age 10, >=1 does of meningococcal vaccine and all recommended doses of human papillomavirus vaccine

Source: America's Health Rankings, 2017 Annual Report, https://assets.americashealthrankings.org/app/uploads/ahrannual17_complete-121817.pdf.

State Health Plan Deep-Dive

Faith-Based Organizations

In partnership with the Office of Minority Health and Disparities Elimination

Office of Minority Health and Disparities Elimination

In 1985, the United States Department of Health and Human Services (HHS) released a landmark report, the Secretary's Task Force Report on Black and Minority Health (Heckler Report). The “Heckler Report” documented the existence of health disparities among racial and ethnic minorities in the United States and called such disparities "an affront both to our ideals and to the ongoing genius of American medicine". The National Office of Minority Health (OMH) was created in 1986 as one of the most significant outcomes of the Heckler Report and was reauthorized by the Affordable Care Act (ACA) in 2010. The mission of the Office of Minority Health is to improve the health of racial and ethnic minority populations through the development of health policies and programs that will eliminate health disparities.

The State Office of Minority Health and Disparities Elimination (OMHDE) is the state contact for the National Office of Minority Health, U.S. Department of Health and Human Services, and Public Health Service and Associates with the Southeast Region IV Office, Southeast Region. OMHDE was established in 1994 by the Commissioner of the Tennessee Department of Health and codified by the State Legislature through the Office of Minority Health Act of 2004. This law was enacted for the purpose of educating the public on health issues concerning minority populations in the state and for advocating initiatives to enhance the quality of life and address disparities in health services available to minorities in Tennessee. The Office provides technical assistance and consultation and also promotes the collaboration and coordination of other divisions within the Department and other State Departments, community agencies, and organizations to address health concerns of minority populations. Currently, OMHDE is funded entirely by state appropriations. The office is seeking to identify additional funding sources, including federal funding, to address state health priorities and initiatives.

The Tennessee Office of Minority Health and Disparities Elimination

The mission of the TDH is to protect, promote and improve the health and prosperity of people in Tennessee. OMHDE is housed at TDH and supports this mission, along with the nation-wide mission of OMH, by working to empower communities to support optimal health for all and to eliminate disparities for racial, ethnic and under-served populations. Strategic goals currently include: Promoting Health in All Policies, Building Capacity, Engaging, Aligning, and Coordinating with Partners, and Monitoring and Improving Performance.

Primary Prevention

TDH and OMHDE understand that the most important and effective way to reduce, control, and eliminate the disproportionate burden of disease, injury, and disability among underserved populations is to emphasize *primary prevention as the most effective way to maintain and improve health* before people get sick. The office's Primary Prevention Initiatives (PPI) are designed to support faith-based communities to engage more effectively with local and statewide efforts. OMHDE's Community and Faith-Based Initiatives are designed to convene and support local leaders, promoting partner alignment and coordination of community resources. PPI efforts include health information workshops that cover the TDH's *"Big 4"* Priorities (Tobacco, Substance Abuse, Obesity, and Physical Activity) as well as other primary prevention efforts around breast feeding, healthy eating, diabetes, emergency preparedness, safe sleep for infants, and more. Evaluating processes and outcomes is also very important as OMHDE collaborates with multiple state offices, including the Division of Health Planning, to collect viable feedback from diverse faith-based and community leaders by partnering with churches, community health alliances, and other stakeholders. In 2017, OMHDE engaged over 20 interdenominational and multicultural faith-based organizations across multiple Tennessee metropolitan areas and rural counties. OMHDE has convened over 100 statewide community meetings, providing trainings and liaisons, and participated in over 200 internal and external partner meetings. OMHDE provides support to internal and external partners, encouraging primary prevention, promoting health in all policies, and building awareness of social determinants of health.

Further Upstream

The public health sector refers to social factors and physical conditions, such as education, housing, employment, economic development, transportation and criminal justice, with the term social determinants of health. The social determinants of health outline critical areas of health inequity and disparities within segments of the population, usually based on age, race, gender, and place. These social determinants of health are directly proportional to health outcomes and the overall health and prosperity of people residing in Tennessee. TDH and OMHDE encourage communities and municipalities to look "*further upstream*" and consider the social determinants of health, connecting individual health to population health and health policies.

Funding

OMHDE understands that addressing the social determinants of health at the local level requires both collective impact and financial resources. The OMHDE's technical assistance and consultation services build capacity for county-based faith-based and community organizations to secure funding available through state, federal, and private sources. Currently, more than 30

faith-based and community partners collectively receive over 300,000 dollars in funding allocated by the TN General Assembly and managed by OMHDE. In addition to this direct funding support, faith-based and community-based organizations can also access training opportunities in areas such as grant-writing, promoting cultural competency and workforce diversity, and sources of other technical assistance or expertise as requested. OMHDE partners learn more about social determinants of health, their potential roles in combating health disparities, and how to access resources for implementing primary and secondary-level public health interventions, increasing their overall capacity to provide community health improvement activities.

In the years to come, OMHDE plans to build and expand collaboration with partners at local, state, and federal levels to incorporate health into policies and programs, building capacity to address social determinants of health though education about culturally-and-linguistically-appropriate services (CLAS), engaging partners in aligning priorities, and increasing access to potential private and public-sector funding by faith-based and community-based organizations.[33]

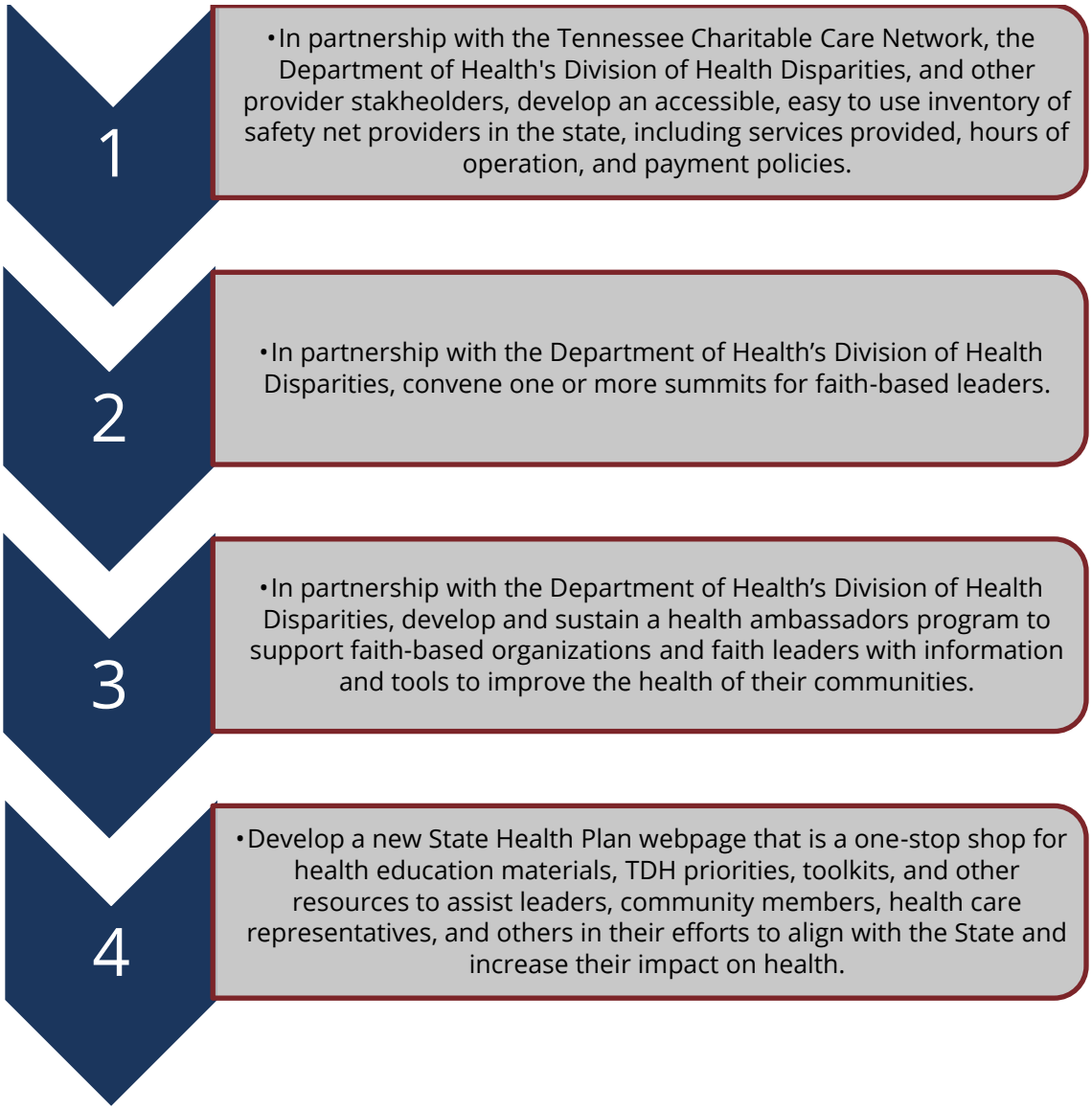
State Health Plan Deep Dives

This 2017 Edition of the State Health Plan includes a "deep-dive" into faith-based organizations. The purpose of the "deep-dive" is to explore specific places and spaces in the state where health is being addressed. The goal is to build significant and meaningful relationships across the state with the people working on the ground to improve the health of their communities. This work provided an opportunity to learn from their experiences and find out how the TDH could better support their efforts. This edition of the SHP includes a series of recommendations that will direct future TDH policies, programs, and efforts in order to address the health concerns heard across

[33] For more information on the Office of Minority Health and Disparities Elimination visit: https://www.tn.gov/health/health-program-areas/dmhde.html, or contact:
The Office of Minority Health and Disparities Elimination
Andrew Johnson Bldg. 2nd Floor
710 James Robertson Parkway
Nashville, TN 37243
(615) 741-9443 Minority.Health@tn.gov

the state during the deep-dive process and to better support the impressive work being done by these groups to improve the well-being of their communities.

Figure 11 – State Health Plan Recommendations



Faith-Based Organizations and Communities

The "deep-dive" in this Edition of the State Health Plan focuses on faith-based organizations and communities across the state. Faith and community-based organizations play an integral role in improving health in Tennessee. These groups include the leaders and members of religious organizations, safety-net service providers, and community organizations and leaders, among others. Focused and personal meetings with faith leaders, safety-net providers, and congregants across the state provided crucial insight into the health challenges communities are facing as well as the innovative and promising approaches taken to address these challenges and improve the health and well-being in their spheres of influence.

In many communities, faith-based organizations are the central and trusted source of support, guidance, and resources. By working with these groups, building relationships and partnerships with them, the Department can learn how to better serve the people of the state. This deep-dive into faith-based communities aimed to answer the following questions:

- What are the most pressing challenges that communities and individuals across the state are facing?
- What are examples of local programs and interventions that are successfully addressing these challenges?
- What barriers exist that prevent or complicate the development and implementation of high-quality interventions?
- What support, state or otherwise, would meaningfully reduce these barriers?
- What does the future of health in Tennessee look like and what is the best way to get there?

Why Faith-Based Organizations and Communities

Places of worship and other faith-based organizations, including safety-net clinics, play a significant role in promoting health and providing preventive health and social services. Programs and services provided by faith-based organizations include health education, screening for and management of high blood pressure, diabetes screening and support, weight loss, smoking cessation, cancer prevention and awareness, geriatric care, nutritional guidance, and mental health care and mental health support. Many organizations also provide numerous social support services and/or referrals to relevant services. A National Congregations study found that approximately 57 percent of congregations in the United States provide various social service

programs. Examples include services related to food and clothing, housing and homelessness, domestic violence, substance misuse and abuse, employment, and health programs.[34]

These organizations play an integral role in affecting health across the state by providing direct health-related services and/or services related to social determinants of health. Through this work, faith-based organizations have the potential to serve as key partners and conduits for prevention efforts supported by TDH. Partnerships with people across the state who are on the ground directly improving and supporting the health of their communities are essential for TDH to effectively address the health needs of people and communities in the state.

Minority and Underserved Communities

This deep-dive engaged faith-based leaders and providers that serve predominately minority and/or underserved communities. Numerous health outcomes disproportionately impact the health and well-being of minority and socioeconomically disadvantaged citizens of Tennessee. Exploring the Big 4 by subpopulations provides a descriptive picture of the disparities that are present in this state.

[34] DeHaven, Mark J., Irby B. Hunter, Laura Wilder, James W. Walton, and Jarett Berry, "Health Programs and Faith-Based Organizations: Are They Effective?" American Journal of Public Health 94(6) (2004): 1030-1036. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1448385/#r3.

Figure 12– Health Disparities in Tennessee

Tennessee Smoking		
Race/Ethnicity	Education	Income
White	Less than High School	Less than $25,000
22.7%	26.2%	35.4%
African American	High School Grad	$25-49,999
19.0%	25.0%	20.4%
Hispanic	Some College	$50-74,999
6.6%	24.2%	16.6%
American Indian/Alaskan Native	College Grad	$75,000 or More
52.1%	8.4%	13.4%

Source: America's Health Rankings, 2017 Annual Report, https://www.americashealthrankings.org/explore/2016-annual-report/measure/Smoking/state/TN.

Tennessee Obesity		
Race/Ethnicity	Education	Income
White	Less than High School	Less than $25,000
31.9%	35.1%	39.8%
African American	High School Grad	$25-49,999
48.0%	39.2%	36.6%
Hispanic	Some College	$50-74,999
19.2%	39.9%	38.7%
American Indian/Alaskan Native	College Grad	$75,000 or More
45.8%	27.6%	33.5%

Source: America's Health Rankings, 2017 Annual Report, https://www.americashealthrankings.org/explore/annual/measure/Obesity/state/TN.

Tennessee Physical Inactivity		
Race/Ethnicity	Education	Income
White	Less than High School	Less than $25,000
30.3%	48.9%	42.2%
African American	High School Grad	$25-49,999
32.1%	34.5%	29.6%
Hispanic	Some College	$50-74,999
22.5%	35.9%	30.5%
American Indian/Alaskan Native	College Grad	$75,000 or More
25.4%	13.3%	71.8%

Source: America's Health Rankings, 2017 Annual Report, https://www.americashealthrankings.org/explore/2016-annual-report/measure/Sedentary/state/TN.

Tennessee Substance Use (Drug Deaths)		
Race/Ethnicity	Education	Income
White	Less than High School	Less than $25,000
20.8	Not Available	Not Available
African American	High School Grad	$25-49,999
9.1	Not Available	Not Available
Hispanic	Some College	$50-74,999
5.2	Not Available	Not Available
American Indian/Alaskan Native	College Grad	$75,000 or More
Not Available	Not Available	Not Available

Source: America's Health Rankings, 2017 Annual Report, https://www.americashealthrankings.org/explore/2016-annual-report/measure/Drugdeaths/state/TN.

Process

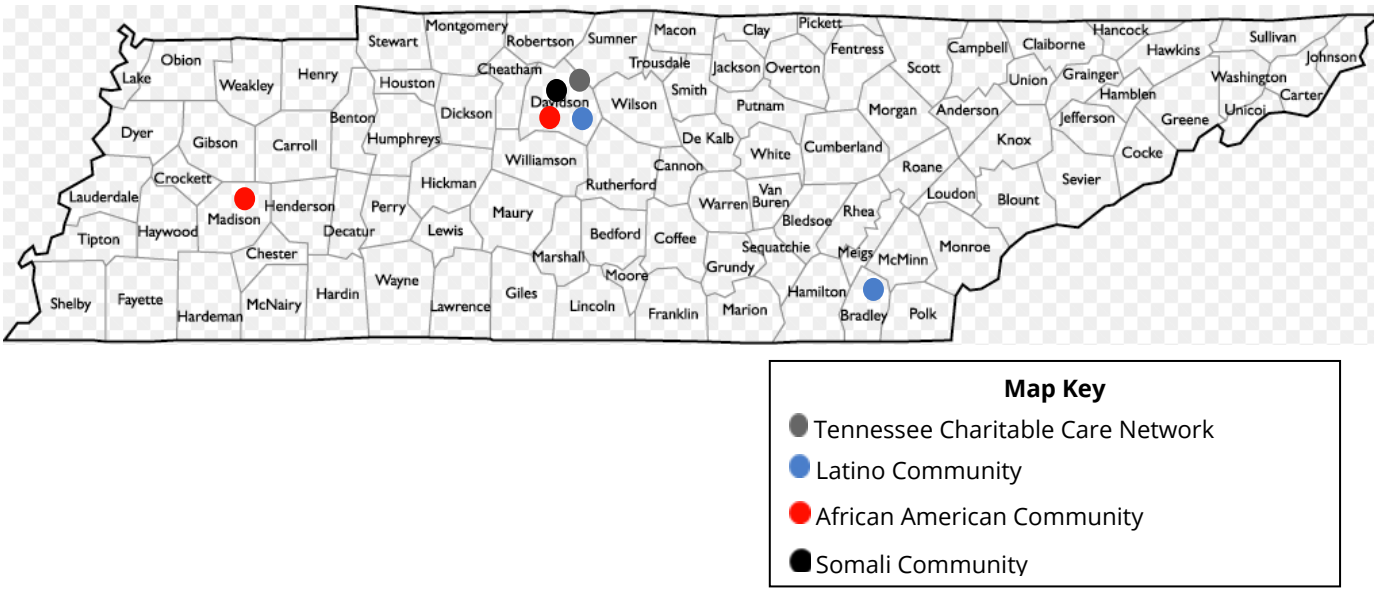
The Office of Health Planning, in partnership with the Office of Minority Health and Disparities Elimination, conducted a series of focus groups across the state with faith-based leaders and community members. The purpose of the focus groups meetings was:

1. To better understand the most pressing issues facing communities across the state,
    - Including traditional health concerns and issues related to social determinants of health (i.e. education, housing, economic stability, and built environment)

2. To hear how faith-based organizations and communities are successfully addressing these concerns and needs, and
3. To learn how TDH can better support these efforts and these communities at large.

A total of six focus group meetings were held. Four meetings were held in Davidson County, one in Madison County, and one in Bradley County. Two meetings in Davidson County and Bradley County focused primarily on Latino faith-based communities, two meetings in Davidson County and Madison County focused primarily on African-American faith-based communities, and one meeting in Davidson County focused primarily on the Muslim Somali immigrant community. The final meeting took place with representatives from the Tennessee Charitable Care Network (TCCN). TCCN is a network of community-based and faith-based charitable care organizations[35] that provide medical care, dental care, behavioral health care, pharmacy/medication services, and/or referrals for specialty care for low-income, uninsured Tennesseans.[36]

Figure 13 – Focus Group Meetings



[35] Not all safety-net providers in the state have faith-based missions. However, because of their focus on providing care to under-served and disadvantaged populations, all safety-net providers are considered contributors and partners for the development and implementation of this State Health Plan.
[36] For more information visits: Tennessee Charitable Care Network at: http://www.tccnetwork.org/.

Health Concerns

Every community across the state is facing distinct opportunities and challenges that must be considered as efforts to improve health are developed and executed. Each focus group shared unique experiences and concerns with the Department, and that information has been used in this Edition of the State Health Plan to develop a set of actionable and meaningful recommendations. These recommendations will be carried out by the Department in response to the information that was shared by the focus groups and in support of the promising work that is already being done across the state.

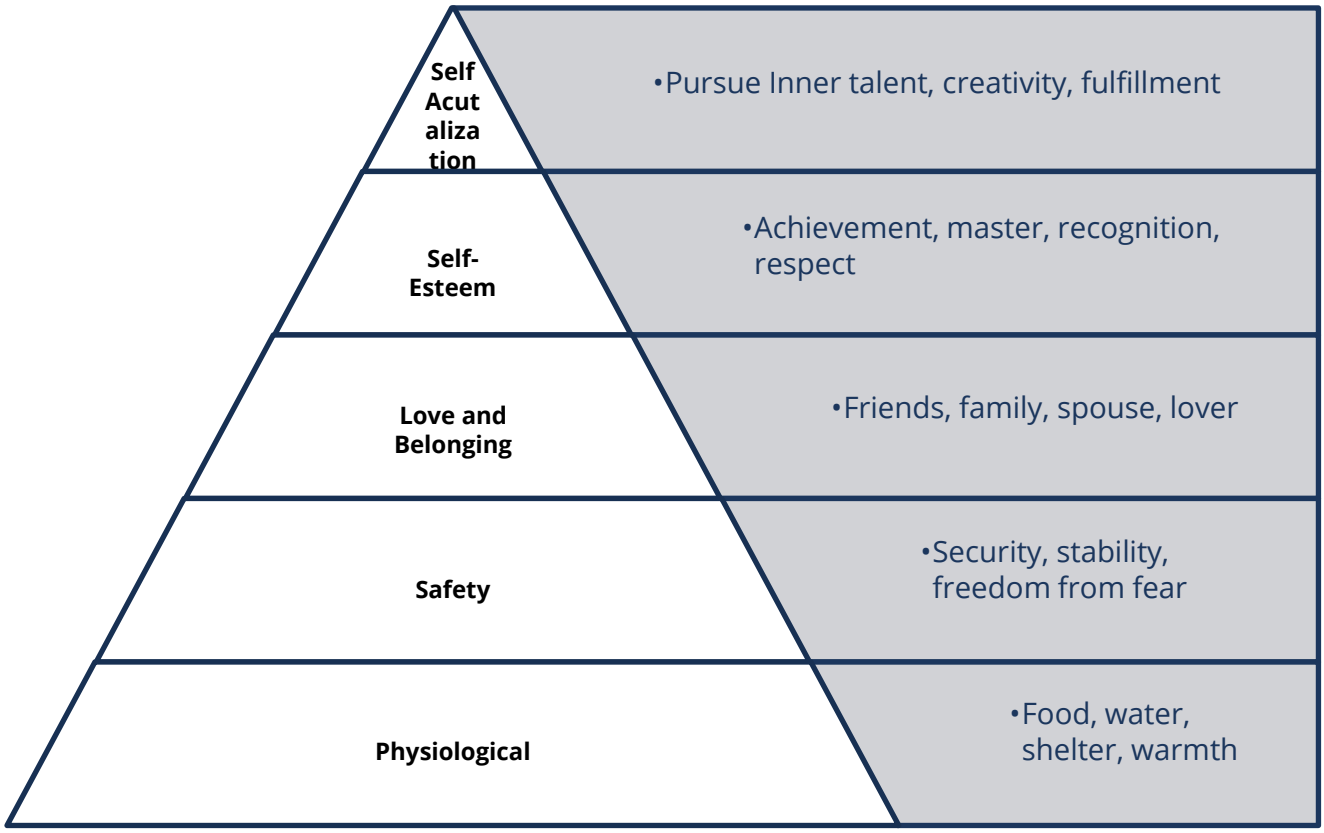
Each group discussed needs, concerns, opportunities, and bright spots that were unique to the communities they were representing.[37] However, several overarching themes emerged and these themes were used to develop the recommendations. Each focus group referenced a hierarchy of needs. For many communities and individuals, health is not a priority until their primary needs are met, specifically physiological needs (i.e. food, shelter, and clothing) and safety needs (i.e. personal and financial security). In order to effectively improve the health and well-being of Tennesseans these "upstream" social determinants that directly impact one's ability to pursue and achieve health should be considered.

[37] For information on each focus group discussion see Appendix C.

Figure 14 – Maslow's Hierarchy of Needs

Maslow's Hierarchy of Needs

In the paper "A Theory of Human Motivation, published in 1943, Abraham Maslow described a hierarchy of needs, as depicted in this pyramid. An individual cannot achieve the levels higher on the pyramid until the needs in the lower levels are met.



Source: Jackson, James C., Michael J. Santoro, Taylor M. Ely, Leanne Boehm, Amy L Kiehl, Lindsay S. Anderson, and E. Wesley Ely , "Improving Patient Care Through the Prism of Psychology: application of Maslow's Hierarchy to Sedation, Delirium and Early Mobility in the ICU," J. Crit Care, 29(3) (2014): 438-444. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4718660/

Knowledge

Concerns about the gaps in health education and an awareness of available safety net services were discussed by each focus group. Materials related to health education that are easy to access and comprehend are needed to help community members improve their health literacy and to provide leaders with the knowledge they need to aid the communities they are serving in their efforts to improve their health. Additionally, these materials need to be available in multiple languages to ensure a thorough understanding of the information. Materials

recommended included guidelines related to nutrition and physical activity, resources to help quit smoking, and healthier lifestyles for those living with diabetes.

Each focus group discussed the number of services that are available related to health care, mental and behavioral health, and social services. However, it is difficult for many Tennesseans to navigate these complex systems. To increase awareness of available resources, tools and resources are needed that include the location of service, services offered, payment system, and hours of operation.

Knowledge	• Lack of health education • Limited knowledge of available safety net services
	• Related Recommendations: 1,2,3,4

Security

Reflecting on Maslow's Hierarchy of Needs, Figure 14, each focus group discussed concerns with safety and security that outweigh health considerations in their communities. Safety concerns varied for each community, but in all cases these needs are significant and play a determining role in individuals' ability to improve their health status. Each group focused on the need for the state to build relationships and partnerships with key community leaders in order to more effectively reach communities. These community leaders have the trust and cultural competency needed to serve as a facilitator as state agencies work to increase outreach to vulnerable communities.

Security	• Security and Safety prioritized over Health • Fear of accessing safety net and other health care and social services • Need for state to build relationships with trusted community leaders to better reach community members • Youth Violence • Adverse Childhood Experiences
	• Related Recommendations: 1,3

State Support

Each focus group outlined ways the state can improve its efforts to support local community programs and initiatives. There are many successful programs already underway across the state that will require additional funding to mature, increase capacity, and address needs. Additionally, many stakeholders collaborate with numerous state agencies for various causes. Stakeholders recommended that TDH work to increase alignment and collaboration with other state agencies to increase efficiencies and avoid stakeholder fatigue.

State Support	• Need for increased funding • Need for improved collaboration and alignment between state agencies
	• Related Recommendations: 2,3,4

Outreach

Leaders from immigrant communities highlighted the need for more multilingual services for community members. Tennesseans throughout the state utilize navigators to assist with benefits enrollment and health care access. There is a need for these services to be offered in more languages and for the translation skills to be improved. Additionally, there is a need for bilingual outreach health workers to be embedded within the culture in which they work to understand not only the language but also the unique cultural norms that influence health decisions.

Outreach	• Limited availability of linguistically-appropriate navigation services to help access resources • Need for improved cultural awareness and sensitivity among outreach workers
	• Related Recommendations: 1,2,3,4

Economics

Each engaged community discussed the challenges of poverty throughout the state and the impact this has on health and well-being. Socioeconomic status is a social determinant of health and has a significant impact on an individual's ability to achieve optimal health. Like security, socioeconomic status relates to Maslow's Hierarchy of Needs.

Economics	• Poverty • Adverse Childhood Experiences • Disparities in employment opportunities and wages • Limited access to affordable housing • Barriers to accessing high quality K-12 education
	• Related Recommendations: 2,3

Mental Health

Mental health is a challenge throughout the state. Rural areas have especially limited access to mental health resources. Stigma is attached to mental health through many various communities and cultures, and Tennessee ranks poorly among mental health indicators when compared to the nation as a whole. These concerns were reiterated throughout each focus group.

Mental Health	• Adverse childhood experiences • Cultural barriers and stigma • Limited services • Trauma • Youth suicide
	• Related Recommendations: 1,2,3

Recommendations

In response to the information that was shared throughout the focus group process, TDH Office of Health Planning and OMHDE have developed a series of recommendations to be implemented by these two offices, in partnership with the Tennessee Charitable Care Network and others, throughout 2018 and 2019. The Department is committed to actively addressing the areas of concern that were expressed and to supporting the impressive work that is being conducted by faith-based organizations across the state.

1. **In partnership with the Tennessee Charitable Care Network, the Department of Health's Division of Health Disparities, and other provider stakeholders, develop an accessible, easy to use inventory of safety net providers in the state, including services provided, hours of operation, and payment policies.**

Tennessee has a network of Health Care Safety Net providers that provide primary care, behavioral health, case management, and emergency dental services to uninsured adults age 19-64. This network includes Federally Qualified Health Centers, Local Health Departments, and Community and Faith-Based Providers. Health Planning will partner with the Department's Office of Rural Health and Health Access, the Office of Minority Health and Disparities Elimination, and the Tennessee Charitable Care Network to develop an inventory and interactive map that provides information on where these clinics are located in the state, what services are provided, hours of operation, and payment policies. This recommendation will aim to improve access to primary care and increase knowledge for Tennesseans who are under insured, uninsured, and/or living in medically underserved areas of the state.

2. **In partnership with the Department of Health's Division of Health Disparities, convene one or more summits for faith-based leaders.**

Health Planning and OMHDE will partner with other state agencies to offer one or more summits for faith-leaders across the state. The summit will serve as an opportunity for faith-leaders to connect with representatives from state agencies to receive information on relevant health topics and available state resources, and to network with other faith leaders. The summit(s) will serve as the launch of the health ambassadors program discussed in recommendation 3.

3. **In partnership with the Department of Health's Division of Health Disparities, develop and sustain a health ambassadors program to empower faith-based organizations and faith leaders with information and tools to improve the health of their communities.**

Health Planning and OMHDE will partner to develop and deploy a heath ambassadors program designed to equip faith-based leaders with knowledge, tools, and resources needed to successfully serve their communities. It will be an empowering program that ensures the needs of those who are committed to helping improve the health and well-being of those around them are being met. Opportunities for health ambassadors will include identifying needs in their communities, sharing thoughts, ideas, and concerns directly with representatives from TDH, and receiving training and resources to use while improving health in their faith centers, communities, and homes.

4. **Develop a new State Health Plan webpage that is a one-stop shop for health education materials, TDH priorities, toolkits, and other resources to assist leaders, community members, health care representatives, and others in their efforts to align with the State and increase their impact on health.**

Health Planning will develop a new interactive State Health Plan webpage to increase access to resources, improve health education, and increase interaction with individuals throughout the state that are working to improve the health of their communities. The website will include health education materials, toolkits, and information on TDH priorities and how to align efforts with the state's mission. The website will also include a section that tracks health in Tennessee utilizing the Tennessee's Vital Signs, and the Vital Signs Actions. The Vital Signs Actions will be a searchable database of promising programs and interventions taking place in communities across the state. Individuals seeking to impact health can utilize this database to replicate existing successful programs, build partnerships, access resources, and share their own best practices with others.

Each of these recommendations was thoughtfully developed in response to the information gathered during the focus group meetings that were held with faith-leaders throughout the state. Health Planning is grateful to every leader who took the time to share concerns and ideas with the Department. Health Planning is looking forward to implementing these recommendations in 2018 as a way to better serve these leaders who are committed to improving the lives of those around them. Without the hard work, knowledge, and support of these dedicated faith and community leaders, Tennessee will not achieve our vision to be among the ten healthiest states in the nation.

Certificate of Need Standards and Criteria

Acute Care Beds

and

Non-Residential Opioid Treatment Programs

Certificate of Need

A certificate of need (CON) is a permit for the establishment or modification of a health care institution, facility, or service at a designated location. Tennessee's CON program seeks to deliver improvements in access, quality, and cost savings through orderly growth management of the state's health care system.

In the 1970's the federal government urged states to control rising health care costs by managing the growth of health care services and facilities through the use of health planning. In response, the Tennessee General Assembly created the state's CON program in 1973. The Health Services Development Agency (HSDA) was established as part of the Health Services Planning Act of 2002. The HSDA serves as an independent agency that reviews CON applications and votes to either approve or deny the request. The Division of Health Planning was established under Tennessee law in 2004 and is statutorily charged with developing and revising the Standards and Criteria that guide the HSDA review and decision making process.[38] The following facilities, equipment, and services are regulated by the CON program:

Figure 15 – Certificate of Need Provisions

Institutions that Require a Certificate of Need
• Hospital • Nursing Home • Recuperation Center • Ambulatory Surgical Treatment Center • Mental Health Hospital • Intellectual Disability Institutional Habilitation Facility • Home Care Organization • Outpatient Diagnostic Center • Rehabilitation Facility • Residential Hospice • Non-Residential Opioid Treatment Programs

[38] For more information visit: http://tn.gov/health/article/certificate-of-need or https://www.tn.gov/hsda/topic/certificate-of-need-basics

Services that Require a Certificate of Need
• Burn Unit • Neonatal Intensive Care Unit • Open Heart Surgery • Positron Emission Tomography • Organ Transplantation • Home Health • Psychiatric (Inpatient) • Pediatric Magnetic Resonance Imaging • Magnetic Resonance Imaging in counties with populations less than 250,000 • Cardiac Catheterization • Linear Accelerator • Hospice • Opiate Addiction Treatment
Actions that Require a Certificate of Need
• Any change in the bed complement of a health care institution which: a. Increases by one or more the total number of licensed beds; b. Redistributes beds from acute to long term care; c. Redistributes from any category to acute, rehabilitation, child and adolescent psychiatric, or adult psychiatric; and/or d. Relocates beds to another facility or site. • Change in location or replacement of existing or certified facilities providing health care services or health care institutions. • Change of parent office of a home health or hospice agency from one county to another county. • One time every three years, a hospital, rehabilitation facility, or mental health hospital may increase its total number of licensed beds in any bed category by 10% or less of its licensed capacity at any one campus over any period of one year for any services or purposes it is licensed to perform without obtaining a certificate of need. The hospital, rehabilitation facility, or mental health hospital shall provide written notice of the increase in beds to the agency on forms provided by the agency prior to the request for licensing by the board for licensing health care facilities or the department of mental health and substance abuse services, whichever is appropriate. a. A hospital, rehabilitation facility, or mental health hospital shall not i. Increase its number of licensed beds for any service or purpose for which it is not licensed to provide; or

ii. Redistribute beds within its bed complement to a different category.

- "Campus" means structures and physical areas that have the same address and are immediately adjacent or strictly contiguous to the facility's or hospital's main buildings.
    a. For new hospitals, rehabilitation facilities, or mental health hospitals, the 10% increase cannot be requested until 1 year after the date all of the new beds were initially licensed.
    b. When determining projected county hospital bed need for certificate of need applications, all notices filed with the agency pursuant to subdivision (g)(1), with written confirmation from the board for licensing health care facilities or the department of mental health and substance abuse services, whichever is appropriate, that a request and application for license has been received and a review has been scheduled, shall be considered with the total of licensed hospital beds, plus the number of beds from approved certificate of need, but yet unlicensed.

Each edition of the State Health Plan has included revisions to CON Standards and Criteria.[39] The revision or development of Standards and Criteria includes a comprehensive process that engages the public, industry stakeholders, and HSDA staff and board members.

The 2017-2018 Edition of the State Health Plan includes revisions to the CON Standards and Criteria for Acute Care Beds and Non-Residential Opioid Treatment Programs. As required by statute, these revisions and the entire 2017-2018 Edition of the State Health Plan have been reviewed by the agency members and staff.

[39] All current CON standards, including those previously revised, can be found at the following link: https://www.tn.gov/hsda/.

STATE OF TENNESSEE

STATE HEALTH PLAN

CERTIFICATE OF NEED STANDARDS AND CRITERIA

FOR

Acute Care Beds

The Health Services Development Agency (HSDA) may consider the following standards and criteria for applicants seeking to establish Acute Care Beds. Rationale statements are provided for standards to explain the Division of Health Planning's underlying reasoning. Additionally, these rationale statements may assist stakeholders in responding to these Standards and may assist the HSDA in its assessment of applications. Existing Acute Care Bed programs are not affected by these standards and criteria unless they take action that requires a new certificate of need (CON) for such services. These proposed standards and criteria will become effective immediately upon approval and adoption by the governor.

The Certificate of Need Standards and Criteria serve to uphold the Five Principles for Achieving Better Health set forth by the State Health Plan. These Principles were first developed for the 2010 edition and have been utilized as the overarching framework of the Plan in each annual update that has followed. Utilizing the Five Principles for Achieving Better Health during the development of the CON Standards and Criteria ensures the protection and promotion of the health of the people of Tennessee. The State Health Plan's Five Principles for Achieving Better Health are as follows:

1. **Healthy Lives:** The purpose of the State Health Plan is to improve the health of Tennesseans.
2. **Access:** Every citizen should have reasonable access to health care.
3. **Economic Efficiencies:** The state's health care resources should be developed to address the needs of Tennesseans while encouraging competitive markets, economic efficiencies and the continued development of the state's health care system.

4. **Quality of Care:** Every citizen should have confidence that the quality of health care is continually monitored and standards are adhered to by health care providers.
5. **Workforce:** The state should support the development, recruitment and retention of a sufficient and quality health care workforce.

Definitions

Licensed Beds: The number of beds licensed by the agency having licensing jurisdiction over the facility.

Staffed Beds: Beds that are licensed and physically available for which staff is on hand to attend to the patient who occupies the bed. Staffed beds include those that are occupied and those that are vacant.

Rural Area: A proposed service area shall be designated as rural in accordance with the U.S. Department of Health and Human Services (HRSA) Federal Office of Rural Health Policy's *List of Rural Counties and Designated Eligible Census Tracts in Metropolitan Counties*. This document, along with the two methods used to determine eligibility, can be found at the following link:

http://www.hrsa.gov/ruralhealth/resources/forhpeligibleareas.pdf

For more information on the Federal Office of Rural Health Policy visit:

http://www.hrsa.gov/ruralhealth/

Service Area: The county or counties represented in an application as the reasonable area in which a facility intends to provide services and/or in which the majority of its patients reside.

Standards and Criteria

1. **Determination of Need:** The following methodology should be used and the need for hospital beds should be projected four years into the future from the current year.

   Using the latest utilization and patient origin data from the Joint Annual Report of Hospitals and the most current populations projection series from the Department of Health, both by county, calculate need based on the following:

   Step 1

   Determine the current Average Daily Census (ADC) in each county,

$$ADC = \frac{\text{Patient Days}}{365 \text{ (366 in leap year)}}$$

Step 2

To determine the service area population (SAP) in both the current and projected year(s):

a. Begin with a list of all the hospital discharges in the state, separated by county, and showing the discharges both by county where the patient actually lives (resident discharges), and the county in which the patient received medical treatment.

b. For the county in which the hospital is (or would be) located (service county), determine which other counties have patients who are treated in your county (resident counties). Treat all of the discharges from another state as if that whole state were a single resident county. The total discharges of residents from another state should be calculated from state populations estimates and the latest National Center for Health Statistics southeastern discharge rates.

c. For each resident county, determine what percent of their total resident discharges are discharged from a hospital in the proposed/existing service county (if less than one percent, disregard).

d. For each resident county, apply the percentage determined above to the county's population (both projected and current). Add together the resulting numbers for all the resident counties and add that sum to the projected and current population of your service county. This will give you the service area population (SAP).

Step 3

Determine projected Average Daily Census as:

$$\text{Projected ADC} = \text{Current ADC} \times \frac{\text{Projected SAP}}{\text{Current SAP}}$$

Step 4

Calculate Projected Bed Need for each county as:

Projected Need=Projected ADC +2.33 X (Square Root of Projected ADC)

However, if projected occupancy:

$$\text{Projected Occupancy: } \frac{\text{Projected ADC}}{\text{Projected Need}} \times 100$$

If greater than 80 percent, then calculate projected need:

$$\text{Projected Need} = \frac{\text{Projected ADC}}{.8}$$

a. New hospital beds can be approved in excess of the "need standard for a county" if the following criteria are met:

   i. All existing hospitals in the proposed service area have an occupancy level greater than or equal to 80 percent for the most recent Joint Annual Report. Occupancy should be based on the number of staffed beds for two consecutive years.

      1. In order to provide adequate information for a comprehensive review, the applicant should utilize data from the Joint Annual report to provide information on the total number of licensed and staffed beds in the proposed service area. Applicants should provide an explanation to justify any differences in staffed and licensed beds in the applicant's facility or facilities. The agency board should take into consideration the ability of the applicant to staff existing unstaffed licensed beds prior to approving the application for additional beds.

         The following table should be utilized to demonstrate bed capacity for the most recent year.

Total Beds			
Total Licensed Beds	Staffed beds set up and in use on a typical day	Licensed beds not staffed	Licensed beds that could not be used within 24-48 hours

ii. All outstanding CON projects for new acute care beds in the proposed service area are licensed.

iii. The Health Services and Development Agency may give special consideration to applications for additional acute care beds by an existing hospital that demonstrates (1) annual inpatient occupancy for the twelve (12) months preceding the application of 80 percent or greater of licensed beds and (2) that the addition of beds without a certificate of need as authorized by statute will be inadequate to reduce the projected occupancy of the hospital's acute care beds to less than 80 percent of licensed bed capacity.

b. In accordance with Tennessee Code Annotated 68-11-14607 (g), "no more frequently than one time every three years, a hospital, rehabilitation facility, or mental health hospital may increase its total number of licensed beds in any category by ten percent or less of its licensed capacity at any one campus over any period of one year for any services it purposes it is licensed to perform without obtaining a certificate of need". These licensed beds that were added without a certificate of need should be considered as part of the determination of need formula by the agency.

i. Applicants should include information on any beds that have been previously added utilizing this statute.

c. Applicants applying for acute care beds in service area counties where there is no hospital, and thus no bed occupancy rate numbers to provide for the need formula, should provide any relevant data that supports its claim that there is a need for acute care beds in the county or counties. Data may include, for example, the number of residents of the county or counties who over the previous 24 months have accessed acute care bed services in other counties.

Data: Applicants should utilize population data from the University of Tennessee, Tennessee State Data Center, Boyd Center for Business & Economic Research (UTCEBER) for determination of need calculations. These data are made publicly available at the following link:

http://tndata.utk.edu/sdcpopulationprojections.htm

Department of Health Acute Care Bed Need Projections are available upon request at the following link under "Submit a Request":

https://tn.gov/health/section/statistics

Note: A Critical Access Hospital (CAH) that has Centers for Medicare and Medicaid Services (CMS) approval to furnish swing bed services may use any acute care bed within the CAH for the provision of swing bed services, with the following exceptions: within their IPPS-excluded rehabilitation or psychiatric distinct part unit, in an intensive care-type unit, and for newborns.

See:https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/SwingBedFactsheet.pdf

2. **Quality Considerations:** Applicants should utilize Centers for Disease Control & Prevention's (CDC) National Health care Safety Network (NHSN) measures. Applicants must provide data from the most recent four quarters utilizing the baseline established by the NHSN within the dataset.

   Data Source: Hospital Compare
   https://www.medicare.gov/hospitalcompare/search.html?

   Applicants should utilize the following table to demonstrate the quality of care provided at the existing facility.

Centers for Disease Control & Prevention's (CDC) National Health Care Safety Network (NHSN) Measures				
Measure	**Source**	**National Benchmark**	**Hospital Standardized Infection Ratio (SIR)**	**Hospital Evaluation (above, at, or below national benchmark)**
Catheter associated urinary tract infection (CAUTI)	Hospital Compare: Complications & Deaths – Health care-associated infections	Standardized infection ratio (SIR) national benchmark = 1.		

Central line associated blood stream infection (CLABSI)	Hospital Compare: Complications & Deaths – Health care-associated infections	Standardized infection ratio (SIR) national benchmark = 1.		
Methicillin resistant staphylococcus aureus (MRSA)	Hospital Compare: Complications & Deaths – Health care-associated infections	Standardized infection ratio (SIR) national benchmark = 1.		
Clostridium difficile (C.diff.)	Hospital Compare: Complications & Deaths – Health care-associated infections	Standardized infection ratio (SIR) national benchmark = 1.		
Surgical Site Infections (SSI)				
SSI: Colon		Hospital Compare: Complications & Deaths – Health care-associated infections	Standardized infection ratio (SIR) national benchmark = 1.	
SSI: Hysterectomy	Hospital Compare: Complications & Deaths – Health care-associated infections	Standardized infection ratio (SIR) national benchmark = 1.		
		National Average	**Tennessee Average**	**Hospital Percentage**
Health care work influenza vaccinations	Hospital Compare: Timely & Effective Care – Preventive Care			

Applicants should provide the above metrics and any improvement plans that are in place to improve the hospital's performance on these metrics.

In addition to the above metrics, the applicant should list, or briefly summarize, any significant quality accreditations, certifications, or recognitions that might be appropriate for Agency consideration (i.e. Joint Commission, TDH/BLHCF survey results, CMS standing, and/or clinical quality awards).

The above metrics should serve as a guide for the Agency to better understand the quality of care that is provided by the applicant at the existing facility. National and state averages serve as an indicator by which the board may evaluate the applicant.

Note: In the event quality data is unavailable for an applicant's existing facility, the applicant should provide data from a comparable, existing facility owned by the applicant. If no comparable data is available, the absence of such information should not disadvantage the applicant over another with available quality data.

3. **Establishment of Service Area:** The geographic service area shall be reasonable and based on an optimal balance between population density and service proximity of the applicant.

4. **Relationship to Existing Similar Services in the Area:** The proposal shall discuss what similar services are available in the service area and the trends in occupancy and utilization of those services. This discussion shall include the likely impact of the proposed increase in acute care beds on existing providers in the proposed service area and shall include how the applicant's services may differ from these existing services. The agency should consider if the approval of additional beds in the service area will result in unnecessary, costly duplication of services. This is applicable to all service areas, rural and others.

The following tables should be utilized to demonstrate existing services in the proposed service area.

Facility	County	20XX Licensed Beds	Patient Days			Licensed Occupancy			% Change in Patient Days 20XX-20XX
			20XX	20XX	20XX	20XX	20XX	20XX	

Total									

Facility	County	20XX Staffed Beds	Patient Days			Staffed Occupancy			% Change in Patient Days 20XX-20XX
			20XX	20XX	20XX	20XX	20XX	20XX	
Total									

Rural: Additional acute care beds should only be approved in a rural service area if the applicant can adequately demonstrate the proposed facility will not have a significant negative impact on existing rural facilities that draw patients from the proposed service area.

5. **Services to High-Need and Underserved Populations:** Special consideration shall be given to applicants providing services fulfilling the unique needs and requirements of certain high-need populations, including uninsured, low-income, and underserved geographic regions, as well as other underserved population groups.
6. **Relationship to Existing Applicable Plans; Underserved Area and Population:** The proposal's relationship to underserved geographic areas and underserved population groups shall be a significant consideration.

7. **Access:** The applicant must demonstrate an ability and willingness to serve equally all of the service area in which it seeks certification. In addition to the factors set forth in HSDA Rule 0720-11-.01(1) (listing factors concerning need on which an application may be evaluated), the HSDA may choose to give special consideration to an applicant that is able to show that there is a limited access in the proposed service area.

8. **Adequate Staffing:** An applicant shall document a plan demonstrating the intent and ability to recruit, hire, train, assess competencies of, supervise, and retain the appropriate numbers of qualified personnel to provide the services described in the application and that such personnel are available in the proposed service area.

9. **Assurance of Resources:** The applicant shall document that it will provide the resources necessary to properly support the applicable level of services. Included in such

documentation shall be a letter of support from the applicant's governing board of directors, Chief Executive Officer, or Chief Financial Officer documenting the full commitment of the applicant to develop and maintain the facility resources, equipment, and staffing to provide the appropriate services. The applicant shall also document the financial costs of maintaining these resources and its ability to sustain them.

10. **Data Requirements**: Applicants shall agree to provide the Department of Health and/or the Health Services and Development Agency with all reasonably requested information and statistical data related to the operation and provision of services and to report that data in the time and format requested. As a standard practice, existing data reporting streams will be relied upon and adapted over time to collect all needed information.

11. **Quality Control and Monitoring:** The applicant shall identify and document its existing or proposed plan for data reporting, quality improvement, and outcome and process monitoring system.

    Rationale: This section supports the State Health Plan's Fourth Principle for Achieving Better Health regarding quality of care.

12. **Licensure and Quality Considerations:** Any existing applicant for this CON service category shall be in compliance with the appropriate rules of the TDH. The applicant shall also demonstrate its accreditation status with the Joint Commission or other applicable accrediting agency.

13. **Community Linkage Plan:** The applicant shall describe its participation, if any, in a community linkage plan, including its relationships with appropriate health care system providers/services and working agreements with other related community services assuring continuity of care.

    Rationale: The 2014 Update to the State Health Plan moved from a primary emphasis of health care to an emphasis on "health protection and promotion". The development of primary prevention initiatives for the community advances the mission of the current State Health Plan.

STATE OF TENNESSEE

STATE HEALTH PLAN

CERTIFICATE OF NEED STANDARDS AND CRITERIA

FOR

Non-Residential Opioid Treatment Programs

The Health Services Development Agency (HSDA) may consider the following standards and criteria for applicants seeking to establish Non-Residential Opioid Treatment Programs. Rationale statements are provided for standards to explain the Division of Health Planning's underlying reasoning. Additionally, these rationale statements may assist stakeholders in responding to these Standards and may assist the HSDA in its assessment of applications. Existing Non-Residential Opioid Treatment Programs are not affected by these standards and criteria unless they take action that requires a new certificate of need (CON) for such services. These proposed standards and criteria will become effective immediately upon approval and adoption by the governor.

The Certificate of Need Standards and Criteria serve to uphold the Five Principles for Achieving Better Health set forth by the State Health Plan. These Principles were first developed for the 2010 edition and have been utilized as the overarching framework of the Plan in each annual update that has followed. Utilizing the Five Principles for Achieving Better Health during the development of the CON Standards and Criteria ensures the protection and promotion of the health of the people of Tennessee. The State Health Plan's Five Principles for Achieving Better Health are as follows:

1. **Healthy Lives:** The purpose of the State Health Plan is to improve the health of Tennesseans.

2. **Access:** Every citizen should have reasonable access to health care.
3. **Economic Efficiencies:** The state's health care resources should be developed to address the needs of Tennesseans while encouraging competitive markets, economic efficiencies and the continued development of the state's health care system.
4. **Quality of Care:** Every citizen should have confidence that the quality of health care is continually monitored and standards are adhered to by health care providers.
5. **Workforce:** The state should support the development, recruitment and retention of a sufficient and quality health care workforce.

Definitions

Non-Residential Opioid Treatment Programs or Nonresidential Substitution-based Treatment Centers for Opiate Addiction as referenced in TCA § 68-11-1607: A non-residential opioid treatment program should provide adequate medical, counseling, vocational, educational, mental health assessment, and social services to patients enrolled in the opioid treatment program with the goal of treating the individual with opioid use disorder.

Standards and Criteria

1. **Determination of Need:** The need for non-residential opioid treatment programs should be based on information prepared by the applicant for a certificate of need that acknowledges the importance of considering the demand for services along with need while addressing and analyzing service problems as well.

   The assessment should cover the proposed service area and include the utilization of existing opioid use disorder treatment providers, scope of services provided, patient origin, and patient mix.

   The assessment should consider the users of opioids as the clients at non-residential opioid treatment programs. Assessment data will be based on prevalence estimates of opioid and heroin use, narcotic-related offenses, opioid-related hospitalizations, deaths, substance abuse treatment admissions, and estimates of medication assisted treatment providers for opioid use disorder and their patient capacity.

   Need Formula: Need should be based on the following formula: The capacity of existing programs serving individuals who are opiate dependent divided by the number of

individuals estimated to be opiate dependent. Counties with service providers meeting less than 25% of the need shall be considered high need counties.

Applications for proposed service areas that fail to meet the 25% threshold should still be considered for approval. This need formula only designates *high need* counties that should be given special consideration. It does not indicate that high-quality applications for counties with lower demonstrated need should necessarily be denied.

Note: The Department of Mental Health and Substance Abuse Services (TDMHSAS) shall annually publish estimates of persons with opioid use disorder for each county in Tennessee and estimates of the number of clients with opioid use disorder receiving services funded by or licensed by TDMHSAS. The applicant shall specify the percent of unmet treatment need that will be met by the proposed Non-Residential Opioid Treatment Programs.

The assessment should also include:

a. A description of the geographic area to be served by the program,
    i. The applicant shall provide the number of patients projected to be served by county of residence in year one and year two.

    Please complete the following table to indicate patient origin by county in year one and year two of the proposed project. Additional columns may be added to reflect the appropriate number of relevant counties.

	County 1	County 2	County 3	County 4	**Total**
Patients Year 1					
Patients Year 2					

    ii. At least 90% of the projected patients in year one and year two reside within a 60 mile radius of the proposed program site or less than a one hour drive time to the proposed program site.
    iii. The applicant shall provide an analysis of driving distances by county from the proposed clinic location site in comparison to the closest existing OTP clinic.

    Please complete the following table to demonstrate the driving distances from the counties in the proposed service area to the proposed site and to existing

non-residential opioid treatment programs within a 180 minute drive time. This should include programs located in neighboring states. Additional columns and rows may be added to reflect the appropriate number of existing programs and affected counties.

	Proposed OTP	Existing OTP 1	Existing OTP 2	Existing OTP 3
County 1				
County 2				
County 3				
County 4				

b. Population of the area to be served, and
c. The estimated number of persons, in the described area, with opioid use disorder and an explanation of the basis of the estimate.
d. The applicant shall provide the projected rate of intake per week for year one of the proposed project along with factors controlling intake.
e. The applicant shall compare estimated need to the existing capacity of non-residential substance abuse treatment facilities including office-based opiate treatment, opioid treatment program, alcohol and drug rehabilitation treatment, and alcohol and drug detoxification facilities.
f. The applicant shall contact the Tennessee Methadone Authority to obtain the current patient caseload and capacity of Non-Residential Opioid Treatment Providers providing care to patients in the proposed service area. The list shall delineate the number of patients receiving methadone treatment and buprenorphine treatment.

Consideration should be given to the reality that existing facilities can expand or reduce their capacity to maintain or treat patients without large changes in overhead.

2. **Assurance of Resources:** The proposal's estimate of the number of patients to be treated, anticipated revenue from the proposed project, and the program funding source with description of the organizational structure of the program delineating the person(s) responsible for the program, should be considered.

3. **Charity Care:** The proposal should address the program's ability to provide for indigent and charity care. The applicant shall provide the rate of charity care of total gross revenue in year one and year two, including the total number of charity care patients to be served.

Please complete the following table to demonstrate projected charity care in year 1 and year 2.

	Gross Revenue	Gross Charge Per Patient	Charity Care Total	Total Charity Care Patients
Year 1				
Year 2				

4. **Special Populations:** The applicant shall address how the proposed program will serve patients who are pregnant, HIV positive, Hepatitis C positive, and patients who are incarcerated and/or facing risk of incarceration. The applicant should also discuss its ability, willingness, and plan to provide care to women who are pregnant but cannot afford the services.

5. **Adequate Staffing:** An applicant shall document a plan demonstrating the intent and ability to recruit, hire, train, assess competencies of, supervise, and retain the appropriate numbers of qualified personnel to provide the services described in the application and that such personnel are available in the proposed service area. The applicant should provide evidence of planned staffing patterns that adhere to relevant TDMHSAS licensing standards.

6. **Licensure and Quality Considerations:** Any existing applicant for this CON service category shall be in compliance, or have a plan for compliance, with the appropriate rules of the Tennessee Department of Health (TDH) and TDMHSAS.

   Rationale: This section supports the State Health Plan's Fourth Principle for Achieving Better Health regarding quality of care.

7. **Data Requirements:** Applicants shall agree to provide the TDH, TDMHSAS, and/or the HSDA with all reasonably requested information and statistical data related to the operation and provision of services and to report that data in the time and format requested. As a standard practice, existing data reporting streams will be relied upon and adapted over time to collect all needed information**.**

8. **Community Linkage Plan:** The applicant shall describe its participation, if any, in a community linkage plan, including its relationships with appropriate health care system providers/services and working agreements with other related community services assuring continuity of care. The applicant is encouraged to include primary prevention initiatives in the community linkage plan that would address risk factors leading to increased opioid dependency. Applicants should document plans for satisfying TDMHSAS Administrative Rule 0940-05-42-.28, related to community education.

   Rationale: The State Health Plan moved from a primary emphasis of health care to an emphasis on "health protection and promotion". The development of primary prevention initiatives for the community advances the mission of the State Health Plan.

Appendix A

Statutory Authority for the State Health Plan

The Division of Health Planning was created by action of the Tennessee General Assembly and signed in to law by Governor Phil Bredesen (Tennessee Code Annotated § 68-11-1625). The Division is charged with creating and updating a State Health Plan. The text of the law follows.

a. There is created the state health planning division of the department of finance and administration. It is the purpose of the planning division to create a state health plan that is evaluated and updated at least annually. The plan shall guide the state in the development of health care programs and policies and in the allocation of health care resources in the state.
b. It is the policy of the state of Tennessee that:
    1. Every citizen should have reasonable access to emergency and primary care;
    2. The state's health care resources should be developed to address the needs of Tennesseans while encouraging competitive markets, economic efficiencies and the continued development of the state's health care industry;
    3. Every citizen should have confidence that the quality of health care is continually monitored and standards are adhered to by health care providers; and
    4. The state should support the recruitment and retention of a sufficient and quality health care workforce.
c. The planning division shall be staffed administratively by the department of finance and administration in a manner that the department deems necessary for the performance of the planning division's duties and responsibilities, which may include contracting for the services provided by the division through a private person or entity
d. The duties and responsibilities of the planning division include:
    1. To develop and adopt a State Health Plan, which must include, at a minimum, guidance regarding allocation of the state's health care resources;
    2. To submit the State Health Plan to the Health Services and Development Agency for comment;
    3. To submit the State Health Plan to the Governor for approval and adoption;
    4. To hold public hearings as needed;
    5. To review and evaluate the State Health Plan at least annually;
    6. To respond to requests for comment and recommendations for health care policies and programs;

7. To conduct an ongoing evaluation of Tennessee's resources for accessibility, including, but not limited to, financial, geographic, cultural, and quality of care;
8. To review the health status of Tennesseans as presented annually to the Division by the Department of Health and the Department of Mental Health and Developmental Disabilities;
9. To review and comment on federal laws and regulations that influence the health care industry and the health care needs of Tennesseans;
10. To involve and coordinate functions with such State entities as necessary to ensure the coordination of State health policies and programs;
11. To prepare an annual report for the General Assembly and recommend legislation for its consideration and study; and
12. To establish a process for timely modification of the State Health Plan in response to changes in technology, reimbursement and other developments that affect the delivery of health care.

Appendix B

America's Health Rankings: Measures

Core Measures			
	Measure	Description	Source, Data Year(s)
Behaviors	Drug Deaths	Age-adjusted number of deaths due to drug injury of any intent (unintentional, suicide, homicide or undetermined) per 100,000 population	Centers for Disease Control and Prevention (CDC), National Vital Statistics System, 2013-2015
	Excessive Drinking	Percentage of adults who reported either binge drinking (having four or more [women] or five or more [men] drinks on one occasion in the past 30 days) or chronic drinking (having eight or more [women] or 15 or more [men] drinks per week)	CDC, Behavioral Risk Factor Surveillance System, 2016
	High School Graduation	Percentage of high school students who graduate with a regular high school diploma within four years of starting ninth grade (ACGR)	U.S. Department of Education, National Center for Education Statistics, 2014-2015
	Obesity	Percentage of adults with a body mass index of 30.0 or higher based on reported height and weight	CDC, Behavioral Risk Factor Surveillance System, 2016
	Physical Inactivity	Percentage of adults who reported doing no physical activity or exercise other than their regular job in the past 30 days	CDC, Behavioral Risk Factor Surveillance System, 2016
	Smoking	Percentage of adults who are smokers (reported smoking at least 100 cigarettes in their lifetime and currently smoke every or some days)	CDC, Behavioral Risk Factor Surveillance System, 2016
Community & Environment	Air Pollution	Average exposure of the general public to particulate matter of 2.5 microns or less in size (PM2.5)	U.S. Environmental Protection Agency, 2014-2016; U.S. Census Bureau, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2016, 2014-2016
	Children in Poverty	Percentage of children younger than 18 who live in households at or below the poverty threshold	U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement, 2016
	Infectious Disease	Mean z score of the incidence of chlamydia, pertussis and Salmonella per 100,000 population	America's Health Rankings composite measure, 2017
	Chlamydia	Number of new cases of chlamydia per 100,000 population	CDC, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention Atlas, 2015
	Pertussis	Number of new cases of pertussis per 100,000 population	CDC, Morbidity and Mortality Weekly Report (MMWR),

			Summary of Notifiable Infectious Diseases and Conditions, 2015
	Salmonella	Number of new cases of Salmonella per 100,000 population	CDC, MMWR, Summary of Notifiable Infectious Diseases and Conditions, 2015
	Occupational Fatalities	Number of fatal occupational injuries in construction, manufacturing, trade, transportation, utilities and professional and business services per 100,000 workers	U.S. Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 2013-2015; U.S. Bureau of Economic Analysis, 2013-2015
	Violent Crime	Number of murders, rapes, robberies and aggravated assaults per 100,000 population	Federal Bureau of Investigation, 2016
Policy	**Immunizations – Adolescents**	Mean z score of the percentage of adolescents aged 13 to 17 who received >=1 dose of Tdap vaccine since age 10, >=1 dose of meningococcal vaccine and all recommended doses of human papillomavirus vaccine	America's Health Rankings composite measure, 2017
	HPV Females	Percentage of females aged 13 to 17 who are up to date on all recommended doses of human papillomavirus (HPV) vaccine	CDC, National Immunization Survey, 2016
	HPV Males	Percentage of males aged 13 to 17 who are up to date on all recommended doses of human papillomavirus (HPV) vaccine	CDC, National Immunization Survey, 2016
	Meningococcal	Percentage of adolescents aged 13 to 17 who received >=1 dose of meningococcal conjugate vaccine (MenACWY)	CDC, National Immunization Survey, 2016
	Tdap	Percentage of adolescents aged 13 to 17 who received >=1 dose of tetanus, diphtheria and acellular pertussis (Tdap) vaccine since age 10	CDC, National Immunization Survey, 2016
	Immunizations – Children	Percentage of children aged 19 to 35 months who received recommended doses of diphtheria, tetanus and acellular pertussis (DTaP), measles, mumps and rubella (MMR), polio, Haemophilus influenzae type b (Hib), hepatitis B, varicella and pneumococcal conjugate vaccines	CDC, National Immunization Survey, 2016
	Public Health Funding	State dollars dedicated to public health and federal dollars directed to states by the Centers for Disease Control and Prevention and the	Trust For America's Health, 2015- 2016; U.S. Department of Health and Human Services (HHS), 2015-2016; U.S. Census

		Health Resources Services Administration per person	Bureau, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2016, 2015-2016
	Uninsured	Percentage of the population that does not have health insurance privately, through their employer or through the government	U.S. Census Bureau, American Community Survey, 2015-2016
Clinical Care	Dentists	Number of practicing dentists per 100,000 population	American Dental Association, 2016
	Low Birthweight	Percentage of infants weighing less than 2,500 grams (5 pounds, 8 ounces) at birth	CDC, National Vital Statistics System, 2015
	Mental Health Providers	Number of psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, providers that treat alcohol and other drug abuse and advanced practice nurses specializing in mental health care per 100,000 population	U.S. HHS, Centers for Medicare & Medicaid Services, National Plan and Provider Enumeration System, 2016; U.S. Census Bureau, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2016, 2016
	Preventable Hospitalizations	Number of discharges for ambulatory care-sensitive conditions per 1,000 Medicare enrollees aged 65 and older	The Dartmouth Atlas of Health Care, 2015
	Primary Care Physicians	Number of active primary care physicians (including general practice, family practice, obstetrics and gynecology, pediatrics, geriatrics and internal medicine) per 100,000 population	American Medical Association, Special data request for active state licensed physicians provided by Redi-Data, Inc., Sept 18, 2017; U.S. Census Bureau, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2016, 2016
Outcomes	Cancer Deaths	Age-adjusted number of deaths due to all causes of cancer per 100,000 population	CDC, National Vital Statistics System, 2013-2015
	Cardiovascular Deaths	Age-adjusted number of deaths due to all cardiovascular diseases including heart disease and stroke per 100,000 population	CDC, National Vital Statistics System, 2013-2015
	Diabetes	Percentage of adults who reported being told by a health professional that they have diabetes (excludes prediabetes and gestational diabetes)	CDC, Behavioral Risk Factor Surveillance System, 2016
	Disparity in Health Status	Difference between the percentage of adults with at least a high school education compared with those without who reported their health is very good or excellent (adults	CDC, Behavioral Risk Factor Surveillance System, 2016
	Frequent Mental Distress	Percentage of adults who reported their physical health was not good 14 or more days in the past 30 days	CDC, Behavioral Risk Factor Surveillance System, 2016

	Frequent Physical Distress	Percentage of adults who reported their physical health was not good 14 or more days in the past 30 days	CDC, Behavioral Risk Factor Surveillance System, 2016
	Infant Mortality	Number of infant deaths (before age 1 year) per 1,000 live births	CDC, National Vital Statistics System, 2014-2015
	Premature Death	Number of years of potential life lost before age 75 per 100,000 population	CDC, National Vital Statistics System, 2015

Supplemental Measures			
	Measure	**Description**	**Source, Data Year(s)**
Behaviors	Binge Drinking	Percentage of adults who reported having four or more (women) or five or more (men) drinks on one occasion in the past 30 days	Centers for Disease Control and Prevention (CDC), Behavioral Risk Factor Surveillance System, 2016
	Chronic Drinking	Percentage of adults who reported having eight or more (women) or 15 or more (men) drinks per week	CDC, Behavioral Risk Factor Surveillance System, 2016
	Fruits	Mean number of fruits consumed per day by adults	CDC, Behavioral Risk Factor Surveillance System, 2015
	Insufficient Sleep	Percentage of adults who reported sleeping less than seven hours in a 24-hour period on average	CDC, Behavioral Risk Factor Surveillance System, 2016
	Seat Belt Use	Percentage of adults who reported always using a seat belt when driving or riding in a car	CDC, Behavioral Risk Factor Surveillance System, 2016
	Vegetables	Mean number of vegetables consumed per day by adults	CDC, Behavioral Risk Factor Surveillance System, 2015
Community & Environment	Disconnected Youth	Percentage of teens and young adults aged 16 to 24 who are neither working nor in school	Measure of America of the Social Science Research Council, Promising Gains, Persistent Gaps Youth Disconnection in America 2017 Report, 2015
	Income Inequality	Inequality on the Gini scale is measured between zero, where everyone earns the same income, and one, where all the country's income is earned by a single person	U.S. Census Bureau, American Community Survey, 2016
	Median Household Income	Dollar amount that divides the household income distribution into two equal groups	U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement, 2016

	Neighborhood Amenities	Percentage of children aged 0 to 17 with access to parks or playgrounds, recreation or community centers, libraries or book mobiles, and sidewalks or walking paths	Data Resource Center for Child and Adolescent Health, National Survey of Children's Health, 2016
	Underemployment Rate	Percentage of the civilian labor force that is unemployed, plus all marginally attached workers, plus the total employed part-time for economic reasons (U-6 definition)	U.S. Bureau of Labor Statistics, 2016
	Unemployment Rate	Percentage of the civilian labor force that is unemployed (U-3 definition)	U.S. Bureau of Labor Statistics, 2016
Policy	Water Fluoridation	Percentage of population served by community water systems who receive fluoridated water	CDC, Water Fluoridation Reporting System, 2014
Clinical Care	Cholesterol Check	Percentage of adults who reported having their blood cholesterol checked within the past five years	(CDC), Behavioral Risk Factor Surveillance System, 2015
	Colorectal Cancer Screening	Percentage of adults aged 50 to 75 who reported receiving one or more of the recommended colorectal cancer screening tests within the recommended time interval (fecal occult blood test (FOBT) within the past year, colonoscopy within the past 10 years, or a sigmoidoscopy within five years and a home FOBT within the past three years)	CDC, Behavioral Risk Factor Surveillance System, 2016
	Dedicated Health Care Provider	Percentage of adults who reported having one or more people they think of as their personal doctor or health care provider	CDC, Behavioral Risk Factor Surveillance System, 2016
	Dental Visit, Annual	Percentage of adults who reported visiting the dentist or dental clinic within the past year for any reason	CDC, Behavioral Risk Factor Surveillance System, 2016
Outcomes	Heart Attack	Percentage of adults who reported being told by a health professional that they had a heart attack (myocardial infarction)	CDC, Behavioral Risk Factor Surveillance System, 2016
	Heart Disease	Percentage of adults who reported being told by a health professional that they have angina or coronary heart disease	CDC, Behavioral Risk Factor Surveillance System, 2016
	High Blood Pressure	Percentage of adults who reported being told by a health professional that they have high blood pressure	CDC, Behavioral Risk Factor Surveillance System, 2015
	High Cholesterol	Percentage of adults who reported having their cholesterol checked and were told by a health professional that it was high	CDC, Behavioral Risk Factor Surveillance System, 2015
	High Health Status	Percentage of adults who reported that their health is very good or excellent	CDC, Behavioral Risk Factor Surveillance System, 2016

	Injury Deaths	Age-adjusted number of deaths due to injury per 100,000 population	CDC, National Vital Statistics System, 2013-2015
	Poor Mental Health Days	Mean number of days in the past 30 days adults reported their mental health was not good	CDC, Behavioral Risk Factor Surveillance System, 2016
	Poor Physical Health Days	Mean number of days in the past 30 days adults reported their physical health was not good	CDC, Behavioral Risk Factor Surveillance System, 2016
	Stroke	Percentage of adults who reported being told by a health professional that they had a stroke	CDC, Behavioral Risk Factor Surveillance System, 2016
	Suicide	Age-adjusted number of deaths due to intentional self-harm per 100,000 population	CDC, National Vital Statistics System, 2015
	Six + Teeth Extractions	Percentage of adults aged 45 to 64 who reported having six or more permanent teeth removed because of tooth decay or gum disease	CDC, Behavioral Risk Factor Surveillance System, 2016

Appendix C

Faith-Based Focus Groups Notes

Bradley County – Latino Community Focus Group Meeting

- Key Takeaway: Security > Health
- Safety and Security
    - Trust is needed for community members to access health care, private or local health department
    - Church programs are underway to address these concerns and increase knowledge/awareness
    - Church leaders can be trusted partner for safety net providers and local health department to increase presence in the community
- Health Literacy and Education
    - Documents and resources are needed in Spanish to handout at churches
    - Lack of Knowledge of Available Resources
        - People are unaware of funds set aside for specialty care
        - Lack of awareness of available dental services outside of care provided to minors at local health departments
        - Leaders know there are services available but there is a need for increased awareness/knowledge among community members – and increased trust of providers
        - Local health department has strong resources with interpreters, home visits, and others – churches can play a role in sharing this information with community members

Davidson County – African American Community Focus Group Meeting

- State Support and Outreach
    - Need for increased funding to support community programs and initiatives
    - More emphasis needed on building relationships between state and economically disadvantaged communities
    - Need for increased collaboration and alignment (breaking down of silos) between state agencies
        - Alleviate stakeholder fatigue
        - Increase efficiencies
    - Collective impact model – unified, planning, action, and collaboration with all stakeholders – state, local, private, community

    - Health in all policies
- Health Literacy and Education
    - Little available information on how social determinants of health contribute to health disparities
    - Difficulty navigating and accessing available community resources – health care, social services
        - Vulnerable populations (elderly, socioeconomically disadvantaged) require additional assistance identifying and navigating available resources
        - Need for multiple platforms for information – online and printed
    - No clear pathway out of poverty – lack of family improvement plans or viable solutions toward optimal health
    - More models of good health needed from TDH
        - Good health, healthy living, best practices
    - More information about social determinants of health
        - What are they and how do they impact health outcomes
- Socioeconomics
    - Poverty
        - Poverty results in socioeconomic barriers that limit opportunities for optimal health
        - Poverty induces stress that leads to adverse health outcomes
        - Low access to affordable and healthy housing
            - No definition of healthy housing
- Mental Health
    - Adverse Childhood Experiences are precursors to mental health concerns, leading to youth suicides
    - Lack of readiness to address mental health concerns

Davidson County – Latino Community Focus Group Meeting

- Safety and Security
    - Trust is needed for community members to access health care, private or local health department
    - More bilingual staff needed at health care and safety net providers
    - Staff embedded in the targeted communities that are culturally aware/sensitive would increase trust
- Health Literacy and Education

    - Health education materials need to be tailored to the targeted community/culture
    - Difficulty navigating available resources and services
        - Translated forms are not always accurate
        - Limited knowledge of available resources
- Socioeconomics
    - Difficulty accessing affordable housing
    - Barriers to accessing high quality K-12 education
    - Need for transportation to appointments
    - Poverty, unstable housing, limited transportation all lead to missed appointments and barriers to accessing care/resources
- Mental Health
    - Mental health care options are limited – barrier to access
    - Bicultural and bilingual counselors are needed
    - Stress from immigration process impacts overall health
    - Stress and poor mental health common among youth

Davidson County – Somali Community Focus Group Meeting

- Key Takeaway: safety, health, and youth are primary concerns
- Health Literacy and Education
    - Difficulty navigating health care system and safety net system
        - Vulnerable citizens (disabilities, senior citizens) have more challenges accessing care and resources and navigating the system
        - Limited knowledge of what safety net providers are available
    - Health Education needed related to:
        - Autism, vaccines, eligibility requirements for specific resources, proper emergency department use
    - State Support
        - Increased collaboration – summit to bring all vested parties together to share knowledge and resources, and build connections
    - Mental Health
        - Limited resources
        - Cultural stigma attached to mental health issues, specifically substance abuse and misuse – more education needed

Davidson County – Tennessee Charitable Care Network Meeting

The Tennessee Charitable Care Network provides support, education, and other services to non-profit organizations that provide charitable health care services throughout the state to low-income, uninsured, and underinsured individuals.[40] Health Planning and Minority Health are planning to partner with this organization on a number of the recommendations listed in this Edition of the State Health Plan as they are implemented.

Madison County – African American Community Focus Group Meeting

- Health Literacy and Education
    - Difficulty navigating health care system, social services, and safety net options
        - Limited options for dental care specifically
        - Hospital closures – need to access care other places
        - Stigma tied to utilizing health department for services
    - Lack of health education related to diabetes
- Mental Health
    - Limited options for mental health care – difficult to access
    - Mental health issues are leading to violence, especially among youth
- Violence
    - High rates of violence among youth
- State Support
    - Need for increased funding to support community efforts

[40] For more information visit: http://www.tccnetwork.org/