Maternal and Child Health Services Title V Block Grant

Tennessee

FY 2024 Application/ FY 2022 Annual Report

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I. General Requirements

I.A. Letter of Transmittal

July 20, 2023

Grants Management Officer
Division of State and Community Health
Maternal and Child Health Bureau
Health Resources and Services Administration
5600 Fishers Lane, Room 18-31
Rockville, MD 20857

Dear Grants Management Officer,

Tennessee's Title V MCH Block Grant application and report are enclosed.

Please contact me directly if further information is needed.

Sincerely,

Tobi Adeyeye Amosun, MD, FAAP
Deputy Director for Population Health
Tennessee Department of Health

I.B. Face Sheet

The Face Sheet (Form SF424) is submitted electronically in the HRSA Electronic Handbooks (EHBs).

I.C. Assurances and Certifications

The State certifies assurances and certifications, as specified in Appendix F of the 2021 Title V Application/Annual Report Guidance, are maintained on file in the States' MCH program central office, and will be able to provide them at HRSA's request.

I.D. Table of Contents

This report follows the outline of the Table of Contents provided in the *"Title V Maternal and Child Health Services Block Grant To States Program Guidance and Forms,"* OMB NO: 0915-0172; Expires: January 31, 2024.

II. Logic Model

Please refer to figure 4 in the "Title V Maternal and Child Health Services Block Grant To States Program Guidance and Forms," OMB No: 0915-0172; Expires: January 31, 2024.

III. Components of the Application/Annual Report

III.A. Executive Summary

III.A.1. Program Overview

Tennessee's MCH/Title V Program

In the state of Tennessee, the Title V Maternal and Child Health (MCH) Services Block Grant to States is administered by the Tennessee Department of Health's Division of Family Health and Wellness (FHW). The division of roughly 150 staff members is led by a director with three deputy directors reporting to them. Each of the deputies have between two and four administrators reporting to them. The administrators have between two and five staff reporting to them. These staff include program directors, epidemiologists, and administrative assistants. For the two required positions for this grant the division director serves as one – MCH Director, and an administrator serves as the other – Children with Special Healthcare Needs (CSHCN) director.

FHW is organized into sections which focus on reproductive and women's health, perinatal/infant/pediatric care, early childhood, injury prevention and detection, chronic disease and tobacco prevention, and supplemental nutrition (including WIC). These sections implement programs that improve the health of women (including mothers), infants, children, adolescents, and their families, as well as those with special health care needs. FHW programs include topics such as family planning, maternal mortality case review, newborn screening, breastfeeding support, infant mortality reduction initiatives, home visiting, pediatric mental health, Adverse Childhood Experience (ACE) reduction, tobacco use reduction, injury prevention, suicide prevention, and CSHCN. Therefore, it is the most appropriate place to administer the MCH Block Grant.

Needs Assessment

At the beginning of each five-year grant cycle, a comprehensive needs assessment is used to identify priority needs of women, infants, children, adolescents, and their families; as well as determine the capacity of the health system to meet those needs. During the years between the comprehensive needs assessments, an on-going needs assessment is conducted to identify any significant changes in needs and capacity.

FHW conducted the comprehensive needs assessment for the 2021-2025 cycle during 2019 and 2020 in conjunction with over 100 partners. Key components included:

- Quantitative analysis of key indicators
- Qualitative data collection and analysis; including focus groups, key informant interviews, and open-ended surveys
- Structured process for choosing priorities based on the data complied
- Capacity assessment of current and potential programming for each identified priority

As a part of the ongoing needs assessment, FHW hosts MCH partner meetings twice each year. These meetings are open to anyone, and effort is made to extend the invitation broadly. During the meetings, participants are asked to consider the progress made on performance measures during the past year, and then based on that evaluation make recommendations for the next year's action plan.

Needs and Priorities

States are required to identify at least one priority in each of the population health domains, except for the Cross-cutting/Systems Building domain which is optional. There are a total of six domains: (1) Women's and Maternal Health, (2) Perinatal and Infant Health, (3) Child Health, (4) Adolescent Health, (5) Children with Special Health Care Needs and (6) Cross-cutting/Systems Building.

As a result of the Needs Assessment, TDH identified priority needs for the MCH population for the 2021-2025 Block Grant cycle. These priorities include: (1) Increase family planning, (2) Decrease pregnancy-associated mortality, (3) Increase breastfeeding, (4) Decrease infant mortality, (5) Decrease overweight and obesity (among children), (6) Increase prevention and mitigation of Adverse Childhood Experiences (ACEs), (7) Decrease tobacco and e-cigarette use (among adolescents), (8) Increase medical homes and (9) Improve transition from pediatric to adult care.

Program Planning

The MCH/Title V Program is managed within the Tennessee Department of Health's Division of Family Health and Wellness. This division includes sections for:

- Reproductive and Women's Health
- Perinatal, Infant, and Pediatric Care
- Early Childhood Initiatives
- Supplemental Nutrition (including WIC)
- Injury Prevention and Detection
- Chronic Disease Prevention and Health Promotion
- Children and Youth with Special Health Care Needs

The variety of content areas in FHW pairs well with the identified priorities. Therefore, each FHW section (including both program and epidemiology staff) leads a priority. Teams are responsible for developing and reporting on the action plan and corresponding measures. This is done in conjunction with the MCH Partner Group, formerly referred to as the MCH Stakeholder Group. This group was formed during the 2015 needs assessment and has met twice a year since then. The group reviews the action plan, measurement progress, and suggests changes for the coming year. They also partner with the MCH/Title V Program to complete the activities outlined in the action plan and work towards the objective for each measure. This is all done under the guidance of the MCH Title V Director who oversees all aspects of program planning.

Performance Reporting

The epidemiology staff for each priority team takes the lead on tracking and reporting on each measure. The MCH Block Grant coordinator facilitates the tracking and visualization of all measures among all priority teams. This enables everyone (MCH/Title V Director, MCH Block Grant coordinator, priority teams, and MCH Partner Group) to view the overall progress made among all priorities.

Assuring Comprehensive, Coordinated, Family-Centered Services

The MCH/Title V Program assures comprehensive and coordinated services in a number of ways. Core services such as WIC, family planning, breast and cervical cancer screening, preventive care for children (EPSDT and immunizations), health promotion, community outreach and the care coordination services of Community Health Access and Navigation in Tennessee (CHANT) and Children's Special Services (CSS) are offered in all county health departments. Rural health departments report to regional office and to the Community Health Services (CHS)

division of the state health department. Metro health departments are independent and accountable to local governments but operate closely via contract with TDH. This organizational structure assures that MCH/Title V and other state and federal funds are administered comprehensively to all counties and that program fidelity is maintained via direct management or contract. Regular communication occurs with the Regional Leadership Team (metro and regional directors and CHS leadership), the Medical Leadership Team (metro and regional health officers), Nursing Leadership Team (metro and regional nursing leads), and the MCH regional directors to assure multi-directional transmission of key information and provide opportunities for sharing of ideas. Other core MCH/Title V services such as newborn screening provide services to the entire state but are centrally located at the state lab to assure excellent communication between the lab and the FHW clinical follow up team for lead, genetic disorders, hearing loss, and congenital heart disease.

The MCH/Title V Program continues to work with families to assure comprehensive coordinated family-centered services by providing education around the importance of receiving services in a patient-centered medical home, and how to partner with providers in the decision-making process. The program provides the “Partnering with your Provider Booklet” statewide for distribution at community events, as well as medical providers for distribution in their practices. Staff has also collaborated with the Bureau of TennCare, the state Medicaid agency, in their Primary Care Transformation Strategy “Patient-Centered Medical Home”. There are currently over 81 participating provider organizations in over 400 locations, covering over 37% of the TennCare population.

For the MCH/Title V CYSHCN program specifically, staff include a dedicated Family/Youth Engagement and Involvement Director whose primary responsibility is to work with Family Voices to ensure opportunities for family and youth training on patient centered medical homes, transition and policy/advocacy. Title V funds have also been used to expand the division contract with Family Voices to provide consultation and training for all programs within FHW. In addition, several programs continue to expand their own advisory and family groups to better inform programs and services. For example, the Perinatal Advisory Committee (PAC) and Genetics Advisory Committee have always been open meetings, and recently family representatives have been sought out to attend those meetings. Likewise, the family planning program has 13 required community and client advisory boards in each rural and metro region. Additional input from reproductive justice groups has also been sought to review program guidelines and messaging around contraception and neonatal abstinence syndrome. Furthermore, in the comprehensive redesign of the CSS, HUGS, and Community Outreach programs into the streamlined Community Health Access and Navigation in Tennessee (CHANT) program has incorporated family engagement in the design process to assure that the needs of children and families are being met appropriately.

Partnerships

The strength of MCH/Title V lies in its partnerships. In addition to the intentional engagement of families and customers listed above, TDH has pursued partnerships of all types using the collective impact framework. The descriptions below are not exhaustive and serve as examples of the myriad of partners valued by the agency and the division.

For example, a multitude of local, state, and national partnerships have emerged statewide regarding the opioid crisis and prevention of neonatal abstinence syndrome. In 2019, this resulted in the second consecutive year to year decline (26% from 2017) in cases reported to the NAS surveillance system since 2013. The NAS subcabinet met regularly from 2013-19 with representatives from TDH, Department of Mental Health and Substance Abuse (TDMHSA), Department of Education (DOE), Department of Children's Services (DCS), TennCare, Department of Human Services (DHS) and several others to review NAS surveillance data and research and to plan interventions together. TDH has partnered with the PAC, regional perinatal centers, rural hospitals, Tennessee Hospital Association and the Tennessee Initiative for Perinatal Quality Care (TIPQC) to share best practice and information

regarding treatment of drug exposed mothers and infants. In addition, TDH has partnered with local drug coalitions, law enforcement, multiple state agencies and insurance companies to fund and promote medication take back sites in all 95 counties. The response to the opioid epidemic has been complex and growing, involving legislative action, law enforcement, regulation education, prevention messaging, and treatment.

Infant mortality reduction efforts have likewise relied extensively on partnerships. For example, DOE, DCS, EMS entities, the medical community, and the judicial system have been critical to maintaining the Child Fatality Review. Local review teams in all judicial districts serve on a volunteer basis and are essential to determining cause of death for infants and children. This data guides the priorities for the upcoming years, and the local review teams serve as bodies to dissemination information to local communities as well. Given the lack of improvement in the infant mortality rate in the state, the infant mortality strategic plan was revised during 2019 with the assistance of numerous partners including Tennessee Chapter of the American Academy of Pediatrics (TNAAP), TIPQC, the PAC, academic partners such as Vanderbilt University and Children's Hospital, the Children's Hospital Alliance of Tennessee, the Tennessee Breastfeeding Coalition, federally qualified health centers, MCH directors statewide, and community advocacy groups.

Obesity is likewise a complex problem requiring a multi-dimensional approach and many partnerships. DOE and the Office of Coordinated School health partner in both data collection and programming for schools across the state. Obesity has also been a priority for the Governor's Children's Cabinet and the state agencies represented. Recognizing the importance of the built environment and culture change for obesity prevention, TDH has partnered with the Department of Environment and Conservation to promote state parks via the Park Rx and rewards program, the promotion of youth activity clubs, and training state park restaurants to become Responsible Epicurean Agricultural Leadership (REAL) food certified. TDH also coordinates with Governor's Foundation for Health and Wellness to promote Healthier Community designation and Healthier Tennessee business initiatives. Academic partners such as Middle Tennessee State University, East Tennessee State University, and Vanderbilt have also been critical for data analysis and program implementation across the state for efforts in both obesity reduction and tobacco prevention. The Department of Human Services has been instrumental in training childcare facilities and assuring the inclusion of the seven Gold Sneaker policies regarding physical activity, nutrition, and tobacco were included in the star rating system for centers.

Leveraging of Federal and Non-Federal Funds

Aligning Title V funds within the Division of Family Health and Wellness allows for planning across programs to address population health priorities by leveraging both federal and state funds. This occurs for all priority areas. For example, reducing and mitigating the effect of ACEs is a priority area for Tennessee Title V since the most recent needs assessment, and activity around this topic has escalated dramatically over the last 5 years in all areas of the state. Title V state and federal funds have been used to support data collection and dissemination, workforce training of thousands of health department staff, and facilitation of multiple partnership meetings across the state. Assuring supportive infrastructure for families is essential to preventing ACEs, and FHW has an active role in this via WIC food security (federal), family planning (federal Title X, reimbursement, and state and federal MCH), investment in the built environment (state Project Diabetes and additional dedicated built environment funds). Positive youth development is promoted via federal rape prevention education funding, state and federal adolescent pregnancy prevention funding, and state funding for youth tobacco prevention councils in 64 counties. Specific programs in FHW also address social determinants of health, enhance parenting skills, and improve community linkages. These include state Healthy Start and federal MIECHV evidence-based home visiting programs and the care coordination program, Community Health Access and Navigation in Tennessee (CHANT). TDH also participates in several inter-agency and community partnerships targeting ACEs including the Children's Cabinet's "no wrong door" Single Team

Single Plan approach to service coordination, the Three Branches Institute, the Young Child Wellness Council, and the Early Success Coalition via federally funded Project LAUNCH.

III.A.2. How Federal Title V Funds Complement State-Supported MCH Efforts

MCH/Title V federal funds are essential to meet state and local needs in a manner that is intentional, flexible, and accountable. States are held accountable for planning and progress in priority areas and must report how both state and federal funds are spent. A needs assessment occurs every five years and is updated annually by review of available data and input of partners. Similarly, the action plan to address the needs with available state and federal resources and a wide range of partners is revised annually. Tennessee has consistently met both maintenance of effort and state funding match requirements of the federal MCH/Title V block grant, ensuring that both funding sources are utilized for MCH needs. The flexibility of the block grant is particularly critical to meet emerging needs when obtaining needed funding from annual appropriation cycles can be significantly delayed. An example from recent years includes leveraging MCH funds to remove the burden of shipping costs associated with the collection of specimens for confirmatory hemoglobinopathy, trait and parent testing. The tertiary center responsible for all hemoglobinopathy confirmatory testing is now able to provide prepaid shipping labels for the shipping of specimens to practices, health departments, etc. to facilitate timely diagnosis of hemoglobinopathy disease and trait cases referred by the newborn screening program.

III.A.3. MCH Success Story

Tennessee regularly experiences natural disasters including tornados, floods, and wildfires. To support families of children and youth with special health care needs (CYSHCN) Tennessee's MCH /Title V CYSHCN) program created Emergency Toolkits to provide families with tools they would need to navigate an emergency. The toolkits are composed of adult and youth masks, hand sanitizer, a first aid kit, flashlight, document holder, resource card, and fillable checklist. All the items are secured in a backpack light enough for youth or adults to carry. A total of 11,000 toolkits were ordered and 5,100 have been distributed. The program is distributing the toolkits through region and metro health departments, Family Voices of Tennessee, local parks, recreation centers, and daycares. The program plans to collaborate with Evidence Based Home Visiting, schools, and hospitals to distribute the remaining toolkits.

This initiative is made possible by a combination of MCH/Title V funds.

III.B. Overview of the State

Demographics, Geography, Economy, and Urbanization

Tennessee spans approximately 500 miles east to west, 110 miles north to south, and is bordered by 8 other states. The state, comprised of 95 counties, is geographically, politically, and constitutionally divided into three Grand Divisions: East, Middle, and West. East Tennessee, comprised of 35 counties, is characterized by mountains and rugged terrain. This region contains Knoxville and Chattanooga (the 3rd and 4th largest cities in the state) as well as the "Tri-Cities" of Bristol, Johnson City, and Kingsport located in the extreme northeastern most part of the state near the boarders to Virginia and North Carolina. Middle Tennessee consists of 39 counties, has the largest land area, and is characterized by rolling hills and fertile stream valleys. Middle Tennessee is the least densely populated of the three Grand Divisions, yet houses the state's capitol and largest city. West Tennessee, bordered by the Mississippi River on the west and the Tennessee River on the east, contains 21 counties. This region has the smallest land area and is the least populous of the three Grand Divisions, yet contains the second most populous city in the state – Memphis. Outside greater Memphis, the region is mostly agricultural.

Tennessee's population is estimated to be 6.9 million. Compared to the United States, Tennessee is less racially and ethnically diverse with a smaller foreign born and non-native English-speaking population. The state has slightly higher rates of homeownership and health insurance coverage. However, the state sees slightly worse rates of high school graduates, employment, and poverty. The tables below compare Tennessee to the US as a whole on many different factors.[1]

Race	Tennessee (%)	United States (%)
White alone	72.2	61.6
Black alone	15.8	12.4
Two or more races	6.0	10.2
Asian alone	2.0	6.0
Some other race alone	3.6	8.4
American Indian and Alaska Native alone	0.4	1.1
Native Hawaiian and Other Pacific Islander alone	0.1	0.2

Ethnicity	Tennessee (%)	United States (%)
Hispanic	6.9	18.7
Non-Hispanic	93.1	81.3

Nativity and Language	Tennessee (%)	United States (%)
Foreign born	5.3	13.6
Language other than English spoken at home	7.5	21.6

Socioeconomic Factors	Tennessee (%)	United States (%)
High school graduates or higher	89.8	89.4
Employment rate	57.7	58.6
Homeownership rate	67.5	65.4
Poverty rate among children under 18	18.1	16.9
Without Health Coverage	10	8.6

Distressed counties rank among the 10 percent most economically distressed counties in the nation. Each year, the Appalachian Regional Commission (ARC) prepares an index of county economic status for every county in the United States. Economic status designations are identified through a composite measure of each county's three-year average unemployment rate, per capita market income, and poverty rate. Based on these indicators, each county is then categorized as distressed, at-risk, transitional, competitive or attainment. As of state FY 2023, there were 10 distressed, and 32 at-risk counties in Tennessee, representing an increase of 1 distressed and 2 at-risk counties from state FY 2022[2].

Population Characteristics

In Tennessee, there are approximately 1.3 million women of reproductive age (15-44), comprising 20% of the state's total population in 2021. In 2021, there were 81,709 births to Tennessee residents, translating to a general fertility rate (GFR) of 59.7 per 1000 women aged 15-44. There are an estimated 334,628 Tennessee children aged 0-17 with special health care needs, approximately 22% of the population. Through efforts to advance emergency preparedness, Tennessee used AMCHP's "Public Health Emergency Preparedness and Response Checklist for Maternal and Infant Health" to calculate estimates of the number of pregnant people (S2-A2), as well as infants and children <5 years statewide, by region, and by county. Using the Centers for Disease Control and Prevention's "Estimating the Number of Pregnant Women in a Geographic Area: A Reproductive Health Tool," there are an estimated 62,532 pregnant people in Tennessee at a given point in time, with county ranges between 31 – 10,288. There are 81,188 infants in Tennessee, with county ranges between 47 – 12,674. There are 407,366 children under 5 years in Tennessee, with county ranges between 218 –
64,464. A map of population estimates by county for pregnant people, children > 1 year, and children > 5 years can be found in the Supporting Documents section.

Health Status of Tennessee's MCH Population

After two reporting cycles without assessing the overall health ranking of states due to the ongoing challenges related to the COVID-19 pandemic, a special edition of the 2022 Annual Report for America's Health Rankings welcomed their return. Seeing no change from 2019, Tennessee continued to rank 44th in the nation for overall health. Historically Tennessee has ranked in the bottom ten states for this overall measure[3]. Unfortunately, the state ranks poorly on several key MCH, chronic disease, and social determinants of health indicators. From 2021 to 2022, rankings for the following indicators remained unchanged or declined:

- Adverse Childhood Experiences (44th)
- Child poverty (41st)
- Drug deaths (45th)
- E-cigarette use (46th)
- Fruit and vegetable consumption (30th)
- Infant child care cost (33rd)

- Mental distress (46th)
- Multiple chronic conditions (46th)
- Physical distress (46th)
- Physical inactivity (43rd)
- Smoking (47h)Teen births (44th)
- Violent crime (48th)
- Well woman visit (32nd)

However, the state noted improvements in the rankings of several key MCH, chronic disease, and social determinants of health indicators, including:

- Childhood immunizations (33rd)
- Food insecurity (35th)
- High-speed Internet (40th)
- Low birthweight (36th)
- Obesity (31st)
- Premature death (44th)
- Preventable hospitalizations (33rd)

Additionally, the state continued to rank in the top ten for one of the MCH, chronic disease, and social determinants of health indicators:

- High school graduation (6th)

Similarly, this is the first time since 2019 that the Health of Women and Children Report, a sub-report of America's Health Rankings Report, included the overall health rankings of states. Tennessee's overall ranking slightly improved from 2019 (41st) to 2022 (40th). The overall health ranking of women in Tennessee improved in 2022, jumping up 3 slots to 43rd, and the ranking of children moved down two slots to 37th place[4]. Strengths that were noted, included the low prevalence of asthma among children, a high prevalence of developmental screenings, and a high prevalence of cervical cancer screening. A high prevalence of multiple chronic conditions among women, a high prevalence of adverse childhood experiences (ACEs), and a high prevalence of household smoking were identified as challenges.

The 2022 report also highlighted a:

- 39% reduction in the rate of neonatal abstinence syndrome diagnoses at hospital birth between 2016 to 2019,
- 35% increase in the rate of drug related deaths among women ages 20-44 between 2015-2017 and 2018-2020
- 34% increase in the percent of women ages 18-44 reporting frequent mental distress between 2015-2016 and 2019-2020

State Health Agency Roles, Responsibilities, and Priorities

Tennessee's MCH initiatives are administered by the Tennessee Department of Health (TDH), the cabinet-level public health agency. The mission of TDH is to protect, promote, and improve the health and prosperity of people in

Tennessee. The Department has a strategic plan that focuses on prevention and access to health and healthcare services. TDH's new strategic plan development process in currently underway. The existing plan for the Department prioritizes these four prevention initiatives: tobacco use, youth obesity, substance misuse, and adverse childhood experiences (ACEs).

Within TDH, the MCH/Title V Program is administered by the Division of Family Health and Wellness (FHW). This Division manages the Department's portfolio of programs and initiatives related to Maternal and Child Health, Chronic Disease Prevention and Health Promotion, and Supplemental Nutrition. FHW is responsible for the programmatic implementation of core public health services within local health departments (i.e., family planning, breast and cervical cancer screening, Children's Special Services, WIC) in addition to health promotion activities (tobacco prevention, lead prevention and case follow up, etc.) as well as management of programs external to the department such as Evidence Based Home Visiting and expanding systems capacity for priorities spanning from perinatal care to diabetes prevention programs.

Public health efforts in Tennessee have long been focused on the MCH population. All the current TDH priorities relate to the MCH population, and TDH is committed to improving the health and well-being of the MCH population across the life course.

State Systems of Care for Underserved and Vulnerable Populations

As of June 2022, Tennessee has 15 Critical Access Hospitals designated to preserve access to local primary and emergency health services. These hospitals are located in rural counties with less healthy populations that demonstrate higher rates of obesity, diabetes, preventable hospitalizations, cardiovascular deaths and cancer deaths as compared to state and national benchmarks. Additionally, these hospitals are located in rural counties with fewer physicians and with a higher proportion of patients who live in poverty and a higher Medicaid population. They have 25 beds or less and are more than 35 miles from the next nearest hospital.

As of November 2022, 92 of Tennessee's 95 counties are federally designated as either whole or partial-county Health Professional Shortage Areas (HPSAs) for Primary Care (based on either the low-income population or geography). This is down from 94 counties in June 2022. Ninety-three of the state's 95 counties are designated as federal Dental HPSAs and all 95 counties are designated as federal Mental Health HPSAs. Sixty-one of the state's 95 counties are designated as either whole or partial-county Medically Underserved Areas (MUA). TDH facilitates state funding for Federally Qualified Health Centers as well as Faith and Charitable Care Centers has strong relationships with both the Tennessee Primary Care Association (FQHCs) and Tennessee Charitable Care Network (faith-based clinics) which has facilitated grants and population health planning among the entities.

The distribution of primary care providers varies across the state. A map with health resource shortage areas for obstetrics and pediatrics can be found in the Supporting Documents section. As of January 2023, TDH Division of Health Licensure and Regulation[5]:

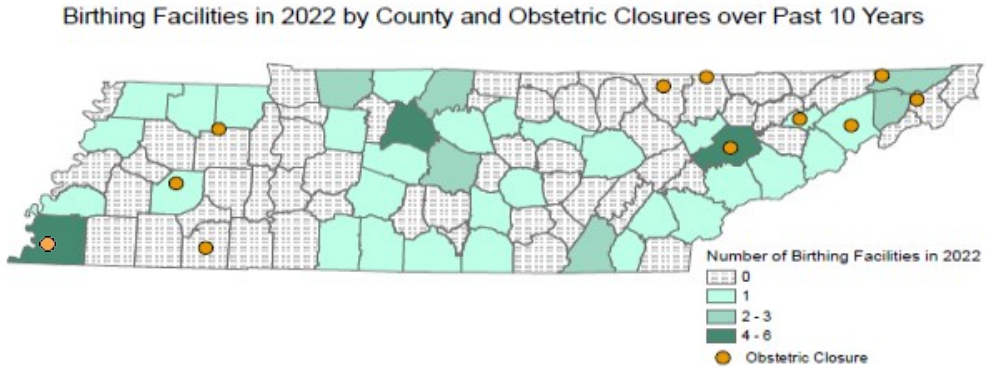
Specialty	Actively Licensed Physicians
Obstetrics and Gynecology	740
Family Medicine/General Practice	1843
Pediatrics (includes subspecialities and Med/Peds	1524

The most pressing primary care workforce shortages in Tennessee are in the field of obstetrics. According to FY22 Female Population of Childbearing Age to Obstetric Provider Ratio Table, among the 95 Tennessee counties, twenty-nine (30.5%) have no obstetric providers, three have patient: obstetric provider ratios greater than 128,777:1,

nine have patient: obstetric provider ratios greater than 10,526:1, and 25 have ratios greater than 5,117:1.

With no closures in FY2021, Tennessee maintained a total of 58 birthing facilities and two birth centers in FY2022. This is, however, down from 68 in 2016.[6] In 2018, 60 Tennessee birth facilities participated in the Center for Disease Control and Prevention's Levels of Care Assessment tool. For maternal care, there were 5 facilities (8%) assessed as < Level I, 27 (45%) as Level I, 19 (32%) as Level II, 2 (3%) as Level III, and 7 (12%) as Level 4. TDH coordinates the Tennessee Regional Perinatal Centers, which contain five regional centers throughout out the state to assure statewide infrastructure to provide high-risk obstetric and infant care through direct clinical care and consultation (available 24/7), education for community hospitals and providers, and technical assistance to state agencies. In FY2022, 106,931 obstetrical consultations (outpatient), 3,750 NICU follow-up clinic visits, 342 neonatal transports were performed by perinatal center staff and 8,535.3 hours of education were provided throughout the state.

Since 2012, there have been 11 obstetric closures, including three full hospital closures and seven obstetric facility closures (Figure 1); of these eleven closures, seven have occurred in rural counties. Of Tennessee counties, 57 (60%) do not have a birthing facility.



TDH works closely with TennCare, the state's Medicaid agency. TennCare provides health care for approximately 1.3 million Tennesseans and operates with an annual budget of approximately $12 billion. TennCare members are primarily low-income pregnant women, children and individuals who are elderly or have a disability. TennCare covers approximately 20 percent of the state's population, 50 percent of the state's births, and 50 percent of the state's children. TennCare is a critical and valuable partner in serving Tennessee's MCH population. [10] More description of this agency and the partnership between the agencies is found in the description of the Health Care Delivery System in the State Action Plan Narrative Overview.

Children's Special Services (CSS, Tennessee's state MCH/Title V CYSHCN program) is a critical gap-filling program supported by federal and state MCH funds. It serves as both a payor of last resort for Children and Youth with Special Health Care Needs as well as a care coordination entity for these families. Founded in 1919, CSS is governed by state code. While CSS is core to CYSHCN services in Tennessee, CYSHCN priorities for this vulnerable population expand beyond the program to include broad family and stakeholder engagement, particularly in the areas of pediatric to adult transition and patient-centered medical home, as determined by the state needs assessment. CYSHCN staff have also coordinated some efforts at behavioral health integration, though this has largely taken place within healthcare delivery facilities, particularly FQHCs and safety net mental health centers.

State Statutes and Other Regulations Impacting MCH/Title V

Numerous state laws and regulations impact the operation of MCH/Title V program services in Tennessee. Many of the laws provide TDH authority to operate programs such as Family Planning, CSS, evidence-based home visiting, fetal infant mortality review (FIMR), child fatality review (CFR), maternal mortality review, or teen pregnancy prevention. Child fatality review and, more recently, maternal mortality review legislation provides funding and legal

authority to enhance data gathering to inform action.

Some state laws mandate specific activities or services related to the MCH population. For example, laws mandate that infants receive screening for metabolic/genetic conditions, critical congenital heart disease, and congenital hearing loss. Others mandate coverage for services such as hearing screening or hearing aids.

Other laws provide basic protections for the MCH population. These include Tennessee's child passenger restraint law (which was the first such law passed in the nation), as well as laws that require prophylactic eye antibiotics for infants, prohibit female genital mutilation, require schools to test for lead in water, and prohibit smoking in most public places.

Several laws establish committees that advise TDH on specific programs or services. These include the Children's Special Services Advisory Committee (services for children and youth with special health care needs), Perinatal Advisory Committee (perinatal regionalization), and the Genetics Advisory Committee (newborn screening and follow-up).

In addition to laws passed by the General Assembly, many programs and services related to the MCH population operate under rules and regulations promulgated by the TDH and approved by the Attorney General, Secretary of State, and Government Operations Committee of the General Assembly. Often these rules contain more detailed information on program operations than the law that established a particular program or service. Examples include rules related to newborn screening, operation of the CSS program, and operation of the child safety fund (funding from child safety seat violations used to fund the purchase of additional child safety seats for distribution in local communities).

Several new MCH-related laws were passed during the 2023 legislative session:

Tennessee State Employee Leave

Public Chapter 216 (SB276/HB324) grants eligible state employees absence from work with pay for up to 6 weeks due to the birth of a child or placement of a child with the employee for adoption. Employees must give thirty-days' notice to the appropriate appointing authority, but if the employee learns of the birth or adoption less than thirty (30) days in advance, the employee can give notice as soon as reasonably possible. In addition, this public chapter requires that leave used by an eligible employee pursuant to this section must not be charged to sick, annual, or other leave the employee may have accumulated. Effective as of July 1, 2023.

Local Education Agencies Employee Leave

Public Chapter 399 (SB1458/HB0983) requires local education agencies (LEAs) to provide licensed employees 6 paid workweeks for the birth, or stillbirth, of the employee's child or employee's adoption of a newly placed minor child. This public chapter defines eligible employees as teachers, principals, supervisors, or other individuals required by law to hold a valid license of qualification for employment in a local education agency and who has been employed full-time with a local education agency for at least twelve (12) consecutive months. Effective as of May 11, 2023.

Deaf Mentor Programs

Public Chapter 327 (SB0004/HB0435) establishes a deaf mentor and parent advisor program to assist families in implementing bilingual and bicultural home-based programming for young children who are deaf, hard of hearing, or

deaf-blind at the Tennessee Schools for the Deaf (Knoxville and Nashville campuses) and the West Tennessee School for the Deaf. The program must focus on preventing language deprivation or gaps through insufficient language access; providing a positive impact on a child's social and emotional development through a deaf role model and on a parent's emotional journey of having a deaf, hard of hearing, or deaf-blind child through a parent advisor; and ensuring that children who are deaf have equal access to learning opportunities at home and in the community. Effective as of July 1, 2023.

Coverage for Breast Examinations

Public Chapter 379 (SB0365/HB0355) requires that a health benefit plan that provides coverage for a screening mammogram must provide coverage for diagnostic imaging and supplemental breast screening without imposing a cost-sharing requirement on the patient. Effective 90 days after May 11, 2023.

Doula Services Advisory Committee

Public Chapter 424 (SB0394/HB0734) creates the doula services advisory committee, administratively attached to the Tennessee Department of Health, to advise the Department by establishing core competencies and standards for the provision of doula services in Tennessee and to recommend reimbursement rates and a fee schedule for TennCare (Medicaid) reimbursement for doula services. The committee consists of five (5) members, one of which is the Commissioner of the Department of Health or his designee with relative experience requirements. Effective as of July 1, 2023.

Newborn Screening

The Governor's FY2024 budget includes a state RN4 position in newborn screening for establishing a new long-term follow-up program. The State lab was awarded a new grant from HRSA for $345,000 ($200,000 to the Lab to add Mucopolysaccharidosis Type II (MPS II) to the newborn screening panel and $145,000 to follow-up for its long-term follow-up program).

Public Chapter 431 (SB698/HB1358) requests the Tennessee Department of Health to officially request the United States Department of Health and Human Services to add newborn screening for metachromatic leukodystrophy to the recommended uniform screening panel. Metachromatic leukodystrophy (MLD) is a rare genetic brain disease that can be tested for during newborn screenings via a simple pin prick of the newborn's foot in order to test the blood. Effective as of May 11, 2023.

Mature Minor Doctrine Clarification Act

Public Chapter 477 (SB1111/HB1380) created the "Mature Minor Doctrine Clarification Act" which prohibits a healthcare provider from providing a vaccination to a minor unless the healthcare provider first receives informed consent from a parent or legal guardian of the minor. The healthcare provider must document receipt of and include in the minor's medical record proof of prior parental or guardian informed consent. Moreover, this law requires written consent from a parent or legal guardian before providing a minor with a COVID-19 vaccine. Finally, this law prohibits an employee or agent of the state to provide, request, or facilitate the vaccination of a minor child in state custody except upon written request to, and court order from, the appropriate court; if a parent or legal guardian of the minor has provided prior written informed consent to the vaccination; or if the parental rights of each of the minor's parents or legal guardians have been terminated by a court, and all opportunities for appeal have been exhausted Effective as of May 17, 2023.

"Sex" Definition

Public Chapter 486 (SB1440/HB239) defines "sex" in code to mean a person's immutable biological sex as determined by anatomy and genetics existing at the time of birth and evidence of a person's biological sex. "Evidence of a person's biological sex" includes, but is not limited to, a government-issued identification document that accurately reflects a person's sex listed on the person's original birth certificate. Effective as of July 1, 2023.

A list of MCH-related laws is included in the Supporting Documents section.

Several new MCH-related policies were proposed or updated in 2023:

TennCare

In April 2022, Tennessee announced an extension of TennCare, which lengthens postpartum coverage from 60 days to one year. TennCare has also included added dental benefits for pregnant and postpartum women. Through the Governor's 2024 budget, the TennCare pregnancy category eligibility income threshold will increase to 250% federal poverty level (FPL) from 197% and the parental eligibility income threshold will increase to 100% FPL. Additionally, TennCare introduced outpatient lactation consultant coverage which went live on June 1, 2023. Lastly, TennCare has proposed covering the cost of 100 diapers per month for children under the age of two years. Starting in April 2023, TennCare members began going through state and federally-required redetermination processes to determine continued eligibility for TennCare. The Division of Family Health and Wellness continues to support the TennCare redetermination process through collaboration with Presumptive Eligibility and Community Health Access and Navigation in Tennessee (CHANT) program.

Lactation Support Services

Lactation support services will now be covered as medically necessary for TennCare (Medicaid) enrollees. Lactation support services include education, counseling, and assistance for common breastfeeding issues, along with skilled, evidence-based care for more complex lactation issues. This new TennCare policy was effective June 1, 2023.

Free Baby Diapers

TennCare proposed using shared savings dollars to pay for diapers for Medicaid recipients for two (2) years. Implementation of this proposal depends on approval from Centers for Medicare and Medicaid (CMS) and would be a first-of-its-kind Medicaid service. This benefit could become available as early as January 2024.

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[1] Data Profiles. Tennessee 2021. https://data.census.gov/cedsci/profile?g=0400000US47
[2] State of Tennessee. Transparent Tennessee. 2023. https://www.tn.gov/transparenttn/state-financial-overview/open-ecd/openecd/tnecd-performance-metrics/openecd-long-term-objectives-quick-stats/distressed-counties.html
[3] America' Health Rankings. 2022. https://assets.americashealthrankings.org/app/uploads/allstatesummaries-ahr22.pdf
[4] America's Health Rankings. 2022 Health of Women and Children Report. https://assets.americashealthrankings.org/app/uploads/allstatesums-hwc2022.pdf
[5] Tennessee Department of Health. Division of Health Disparities. Healthcare Provider Census.
[6] Tennessee Department of Health, Division of Vital Records and Statistics, Office of Health Statistics. Birth Statistical System

III.C. Needs Assessment
FY 2024 Application/FY 2022 Annual Report Update

Population Characteristics

For population characteristics, see Overview of the State.

COVID-19 Data Collection and Analyses

Surveillance of Emerging Threats to Mothers and Babies
Tennessee continued to receive CDC's Surveillance for Emerging Threats to Mothers and Babies Network (SET-NET) and partner with the MCH/Title V Program to inform data to action efforts for COVID-19. SET-NET data dashboards and infographics are published in English and Spanish to the Pregnancy and Infant Care COVID-19 Website, quarterly. Data are regularly presented to the Perinatal Advisory Committee and the Health Disparities Task Force. In 2022, Tennessee partnered with SET-NET to inform six-month outcomes of infants born to people with SARS-CoV-2 in pregnancy in a Pediatrics article, breastmilk feeding among people with SARS-CoV-2 infection in pregnancy in a American Journal of Public Health article, preterm birth among pregnant people with SARS-CoV-2 infection in a Journal of Perinatology article, neonatal SARS-CoV-2 infection in a Pediatric and Perinatal Epidemiology article, and recurrent SARS-CoV-2 infection after COVID-19 illness in pregnancy in Emerging Infectious Diseases. In addition, Tennessee partnered with SET-NET to inform Mpox cases among cisgender women and pregnant persons in a MMWR article.

Pediatric COVID-19, Multisystem Inflammatory Syndrome, and COVID-19 Vaccines
Pediatric COVID-19 cases as well as MIS-C cases are publicly available as data dashboards on the Special Populations Website, monthly. To support the equitable rollout of the pediatric COVID-19 vaccine, maps of pediatric vaccine (5-11) uptake rates by county were published monthly and shared with community partners. Due to changing COVID-19 burdens over the past year, community partnership meetings have transitioned to quarterly.

New Data Collection & Analysis Efforts

Neonatal Abstinence Syndrome Surveillance Data
The TDH Neonatal Abstinence Syndrome (NAS) Surveillance Program was established in 2013 when NAS first became a reportable condition. The 2013 to 2020 annual reports featured data on NAS cases reported by hospitals. Due to the COVID-19 pandemic and its effect on hospital reporting, data from new sources (hospital discharge data and birth statistical data) were analyzed and incorporated into the 2021 data report. The inclusion of additional data sources provides a more comprehensive picture of NAS in Tennessee.

- The number and rate of NAS cases reported to TDH directly increased each year from 2013 to 2017 until a decrease was observed in 2018 and again in 2019. In 2020 there were 835 reported cases (10.2 per 1,000) and 734 in 2021 (9.1 per 1,000).
- Analysis of hospital discharge data (using the ICD-10 diagnostic code most often used in NAS cases, P96.1), however, showed an increase from 793 in 2020 to 830 in 2021, translating to a rate of 10.2 per 1,000 live births in 2021.
- Geographic variability continues to be observed among reported cases, and the eastern part of the state continues to see the highest rate of reported cases.

Family Planning Telehealth Patient Satisfaction Survey

- Implemented a patient satisfaction survey for the Family Planning Telehealth Program in 2021. Data are collected on an ongoing basis and were analyzed in September 2022. Between November 1, 2021 and

August 31, 2022, there were 606 Family Planning Telehealth encounters and 170 survey responses, for a response rate of 28%. Among respondents,

- The majority (85%) reported Family Planning Telehealth was their first experience with telehealth, with most (80%) reported using audio and visual through their own phone or computer.
- The most common benefits reported among respondents were not having to wait for an in-person appointment (75%) and decreased transportation time.
- Almost all respondents (99%) were given clear instruction on how to obtain their method of choice; among respondents, 61% selected birth control bills.
- The vast majority of respondents (93%) were satisfied with their Family Planning Telehealth visit and 95% would recommend Family Planning Telehealth to friends and family.

Pregnancy Risk Assessment Monitoring System (PRAMS)
Tennessee PRAMS conduced new analyses on stress before or during pregnancy and the impact on both preterm birth and low birth weight outcomes and created a fact sheet, highlighting common stressors included: moving to a new address (37%), a family member sick or in the hospital (26%), arguing more than usual with a partner (24%), and problems paying the bills (21%). Demographic groups experiencing more stress included: non-Hispanic Black women, unmarried women, women who reported depression prior to pregnancy, women aged less than 20 years, and those with Medicaid insurance coverage at delivery. TN did not find that overall stress to be associated with birth outcomes; however, analyses noted non-Hispanic Black women had a higher likelihood of low birthweight and preterm birth regardless of stress experiences.

Tennessee PRAMS also conducted new analyses on postpartum depressive symptoms, creating a fact sheet. In Tennessee, one in six women reported postpartum depressive symptoms during 2016-2019. The strongest factors associated with postpartum depressive symptoms included: depression prior to pregnancy, intimate partner violence, smoking prior to pregnancy, and preterm birth.

National Survey of Children's Health Oversample
Through collaboration with the Division of Health Disparities Elimination, FHW applied for an oversample of Black and Hispanic respondents for the National Survey of Children's Health starting in 2022 for an initial period of two years. The initial results of the oversample should be available in October 2023.

Severe Maternal Morbidity Analyses
TDH received the HRSA Maternal Health Innovation grant award in 2022. One key proposal in the grant was to analyze severe maternal morbidity data. In 2021 – 2022, FHW, in partnership with the TDH Office of Informatics and Analytics, successfully added and linked birth certificate data into the Integrated Data System (IDS), through support of the HRSA Emerging Issues in MCH grant. In 2023, two FHW epidemiologists supporting the Maternal Health Innovation grant were approved for access to the IDS to complete analysis for severe maternal morbidity using linked birth certificate and hospital discharge data.

Tennessee Department of Health Roadshows
The roadshow is an annual event that takes place between January-March of each year. Several Central Office based offices/divisions met with metro health department health promotion staff, as well as select local and regional staff. In 2023, a key component of the road show included local and regional staff to participate in a root cause analysis of various issues in their communities The following were the most common topics to analyze:

- Mental health
- Substance use disorder
- Immunization rates

- Obesity
- Affordable housing
- Public health employee retention

TN Department of Human Resources State Enterprise Exit Survey: Health
Tennessee State Enterprise Exit Survey results for the Tennessee Department of Health was conducted from March 2022 through February 2023. This survey identified workforce-related opportunities to address turnover and improve retention. For Health, there were 427 eligible separations and 80 respondents, with 12 identified as working within Family Health and Wellness. The top reasons for leaving included low pay, lack of supervisory trust, and no room for professional advancement. Survey respondents indicated inadequate onboarding and training, ineffective supervisory and leadership support, and feeling unappreciated and a lack of recognition.

Advisory Councils

There are specific advisory councils required by state law:
- *Traumatic Brain Injury Advisory Council* continues to meet quarterly and has nine members.
- *Genetic Advisory Committee* meets three times a year and has 18 members. Membership includes the directors of the genetics and hemoglobinopathies centers, subspecialists, and a consumer representative.
- *Perinatal Advisory Committee* meets three times a year and has 21 members. Membership includes co-directors of the five regional perinatal centers, other neonatal and obstetric providers, and a consumer representative.

Other work groups or task forces also support MCH/Title V work to engage with a multidisciplinary team of partners. Examples of these groups include:
- Maternal Health Task Force
- Lead Advisory Committee
- Birth Defects
- Hearing Advisory Committee
- Suicide Task Force
- Injury Prevention Coalition
- Health Disparities Task Force

Changes in Health Status and Needs of the State's MCH Population

National Outcome and Performance Measures
There are 9 Outcome and Performance Measures with significant **improvement** in Tennessee since baseline from data reported in the 2023 Federally Available Document:
- Neonatal abstinence syndrome decreased from 16.9 per 1,000 birth hospitalizations in 2015 Q1-3 to 9.6 in 2020 (NOM-11)
- HPV vaccination increased from 48.7% among adolescents 13-17 in 2015 to 75.3% in 2021 (NOM 22.3)
- Tdap vaccination increased from 79.7% among adolescents 13-17 in 2015 to 92% in 2021 (NOM 22.4)
- Meningitis vaccination increased from 76.7% among adolescents 13-17 in 2015 to 88% in 2021 (NOM-22.5)
- Teen births decreased from 30.6 per 1,000 among 5–19-year-olds in 2015 to 21.5 per 1,000 in 2021 (NOM-23)
- Low-risk cesarean delivery decreased from 27.6% in 2015 to 26.6% in 2021 (NPM-2)
- Developmental screening among children, ages 9 through 35 months increased from 26% in 2016 to 44% in

2020-2021 (NPM-6)
- Transition among non-CYSHCN aged 12-17 increased from 12.1% in 2016 to 19.8% in 2020-2021 (NPM-12)
- Smoking in pregnancy decreased from 14.3% in 2015 to 9.1% in 2021 (NPM-14.1)

There are 8 Title V Outcome and Performance Measures with significant **worsening** since baseline:
- Early term birth increased from 26.6% in 2015 to 29.7% in 2021 (NOM-6)
- Tooth decay/cavities among children 1-17 years increased from 8.9% in 2016 to 12.8% in 2020-2021.
- Adolescent mortality among 10–19-year-olds increased from 39.8 per 100,000 in 2015 to 54.9 per 100,000 in 2021 (NOM-16.1)
- Adolescent motor vehicle death among 15–19-year-olds increased from 15.1 per 100,000 in 2014-2016 to 20.6 in 2019-202 (NOM 16.2)
- Flu vaccination among children 6 months to 17 years decreased from 61.8% in 2015-16 to 54.2% in 2021-2022 (NOM-22.2)
- Child injury hospitalization among children 0 through 9 years increased from 109.3 per 100,000 in 2015 Q1-3 to 130.3 in 2020 (NPM-7.1)
- Adolescent injury hospitalization among children 10 through 19 years increased from 191.2 per 100,000 in 2015 Q1-3 to 233.1 in 2020 (NPM-7.2)
- Adolescent physical activity among children 12 through 17 years decreased from 22.4% in 2016 to 13.8% in 2020-2021 (NPM-8.2)

Overall
The 2023 Vanderbilt Child Health poll aimed to gather insights from Tennessee parents regarding their children. A representative sample of 1,034 parents in the state was surveyed in Fall 2022. The top five concerns parents had for kids were: 1) education and school quality, 2) child mental health & suicide, 3) bullying & cyber bullying, 4) school gun violence, and 5) drug and alcohol use. Parents' report of their child's overall wellbeing has declined from 87.1% in 2019 to 81.6% in 2022.

Emerging Issues

Food Insecurity
Over 40% of Tennessee families reported low or very low food security in 2022, an almost 10% increase from 2021, according to the Vanderbilt Child Health Poll. Over 70% of families have changed their spending habits due to an increase in food prices, with almost 30% of those parents skipping meals.

Child Homicide Deaths
In 2020, 67 Tennessee children died of homicide, a rate of 4.4 deaths per 100,000 children; the highest number and rate over the past five years. Tennessee consistently is above the national rate of 2.2 per 100,000 from 2019. Firearms were used in 75% of homicide deaths among children. Additionally, child homicide deaths persist in disproportionately impacting Black children.

Mental Health
Since the COVID-19 pandemic, mental health continues to be critical issue in Tennessee. According to the Vanderbilt Child Health poll, ~1 in 3 parents reported a diagnosis of attention deficit hyperactivity disorder, anxiety or depression in 2022, a 7% increase since 2019. The Tennessee Youth Risk Behavior Survey 2021 results support this, as they found 42.5% of high school students felt sad or helpless almost every day for greater or equal to 2 weeks in a row so that they stopped doing some usual activities; this represents a significant increase from 2015 (28.0%). Additionally in 2021, 22.8% of high school students seriously considered suicide, which represents an

increasing trend since 2011, when the percentage was 14.7%.

Pregnancy-Associated Mortality
In 2020, 98 women in Tennessee died during pregnancy or within the year after pregnancy. There were 46 pregnancy-related deaths, which translates to a pregnancy-related mortality ratio of 58.5 deaths per 100,000 live births, a 51% increase from 2017 – 2019. In 2020, more than 3 out of 4 deaths were deemed to be preventable, and discrimination contributed to 1 in 3 pregnancy-related deaths.

Drug Overdoses and Opioid Prescriptions
From the Tennessee Hospital Discharge Data System, in 2021, there were 7,110 nonfatal overdoses in the state among women aged 15-44 years (defined through the International Classification of Diseases, Version 10, Clinical Modification Codes T36-50), an increase of 3.6% from 2020. The burden of opioid prescriptions for pain is also high: in 2021, 240,418 women aged 15-44 filled at least one prescription for opioids for pain. The overall number of prescriptions for pain filled by women of reproductive age in 2021 was 517,2286.

Home Births
In 2022 provisional birth data, 1.5% of all births were intended home births (N=1285), a significant increase from 2017, when intended home births comprised 0.9% of all births. There were 543 more intended home births in 2022 compared to 2017. Looking across the state, public health regions varied from 0.7% to 4.3% in births that were intended home births. To ensure timely access to newborn screening for these home births, TDH added functionality to the Tennessee Newborn Screening Performance Indicators Dashboard to track screening for home births.

Electronic Vapor Products
In 2021 Tennessee Youth Risk Behavior Survey, 39.5% of high school students reported ever using an electronic vapor product, including e-cigarettes, vapes, vape pens, e-cigars, e-hookahs, hookah pens and mods (such as JUUL, SMOKE, Suorin, Vuse, and blu). While there is no change in trend after controlling for sex, race/ethnicity, and grade since 2015 (41.6%), the outcomes associated with electronic vapor products in adolescents remains a high concern.

Changes in Title V Program Capacity or MCH Systems of Care

FindHelpNowTN
TDH led the development of a real-time treatment locator to help those with substance use disorders, www.findhelpnowtn.org. A formal launch occurred in March 2023. This site allows people to search for treatment providers based on location and insurance payor. Additionally, an option to select pregnancy/postpartum specific treatment resources was built into the platform. As of May 2023, FindHelpNowTN has 263 facilities onboarded to its referral website of treatment facilities, both inpatient and outpatient. Of those, 189 have indicated they serve pregnant/postpartum populations. Of those, 110 serve both Adolescents and Adults, 2 serve Adolescents only, and 77 serve Adults only. Out of the 189 facilities that served pregnant individuals, only 27 (14%) were located in rural areas. There was at least one facility in 65 out of 95 counties in Tennessee. Of the thirty counties without any facility, nine are considered rural, according to the HRSA Federal Office of Rural Health Policy.

Family Medicine Student Loan Repayment
New legislation passed in 2023 creates a family medicine student loan repayment program that will incentivize resident doctors to provide medical health services in Tennessee health resource shortage areas following completion of their training. The legislation authorizes the Department of Health to award family medicine student loan repayment grants to qualifying physicians of up to $40,000 per year for a maximum of five years. The

Department of Health is authorized to use private donations, grants, federal and state funds to maintain the loan program.

Women's Reproductive Health Services
In March of 2023, the Office of Population Affairs made the decision to no longer grant Title X funds to Tennessee. This removed over $7 million of federal funds from Tennessee's Family Planning annual budget. With Governor approval and support, an additional $7.5 million dollars of state funds were allocated for family planning services to fill the gap. The Tennessee Family Planning Program plans to continue to expand access to contraception, reproductive health screenings and preventive care for individuals and families in Tennessee.

New Grants to Promote MCH in Tennessee

Tennessee Strong Families
The Governor's FY 2024 budget contained significant maternal and child health investments as part of a multi-pronged approach to health counteract factors contributing to infant and maternal mortality. The budget contains $2.3 million for perinatal telehealth infrastructure, $2 million in investments in regional perinatal centers and EMS training, $1.3 million for expansion of Community Health Access and Navigation in Tennessee to allow for expanded work with care coordinators and increased outreach using community health workers, and $1 million for a doula pilot program (non-recurring).

Maternal Health Innovation
In 2022, Tennessee received the HRSA Maternal Health Innovation grant, a 5-year $5 million award, to fund community and clinical programs to improve maternal health outcomes in the state. Over the grant cycle, Tennessee will

- Enhance the maternal health task force in Tennessee and develop a maternal health strategic plan
- Strengthen capacities for data collection and analysis to implement maternal health clinical quality improvement projects
- Launch new maternal health service delivery activities (e.g., improving access to services during pregnancy and the postpartum period; equipping the maternal and child health workforce with new training and resources).

Evidence-Based Home Visiting
Tennessee received an additional $25 million in recurring state funding to continue evidence-based home visiting expansion in 2023. Tennessee now offers home visiting programming in each of the 95 counties in the state and will continue expansion efforts to reach eligible families. Additionally, TN EBHV programs received an additional $2.2 million in American Rescue Plan Act (ARPA) funding in 2022. In FY2022, Tennessee was awarded $2 million as a Maternal, Infant, and Early Childhood Innovation Award to develop TN Early Connect (TEC), a collaborative referral mechanism between the Tennessee Department of Human Services, TennCare, and TDH for earlier identification and enrollment of pregnant women into evidence-based home visiting.

Tennessee Pediatric Mental Health Care Access Program
Children's behavioral health needs continue to grow, further exacerbated by COVID-19, and the number of mental health providers is insufficient to meet the needs. In 2021, Tennessee received this grant to promote behavioral health integration into pediatric primary care by supporting pediatric mental health care telehealth access programs. In 2023, Tennessee received $300,00 in additional expansion funds to support this work.

Improving State-level Preparedness through Measuring Improvements to the System of Care
In 2022, TDH's partner, Tennessee Chapter of Family Voices, received this small project grant to improve the state system of care for preparedness by centering the needs of families, including youth, on emergency preparedness

communication, education, and resource needs, with specific focus on those with technological dependence. Additional funds ($17,000) to continue this work were awarded through July 2023.

Workforce Development
CDC provided Tennessee funds through the Cooperative Agreement for Emergency Response: Public Health Crisis Response to establish, expand, and sustain a public health workforce. Part of the funds have been used to provide software training (SAS, ArcPro, and Tableau). FHW epidemiologists have participated in these trainings.

State Title V Partnerships and Collaborations

Tennessee's MCH/Title V program continues to partner with numerous entities at the federal, state, and local level to serve the legislatively defined MCH populations and to expand the capacity and reach of the state MCH/Title V and CYSHCN programs. Existing partnerships are highlighted within the annual report.

One highlight of collaboration this past year has been our Presumptive Eligibility Program collaborating with Federally Qualified Health Centers to meet pregnant women at the place of their prenatal care to ensure they receive timely insurance coverage. The PE Program has been working with both East Tennessee State University's Johnson City Community Clinic and Memphis Health Center to establish contracts for Presumptive Eligibility to be located within these Federally Qualified Health Centers.

Another collaboration has been the American Academy of Pediatrics "*Improving State-level Preparedness through Measuring Improvements to the System of Care"* project, which features collaboration between TN Chapter of Family Voices, parents of children with technological dependence, TDH's Emergency Preparedness and Response Office and Division of Family Health and Wellness, Children's Emergency Care Alliance of Tennessee (CECATN), and Le Bonheur and Vanderbilt University Medical Center's Children's hospitals. The goal of the project is to improve parent satisfaction and knowledge of emergency preparedness at discharge from children's hospitals, specifically for families navigating technology-dependent medical devices, such as ventilators or oxygen concentrators. Two pilot sites are working to test devices and tools, including DC power adaptors, electronic medical id cards, and a discharge checklist and conversation guide to improve parent satisfaction and emergency preparedness and readiness.

The MCH/Title V CYSHSN program has a staff member responsible for Family/Youth Engagement and Involvement whose primary responsibility is to work with Family Voices to ensure opportunities for family and youth training on patient centered medical homes, transition, and policy/advocacy. In addition, several programs continue to expand their own advisory and family groups to better inform programs and services, including recruitment of regular parent participants in the Perinatal Advisory Committee and Genetics Advisory Committee. Likewise, the Community Health Access and Navigation in Tennessee (CHANT) program has incorporated family engagement to assure that the needs of children and families are being met appropriately.

Efforts to Operationalize Needs Assessment Process and Findings

Organizational Structure for Title V Priorities
Each priority has a priority lead and an epidemiology lead. The priority lead is a Section Chief within FHW with subject matter expertise in the designated priority. The epidemiology lead is an epidemiologist within FHW who works closely with programmatic data to inform the activities around the priority. There are also supporting internal staff with expertise in each subject area. Each team continued to work closely with the new FHW Physician Liaison for Health Equity to advance health equity specific strategies in the action plan to decrease disparities identified in

each priority area.

Partner Meetings
External partner meetings were held for each priority in October 2022 and April 2023 led by the priority and epidemiology leads. The focus of the presentations was to engage partners to reflect on the current progress and offer input to proposed action plans for Year 4, including ways in which partner organizations may support the strategies and activities planned for the upcoming block grant year. Meetings were held virtually by priority area to increase participation and engagement statewide.

FHW Staff Capacity Building for Programmatic Alignment and Management
Overall, 2022 – 2023 FHW Program Managers meetings prioritized management topics as well as aligning programmatic work to de-silo efforts across the Division. For management topics, staff had further opportunities on how to work as an intergenerational team, how to be great manager, and best practices for writing and reviewing a job plan. The two main programmatic areas focused on this past year were adolescent and child health initiatives. Program and epidemiology staff presented on their programmatic areas and then were paired with different programs within the Division with the goal of finding alignment and opportunities for program amplification. Additionally, staff met to discuss ways to better incorporate those with lived experience as well as men/fathers/parenting partners in FHW programs.

Strategic Plan Development
The Division of Family Health and Wellness initiated a strategic planning process in 2023 with guidance from the TDH Office of Strategic Initiatives. During the May 2023 Division meeting, input on mission and vision was collected. The next stages of the process will involve input on values and strategic areas of focus during the summer of 2023, identifying key goals for each focus area in Fall 2023, and finalizing a plan by December 2023.

Tennessee Health Disparities Task Force
The Health Disparities Task Force was formed in April 2020 to engage leaders from non-profit and faith-based organizations, academia, health care and local and state government agencies. Members meet weekly and collaboratively generate responsive solutions and policies to reduce disparities and to ensure equitable access to health care, resources and services. Staff from FHW Programs often present and seek community feedback during these meetings. This year, presentations have focused on: MPX updates, sickle cell disease, Ryan White Program, TN Vitality Toolkit, TN State Parks, Lead, radon awareness, lead, Alzheimer's disease.

Changes in Organizational Structure and Leadership

Division and Programmatic Transitions
Opioid Response Coordination Office
In January 2023, the Opioid Response Coordination Office was moved to the Division of Family Health and Wellness. The Office has twelve staff, including two Public Health Administrator 2 positions, 2 epidemiologists, 2 nurse practitioners, and six program and support staff and oversees approximately $6.4 million.

Key Staff Transitions
FHW transitions over the past year have filled key roles as well as presented new gaps to fill to address key emerging issues:

FHW
- Title V Program: Dr. Tobi Amosun, Title V Director, was promoted to Deputy Commissioner of Population

Health in May 2023 and Title V Director position is vacant. Ashley Moore, MPH, has been in block grant coordinator role since May 2022 and was promoted in April 2023. The coordinator role was filled by Elizabeth King, MS in May 2023.

- Health Equity: Dr. Hector Carrasco started as the Family Health and Wellness Health Equity Director in Fall 2022.
- Reproductive and Women's Health: Dr. Hannah Dudney, MD, FACOG, started as the Women's Health Physician Consultant, a new position within FHW in Fall 2022.
- Deputy Director of Child Health and Injury Prevention: Carla Snodgrass retired as Deputy Director in December 2022 and was filled by Rachel Heitmann in January 2023. Rachel Heitmann resigned in June 2023 and the position is currently vacant.
- Section Chief of Injury Prevention: When Rachel Heitmann was promoted to Deputy Director in January 2023, the Section Chief of Injury Prevention was vacant. Ashley Moore, MPH was promoted to Section Chief of Injury Prevention in April 2023.
- MCH Emergency Preparedness: Yolanda Vaughn started in March 2022 and is responsible for efforts aimed at prioritizing systems of care gaps for emergency preparedness, a new position. Ms. Vaughn stepped down in March 2023 and the position is vacant.
- SSDI: Hanna Santuro started in September 2021 and transitioned to coordinate the SSDI grant and other data modernization initiatives in Fall 2022. Ms. Santuro stepped down in March 2023 and the position is vacant.
- CDC/CSTE Applied Epidemiology Fellowship: Emily Lumley, MPH, concluded their CSTE Fellowship in April 2023. Carissa Rodriguez, MPH, matched with the Tennessee Department of Health FHW and starts her Fellowship in August 2023.
- Technical Training: Amira Wooten provides coordination for SAS, Tableau, and ArcPro courses available to TDH employees.
- Fellows and Interns: FHW seeks to strengthen the MCH pipeline through connecting with interns and fellows early in their careers.
    - TDH Public Health Executive Fellows: FHW matched with two fellows starting in June 2022 to increase communications capacity and support MCH/Title V implementation efforts. Tiara Kemp, concluded her Fellowship in June 2023. Octavia Forrest will continue her Fellowship for an additional year.
    - Title V Interns: TDH matched with 2 Title V interns to support family planning and reproductive health efforts in Title V priorities and emerging issues in Summer 2023.*Tennessee Department of Health*
- Commissioner: Lisa Piercey stepped down as Commissioner in May 2022. Governor Lee appointed Morgan McDonald, former Tennessee MCH/Title V Director, to the interim position starting in June 2022. Governor Lee appointed Dr. Ralph Alvarado as Commissioner, starting in January 2023.
- Deputy Commissioner of Population Health: Dr. Tobi Amosun was promoted to Deputy Commissioner of Population Health in May 2023, leaving the Assistant Commissioner of Family Health and Wellness vacant.

Click on the links below to view the previous years' needs assessment narrative content:

2023 Application/2021 Annual Report – Needs Assessment Update

2022 Application/2020 Annual Report – Needs Assessment Update

2021 Application/2019 Annual Report – Needs Assessment Summary

III.D. Financial Narrative

	2020		2021	
	Budgeted	Expended	Budgeted	Expended
Federal Allocation	$12,750,000	$9,115,297	$11,800,000	$9,820,712
State Funds	$14,000,000	$10,802,455	$14,000,000	$11,460,032
Local Funds	$0	$0	$0	$0
Other Funds	$0	$0	$0	$0
Program Funds	$2,100,000	$2,331,656	$1,900,000	$1,704,676
SubTotal	$28,850,000	$22,249,408	$27,700,000	$22,985,420
Other Federal Funds	$159,282,034	$115,089,592	$139,734,625	$113,033,455
Total	$188,132,034	$137,339,000	$167,434,625	$136,018,875

	2022		2023	
	Budgeted	Expended	Budgeted	Expended
Federal Allocation	$11,800,000	$9,240,412	$11,800,000	
State Funds	$12,100,000	$11,609,659	$11,500,000	
Local Funds	$0	$0	$0	
Other Funds	$0	$0	$0	
Program Funds	$1,200,000	$1,959,439	$1,800,000	
SubTotal	$25,100,000	$22,809,510	$25,100,000	
Other Federal Funds	$153,475,117	$143,600,957	$171,947,087	
Total	$178,575,117	$166,410,467	$197,047,087	

	2024	
	Budgeted	Expended
Federal Allocation	$11,800,000	
State Funds	$11,700,000	
Local Funds	$0	
Other Funds	$0	
Program Funds	$2,000,000	
SubTotal	$25,500,000	
Other Federal Funds	$161,977,795	
Total	$187,477,795	

III.D.1. Expenditures

The Division of Administrative Services within TDH is responsible for all fiscal management. Division staff uses Edison which is the State of Tennessee's Enterprise Resource Planning (ERP) system for budgeting, collection of revenues and distribution of expenditures. Computer generated cumulative expenditure and receipt plan analysis, transaction listings and spending/receipt plans are available statewide on-line for all MCH programs. This information can be accessed by both central and regional office staff. Financial audits are the responsibility of the Comptroller's Office. All departments, offices and programs within state government are subject to frequent audits. Contract agencies are also audited frequently. MCH program staff provide site visits and program monitoring at contract agencies in order to assure compliance with the contract's scope of services. Fiscal monitoring of contract agencies is the responsibility of TDH's Internal Audit staff.

Federal MCH/Title V, state and other federal funds were expended in FY 2022 to support MCH programming throughout the state. The outcomes discussed in the state action plan and other sections of the application could not have been achieved without the federal MCH/Title V funding. The MCH/Title V FY 2022 expenditures, both federal and non-federal, align with Tennessee’s MCH priority needs resulting from the 2020 Needs Assessment, as identified in Form 9.

The expenditures for FY 2022 are presented in Form 2, Form 3a and Form 3b of the application. The current indirect cost rate agreement can be found in the Supporting Documents section.

The Tennessee MCH/Title V Program met all legislative requirements regarding the spending of grant funds. This includes a maintenance of effort in the amount of $13,125,024 set by the state in 1989. This figure is based on the amount the state was spending on maternal and child health programs in 1989. The state is required to continue to contribute at least this amount to the program in order to receive this federal grant. The state is on track to meet the maintenance of effort amount for the FY 2022 award. The state is also required to match the federal dollars. For every four federal dollars the state receives, the state must contribute three dollars. As of April 2023, Tennessee has used $9,240,412 of the FY 2022 federal allocation, therefore the required match on that amount is $6,930,309. Tennessee has expended $13,569,098 of state MCH funds, which meets the required state match. As specified in Section 504(d) and Section 505(a)(3), by the end of the fiscal year September 30, 2023 at least 30% of federal grant funds will be spent on preventive and primary care for children, 30% on children with special health care needs, and no more than 10% on administrative cost. Tennessee will meet these thresholds for the FY 2022 award (Form 2, Annual Report Expended, Lines 1A-C):

- Line 1A, Preventive and Primary Care for Children – $3,286,819 (35.5%)
- Line 1B, Children with Special Health Care Needs – $2,522,004 (27.2%)
- Line 1C, Administrative Costs – $738,039 (8%)

In Form 2, Annual Report Expended, Lines 1, 1B, 1C, and 9 were flagged as greater or less than 10% of the Annual Report Budgeted due to the following reason:

- The federal allocation is unknown when the budget is originally submitted with the application. Therefore, the budget is created based on an estimate. In FY2021 the estimate was higher than the actual allocation. Due to this many budget categories had to be adjusted, including this line item.

As illustrated in Form 2, Annual Report Expended, Line 9, improvements to maternal and child health were also supported by a variety of other federal funds in FY 2022, including Women, Infants and Children (WIC), State Systems Development Initiative (SSDI), Maternal, Infant, and Childhood Home Visiting Program (MIECHV), Title X

Family Planning, and Tobacco Control Programs, among others.

Each year, the Tennessee MCH/Title V Program completes an assessment of expenditures by the types of individuals served as reflected in Form 3a. In Form 3a, Annual Report Expended, MCH/Title V FY 2022 Block Grant federal expenditures totaled $10,620,00 excluding administrative costs, and included services provided to Pregnant Women ($47,200), Infants <1 year ($777,600), Children 1 through 21 years ($3,868,100), CSHCN ($3,658,000) and All Others ($2,269,100). MCH/Title V FY 2022 state expenditures totaled $11,700,000 excluding administrative costs, and included services provided Pregnant Women ($198,900), Infants < 1 year ($947,700), Children 1 through 21 years ($2,866,500), CSHCN ($3,170,700), and All Others ($4,516,200).

FY 2022 total expenditures for the federal-state MCH/Title V Block Grant Partnership was $22,320,000 excluding administrative costs. The FY 2022 federal award and state match MCH/Title V Program dollars supported programs across the health domains as illustrated below. Some of the programs span multiple domains, and therefore are repeated among the domains.

Federal Funds				
Women's/Maternal	Perinatal/Infant	Child Health	Adolescent Health	CSHCN
Breast and Cervical Cancer Screening Program Family Planning Program Primary Care Women's Health Services (local health department)	Child Fatality Review and Prevention Program Genetics/Sickle Cell Centers Newborn Screening Follow Up Primary Care Child Health Services (local health department)	Child Fatality Review and Prevention Program Lead Poisoning Prevention Program Primary Care Child Health Services (local health department)	Child Fatality Review and Prevention Program Family Planning Program Lead Poisoning Prevention Program Primary Care Child Health Services (local health department)	Children's Special Services (Tennessee's MCH/Title V CSHCN Program) Genetics/Sickle Cell Centers Lead Poisoning Prevention Program Newborn Screening Follow Up

State Match Funds				
Women's/Maternal	Perinatal/Infant	Child Health	Adolescent Health	CSHCN
Breast and Cervical Cancer Screening Program Family Planning Program Primary Care Women's Health Services (local health department)	Child Fatality Review and Prevention Program Genetics/ Sickle Cell Centers Newborn Hearing Follow Up Primary Care Child Health Services (local health department)	Child Fatality Review and Prevention Program Child Health and Development Program Healthy Start (Tennessee program, not federal Healthy Start) Lead Poisoning Prevention Program Primary Care Child Health Services (local health department)	Child Fatality Review and Prevention Program Adolescent Pregnancy Prevention Lead Poisoning Prevention Program Primary Care Child Health Services (local health department)	Children's Special Services (Tennessee's MCH/Title V CSHCN Program) Genetics/ Sickle Cell Centers Lead Poisoning Prevention Program Newborn Hearing Follow Up

MCH/Title V expenditures are also assessed types of services. In Form 3b, Annual Report Expended, FY 2022 MCH/Title V Block Grant federal expenditures totaled $11,800,000 for MCH services. MCH/Title V FY 2022 federal expenditures for Direct Services totaled $944,000, which included Preventive and Primary Care Services for all Pregnant Women, Mothers, and Infants Up to Age One ($302,080), Preventive and Primary Care Services for Children ($37,760), and Services for CSHCN ($604,160). MCH/Title V FY 2022 federal expenditures for Enabling Services totaled $8,024,000 and Public Health and Systems totaled $2,832,000. State expenditures for FY 2022 totaled $11,700,000 for MCH services. MCH/Title V FY 2022 state expenditures for Direct Services totaled $702,000, which included Preventive and Primary Care Services for all Pregnant Women, Mothers, and Infants Up to Age One ($7,020), Preventive and Primary Care Services for Children ($7,020) and Services for CSHCN ($659,880). FY 2022 state expenditures for Enabling Services totaled $7,750,000 and Public Health Services and Systems totaled $3,248,000.

Estimates of the reach of the MCH/Title V program in terms of population served is listed on Form 5a and 5b. As reflected in Form 5a, the estimated total count of individuals served via Direct, and Enabling Services was 755,275. As reported on Form 5b, Tennessee's MCH/Title V program has the widest reach among Pregnant Women (100%), Infants < 1 Year of Age (99.7%), and Others (100%) categories through the work of the perinatal centers, newborn screening, and suicide prevention efforts respectively. Approximately 63% of all Children 1 through 21 Years of Age were reached and 86% of CSHCN (86%). Tennessee's MCH/Title V program continues to build partnerships and explore ways to heighten awareness of programs to expand its reach.

Tennessee supports MCH/Title V regulations to use MCH Block Grant funds as a payer of last resort. It also should be noted that none of the services paid by the grant were reimbursable by other agencies (namely Medicaid) or providers. This is assured through eligibility determination processes for programs such as CSS as well as regular communication with TennCare regarding the reimbursement services of the MCOs. Any unobligated balance noted in the report will be used to support program activities through the end of FY2023.

III.D.2. Budget

Tennessee state law requires all departments to submit a complete financial plan and base budget request for the ensuing fiscal year that outlines proposed expenditures for the administration, operation, and maintenance of programs. Budget guidelines are prepared annually by the Department of Finance and Administration. The Department's Budget Management Office, in cooperation with all programs, is responsible for the preparation of the budget documents. The base budget request becomes law after it is approved by the General Assembly and signed by the Governor. A work program budget is then developed for each program.

TDH uses a cost allocation system for the local health departments. Costs are allocated using two specific methods, the direct cost allocation method and the resource based relative value method (RBRVS). The direct cost allocation method is used when costs can be directly allocated to one or more programs. Any cost can be directly allocated when coded correctly on the appropriate accounting document. Direct cost allocation is used primarily for costs that arise from administrative support staff in the Department's central and regional offices and for selected contract expenditures. The RBRVS cost allocation method is used to allocate costs which cannot be directly allocated to one or more programs. These costs arise from the delivery of direct health or patient care services in local health departments. RBRVS adds weighted encounter activities using relative value units and allocates costs based on the percentage of activity for each program. RBRVS is a federally approved cost allocation method for TDH. RBRVS is linked at the service delivery level to AS 400 computers at the regional and central offices.

Program encounter data are entered at local health departments for direct patient care services using Current Procedural Terminology (CPT) codes and program codes. Relative value units assigned to each procedure code allow a proportionate amount of cost to be associated with each procedure. RBRVS provides quarterly cost allocation reports to central and regional office staff. These reports are used to monitor and manage expenditures, determine cost for services provided, and allocate resources as needed.

The Title V FY 2024 budget estimates, both federal and non-federal, align with Tennessee's ten MCH priority needs resulting from the 2020 Needs Assessment, as identified in Form 9. Staff funded through the Title V/MCH Block Grant will coordinate efforts to address the priority needs through the strategies below.

1. **Increase family planning** – Evidence-based or informed activities will be implemented to (a) Increase rural access to family planning services through telehealth; (b) Increase access to women's health services by addressing and eliminating barriers to care through client navigation; and (c) Establish connections with diverse community leaders to build partner relationships and strengthen long-standing collaborations.

2. **Decrease pregnancy-associated mortality** – Evidence-based or informed activities will be implemented to (a) Increase surveillance of maternal deaths; (b) Increase evidence-based education at hospitals on topics identified by the Maternal Mortality Review Committee (MMRC); and (c) Increase access to services through community agency involvement to improve maternal health outcomes.

3. **Increase breastfeeding** Evidence-based or informed activities will be implemented to (a) Cultivate a diverse community of professional lactation support through education and training opportunities across health care disciplines; and (b) Re-enforce lactation policies that positively influence breastfeeding practices in the workplace.

4. **Decrease infant mortality** – Evidence-based or informed activities will be implemented to (a) Reduce infant sleep-related deaths, with outreach focused on regions with the highest infant mortality rates, the highest

reported number of sleep-related deaths, and the widest racial disparity among sleep-related deaths (West TN Region, Shelby County, Davidson County East Region and Mid-Cumberland Region); (b) Improve perinatal health outcomes through quality improvement and regionalization efforts; and (c) Reduce infant deaths due to prematurity and low birthweight by reducing infant exposure to tobacco.

5. **Decrease overweight and obesity among children** – Evidence-based or informed activities will be implemented to (a) Support school-based efforts to promote physical activity and good nutrition; (b) Promote nutrition and physical activity professional development opportunities for Early Childhood Education (ECE) and licensed childcare centers; (c) Partner with healthcare providers to promote physical activity counseling during well-child visits; and (d) Promote policy, systems, and environmental change (PSE) strategies to increase physical activity and promote access to healthy food and beverages.

6. **Increase prevention and mitigation of Adverse Childhood Experiences (ACEs)** – Evidence-based or informed activities will be implemented to (a) Increase knowledge of ACEs, PCEs (Positive Childhood Experiences), and practice of Trauma Informed Care (TIC); (b) Ensure a strong start for children by promoting a healthy parent-child attachment through implementation of home visiting programs throughout the 95 counties of Tennessee; (c) Intervene to lessen immediate and long-term harms by linking families to health and social services; and (d) Increase access of non-English speaking families to infant and early child health and development education and services.

7. **Decrease tobacco and e-cigarette use** – Evidence-based or informed activities will be implemented to (a) Engage youth to increase tobacco prevention and anti-tobacco engagement strategies to shift social norms around tobacco use in communities; and (b) Engage partner organizations and utilize social media to increase the reach and impact of tobacco cessation programs among youth.

8. **Increase medical homes among children with special health care needs** - Evidence-based or informed activities will be implemented to (a) Create a shared vision for integrating and improving CYSHCN system of care; (b) Inform and educate families and providers to promote systems change; (c) Identify and disseminate resources on medical home best practices in Tennessee to inform and educate families and providers on care-coordination benefits; and (d) Inform CHANT families on the benefits of a medical home and care coordination.

9. **Improve transition from pediatric to adult care among children with special health care needs** – Evidence-based or informed activities will be implemented to (a) Inform, educate and link YSHCN, families and providers to available transition resources and services, and how to access those services; and (b) Promote successful transition through educational opportunities and self-advocacy training.

10. **Improve mental health** – Evidence-based or informed activities will be implemented to (a) Use evidence-based screening tools to screen pregnant and postpartum women for perinatal mood and anxiety disorders and refer to mental health resources, if indicated; (b) Support Le Bonheur Children's Hospital Emergency Department's (ED) implementation of universal suicide risk screening in the ED; and (c) Launch the Pediatric Mental Health Care Access Program in West TN.

Form 2, Form 3a and Form 3b have been completed in accordance with the guidance. Tennessee is requesting a federal funding amount for FY 2024 that is level with the FY 2023 request, $11,800,000. The current indirect cost rate agreement can be found in the Supporting Documents section.

Tennessee's planned budget for FY 2024 is in full compliance with the federally mandated 30% - 30% - 10% threshold requirements as specified in Section 504(d) and Section 505(a)(3), (Form 2, Application Budgeted, Lines 1A-C):

- Line 1A, Preventive and Primary Care for Children – $3,868,100 (32.7%)
- Line 1B, Children with Special Health Care Needs – $3,658,000 (31%)
- Line 1C, Title V Administrative Costs – $1,180,000 (10%)

The maintenance of effort requirement for maternal and child health programs in Tennessee was established in 1989. This requirement specifies that the state must, at minimum, continue to fund Tennessee MCH program efforts using state funds at the level it was in 1989. At that time Tennessee calculated its maintenance of effort to be $13,125,024.28. This calculation was based on an analysis of 15 months of expenditures for the program, adjusted for differences between the state and federal fiscal years, as well as adjustments for accrued liabilities. The state is also required to match every four federal dollars received with three state dollars. Tennessee fully utilizes Maternal and Child Health Block Grant funding within the 24-month allowable timeframe and meets all targeted maintenance and match requirements set forth in the grant regulations (Form 2, Application Budgeted, Line 7). TDH monitors its maintenance of effort and state match annually and has met requirements in all reporting years.

The Tennessee MCH/Title V Program is not proposing major changes to the reported budget for this year. Apart from Form 2, Application Budgeted, Line 9, which includes other federal funds that were recently added to the MCH/Title V Program portfolio, the budget will mirror that of the FY 2023 budget. Federal dollars are used to extend the reach of state dollars and support some of the efforts and outcomes discussed in the state action plan and elsewhere in the application. The MCH/Title V director leverages other federal dollars from the programs listed below which are under the director's control.

Other Federal Grants

- Birth Defects and Developmental Disabilities
- Commodity Supplemental Food Program (CSFP)
- Comprehensive Suicide Prevention
- Diabetes Prevention and Control*
- Early Hearing Detection and Intervention (EHDI) State Programs
- Injury Prevention and Control
- Maternal, Infant and Early Childhood Home Visiting Program (MIECHV) American Rescue Plan (ARP)
- Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV) Formula Grants
- Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV) Innovation Grant
- National Breast and Cervical Cancer Early Detection Program (NBCCEDP)
- National Cardiovascular Health Program*
- National Comprehensive Cancer Control Program (NCCCP)
- Partnership Programs to Reduce Maternal Deaths due to Violence
- Preventing Maternal Deaths: Supporting Maternal Mortality Review Committees
- Pediatric Mental Health Care Access Program
- Preventive Health and Health Services Block Grant
- Rape Prevention and Education (RPE) Program
- State and Local Healthy Homes and Childhood Lead Poisoning Prevention Programs (CLPPPs)
- State Maternal Health Innovation Program*
- State Systems Development Initiative (SSDI)
- Sudden Death in the Young (SDY) Registry
- The Loving Support Peer Counseling Program (Breastfeeding)

- Tobacco Control Programs
- Traumatic Brain Injury
- WIC Technology for a Better WIC Experience*
- WISEWOMAN Program*
- Women, Infants, and Children (WIC)

*Denote grants added since last year.

All programs of the TDH must be free from discrimination. TDH's non-discrimination policy is as follows: Title VI of the Civil Rights Act of 1964 requires that federally assisted programs be free of discrimination. In accordance with Federal civil rights laws, the Tennessee Department of Health does not tolerate harassment and discrimination based upon any protected class including race, color, national origin, sex, age, disability or reprisal or retaliation, in any program or activity conducted or funded by TDH. Such harassment and discrimination constitute misconduct which undermines the integrity of the employment relationship and is subject to disciplinary action, up to and including dismissal.

In Form 3a, Application Budgeted, the FY 2024 federal Title V Block Grant planned budget totals $10,620,000 excluding administrative costs, and the planned state budget totals $11,700,000 excluding administrative costs. The FY 2024 planned budget for the federal-state Title V Block Grant Partnership is $22,320,000 excluding administrative costs.

Budgeted amounts outlined in Form 3b support Tennessee's intention to spend the majority of its anticipated FY 2024 Title V federal and state funding on enabling and public health services and systems. Tennessee supports Title V regulations to use MCH Block Grant funds as a payer of last resort. The amounts budgeted for direct services are estimates of costs not reimbursable by other agencies (namely Medicaid) or providers.

III.E. Five-Year State Action Plan

III.E.1. Five-Year State Action Plan Table

State: Tennessee

Please click the links below to download a PDF of the Entry View or Legal Size Paper View of the State Action Plan Table.

State Action Plan Table - Entry View

State Action Plan Table - Legal Size Paper View

III.E.2. State Action Plan Narrative Overview

III.E.2.a. State Title V Program Purpose and Design

Partnership and Leadership Roles in Accomplishing Goals and Mission

The purpose of the MCH/Title V Program is to broadly support and improve the health of the maternal and child population in Tennessee. This is done by identifying priority needs and working with partners to leverage program capacity to meet those needs, which ultimately improves health outcomes for women, infants, children, and families across the state. Tennessee's MCH/Title V Program works to convene MCH partners at least twice a year, so that all programs serving these populations can be strategically aligned statewide. This strategic alignment is imperative for utilizing resources efficiently and assuring the greatest impact.

Framework and Approach to Addressing the MCH Priorities

The MCH Block grant works within a life course framework, operationalized by the population health domains below. Through these domains the MCH population is subdivided into time periods that represent important stages in life. States are required to choose at least one priority within each domain, ensuring that priorities are spread across the life course.

Population Health Domains:

- Women/Maternal Health
- Perinatal/Infant Health
- Child Health
- Adolescent Health
- Children with Special Health Care Needs (CYSHCN)
- Cross-cutting/Life Course

Utilizing information gathered through the comprehensive needs assessment, the Tennessee Title V/MCH program identifies priority areas and then assembles teams to work on each area. Each FHW senior leader, and their program/epidemiology staff, are entrusted to lead at least one priority. The teams are responsible for developing action plans, implementing the plans, reporting on progress, and measuring success. All of this is done in collaboration with MCH partners at multiple touchpoints throughout the year.

III.E.2.b. State MCH Capacity to Advance Effective Public Health Systems

III.E.2.b.i. MCH Workforce Development

State-level program planning is provided by individual program directors, in consultation with Tennessee's MCH/Title V Director and senior leadership within FHW. FHW program directors gather every other month for the Program Collaborative meeting, during which staff outline program goals and objectives, map program activities to state priority measures, discuss opportunities for linkages between MCH programs, and work through challenges common across programs. The Program Collaborative meetings also provides an opportunity for ongoing professional development. These meetings provide an opportunity to familiarize staff with Departmental operations, procedures, and policies. Division wide meetings are also held to bring all FHW staff together to celebrate successes, share key information, grow new skills, and develop strategies for priority areas.

Leadership Training

Each year the state sponsors leadership training programs including Lead TN, Tennessee Government Management Institute, Tennessee Government Executive Institute, Accelerated Leadership Institute, and the TDH Commissioner's Leadership Academy program. These yearlong training programs include day-long and/or week-long summits that cover various leadership competencies. Some programs also include group and one-on-one professional coaching. FHW staff are encouraged to apply for these internal programs, as well as programs external to the state including AMCHP Leadership Lab, CityMatCH City Leaders, and Maternal and Child Health Epidemiology Training program. These are all cohort-based programs with limited capacity; therefore, staff are also encouraged to utilize LinkedIn Learning for asynchronous learning that covers a myriad of topics.

Technical Training

Funded through the CDC Public Health Infrastructure grant, all TDH staff have access to live virtual courses on SAS, ArcGIS, and Tableau (and soon R and SQL). The training on each software programs include a series of classes ranging from beginner to advanced studies. These trainings greatly benefit data analysts by teaching them how to use the software to evaluate and present data, allowing FHW program directors to make data informed decisions.

Development Resources

Since 2016, TDH has partnered with the Public Health Information Access Project through the National Library of Medicine (NLM). This partnership provides TDH staff with full-text access to over 240 peer-reviewed journals (including MCH-related journals). Additionally, a partnership with East Tennessee State University facilitates inter-library loan access to other articles not available through the NLM project. MCH/Title V Program funds are used to support the NLM project. MCH/Title V program staff has been instrumental in creating workforce development opportunities in the use of the public health library and teaching of literature reviews for both FHW and TDH.

Workforce Transitions and Expansion

Over the last year the MCH/Title V Program has worked to expand the workforce where possible. The MCH Block Grant Coordinator position became vacant in April 2023 and was filled in May 2023. The MCH Emergency Preparedness position became vacant in March 2023, and after a few rounds of recruitment, it was filled in July 2023. The team continues to identify ways to function more efficiently and expand capacity accordingly. The team also has two temporary staff members, a CDC/CSTE Applied Epidemiology Fellow and a TDH Public Health Executive Fellow. These temporary staff members will play an important role in supporting the five-year comprehensive needs assessment over the next year.

UNC Workforce Development Center

In 2021, Tennessee applied to work with the University of North Carolina's Workforce Development Center to address challenges in adapting onboarding and trainings in a virtual environment. FHW fielded the Staff Engagement Survey and presented results at a FHW Division meeting in 2022. Results reflected decreased staff engagement and satisfaction in almost all areas. Areas of concern included:

- Decreased value of employee opinion at work (91% in 2021 to 76% in 2022)
- Decreased feelings that supervisor, or someone at work, seems to care about me as a person (98% in 2021 to 85% in 2022)
- Decreased opportunities at work to learn and grow (89% in 2021 to 77% in 2022)
- Qualitative responses indicated increased satisfaction of working from home; however, responses noted management practices have not adapted and there are increased feelings of disconnection.

The FHW Workforce Initiative Committee, a volunteer group within the division, has continued to work with the UNC Workforce Development Center in 2022 and 2023 to operationalize action items to prioritize improvements. Due to the efforts of this committee, communications and onboarding capacity has been increased through new and reclassified state positions. New initiatives include:

- Conversational Capacity: FHW partnered with UNC Workforce Development Center staff to give a division-wide presentation and practice session on conversational capacity to increase staff ability to engage in difficult conversations. Staff were then offered additional training during the Summer of 2023 to practice these skills in two 1-hour sessions. More than 25 staff participated in for additional training.
- Warm 360: FHW Leadership completed a Warm 360 during the 2023 Spring Senior Leadership Team (SLT) Retreat to identify "one important thing your counterpart could do to support others of Senior Leadership more effectively." SLT staff then identified one thing they as individuals could commit to doing that would improve team performance. Division leadership hopes to roll this initiative out to all sections by the end of 2023.
- Teams Troubleshooting: Starting in Spring 2023, the FHW Media team started hosting monthly MS Teams troubleshooting meetings to decrease barriers to using MS Teams and promote and increase virtual engagement and knowledge for FHW staff.
- Onboarding: The Division was able to restructure an administrative assistant position to provide further capacity to assist with Division onboarding.
- First Fridays: In Fall 2022, FHW instituted a monthly 30-minute informal virtual meeting with the MCH/Title V Director and all FHW staff to increase transparency and build trust. Staff are allowed to submit anonymous questions prior to the meeting to be addressed.
- FHW Connections: Starting in April 2023, FHW started FHW Employee Connections to build relationships as most staff still work in a remote environment. During the week, two staff members are highlighted with short biographies, pictures, and a discussion prompt to spark conversation among FHW staff with the goal of forming deeper virtual connections.
- End-of-Year Superlatives: To increase peer recognition, staff made nominations for end-of-year superlatives which were presented at a Division meeting.

III.E.2.b.ii. Family Partnership

FHW recognizes the vital nature of parental involvement throughout our division in program development, implementation, and evaluation. The Division has a longstanding collaborative relationship with Family Voices of Tennessee, beginning with an enhanced effort to integrate parent and youth input in all aspects of MCH and FHW services. Family members have attended and participated in Tennessee's Block Grant Review since 2015 and have attended the AMCHP meeting as a Family Delegate and part of the Tennessee delegation since 2013. In addition to the relationship with Family Voices, the Division is constantly seeking ways to improve efforts to engage families and youth in meaningful ways.

Partnerships with families and program participants are detailed throughout the report.
The following are examples of programs integrating family partnerships by domain:

Women's/Maternal Health

Breast and Cervical Program

The Breast and Cervical program consults with persons with lived experience to assist with program planning and implementation. There are also plans for interviews/focus groups and the development of marketing or educational materials. A task force was formally established in 2022, and includes individuals from the communities the program serves, but plans for the group have been put on hold for the time being.

Family Planning Program

The Family Planning program is required by Title X to have an advisory committee to review informational and education materials available to clinic clients. The advisory board is required to be made up of members that are broadly representative of the population or community being served, including adolescent youth.

Perinatal and Infant Health

Birth Defects Surveillance Program

The Birth Defects program is required (per TCA) to have a representation from a parent of children with a birth defect on the Birth Defects Registry Advisory Committee. These committee meetings focus on prevalence, trends and preventive measures for birth defects and infant mortality. The program is currently working with Family Voices to help identify a new parent who might be interested in this role as the last parent representative did not renew their membership.

Breastfeeding Peer Counselor Program

Breastfeeding Peer Counselors (BFPC) are hired from the WIC population and provide input about the BFPC program and WIC in an ongoing manner through open door policy with Region/Metro BF Coordinators and the State BFPC Program Manager. Their input informs program development and planning efforts. They also comment 3 to 4 times per year in an open forum which includes program evaluation questions.

Newborn Hearing Follow-Up Program

Through the Newborn Hearing Follow-up program grant, TDH contracts with Tennessee Disability Coalition to conduct the Parent Empowerment Access Resources and Support (PEARS) program. One-hundred percent (100%) of babies diagnosed with hearing loss after birth are referred to Family Voices PEARS, which is dedicated to directly supporting families, their infants and toddlers who are identified with any degree of hearing loss by offering them the opportunity to talk to or meet face-to-face with a Parent Guide. Parent Guides are part-time staff members

who have lived experience raising a child with hearing loss. PEARS provides a strong foundation in supporting families without bias regarding communication modes or methods as well as functional understanding of supports and services available to families and their children. The PEARS program coordinator, who is also the parent of a deaf/hard of hearing child, participates in newborn hearing program planning on a monthly basis.

Additionally, 25% of the Newborn Hearing Follow-Up Program Advisory Committee membership is parents. With input from the Committee and PEARS coordinator, the program created an educational pamphlet that is distributed to parents through all of the birthing facilities in Tennessee. The Newborn Hearing Follow-Up Program also hosts a Parent Professional Collaborative and Learning Community where parents and families engage with professionals and other families.

Newborn Screening and Follow-Up Program

The Newborn Screening and Follow-Up program coordinates the Genetics Advisory Committee (GAC) which meets at least three times each year. The GAC meetings focus on the state's newborn screening and follow-up program, and members advise the TDH on program operations and the addition of screening tests to the state's testing panel. The program's nurse educator is in the process of creating a focus group or advisory group comprised of the parents of children with normal and abnormal metabolic genetics screening results, those with hearing loss, critical congenital heart disease, and elevated blood lead levels, etc.

Perinatal Regionalization Program

The Perinatal Advisory Committee (PAC) is composed of Perinatal Center directors, experts in perinatal medicine, hospital administrators, nurses and physicians, and family representation. The Committee provides expert advice and direction to TDH on program operations, in addition to other topics related to overall maternal and infant health.

Child Health

Comprehensive Cancer Control Program (TCCCP)

The TCCCP Program has two family/youth quality improvement initiatives in place to inform program efforts. TCCCP funds Ballad Health to create and grow a multidisciplinary palliative care team to improve the quality of life for children newly diagnosed with cancer through the St. Jude Affiliate Clinic and Niswonger Children's Hospital. This pediatric palliative care team provides critical elements of care for patients nearing the end of life, as well as for their caregivers. Through this grant, Ballad provides data, feedback, and suggestions for the TCCCP program. Additionally, the program funds the Cumberland Pediatric Foundation (CPF) to create and maintain a Quality Improvement Team to increase HPV immunization rates through provider education, patient education, use of immunization registry, provider prompts, reminder/recall, and standing orders. Through this grant, CPF provides data, feedback, and suggestions for the TCCCP program.

Evidence-Based Home Visiting Program

The EBHV program is in the early stages of developing a Parent Advisory Council (PAC). The program has consulted with legal to develop a consent form. Although the position that will lead this initiative is currently vacant, the program has moved forward with recruiting families served by the contracted EBHV Local Implementing Agencies (LIAs) to join the Council. An orientation meeting was held in March to introduce the recruited families to the Home Visiting Leadership Alliance (HVLA) and the Young Child Wellness Council (YCWC). The program aims to have parent representation at both the HVLA and YCWC quarterly meetings to provide feedback and assist in future development of the council. The program hopes to convene the PAC on three occasions before the end of 2023.

Gold Sneaker
Gold Sneakers is currently undergoing a major revamp. A committee comprised of 21 members from various organizations with ties to the daycare/early childhood development community, such as Tennessee Early Childhood Training Alliance (TECTA), local and metro health departments, American Heart Association, Childcare Resource & Referral (CCR&C), Department of Education, and Healthy Kids & Teens, was established to inform the process. The group has convened several times in 2022, and most recently participated in a focus group which centered on collecting information about their vision for the new program. Gold Sneaker is still in the information gathering phase of this effort.

Tennessee Child and Adolescent Psychiatry Education and Support Program (TCAPES)
The TCAPES program has an Advisory Committee. Members of the committee, some of whom are parents or youth advocates, are residents of communities across Tennessee. While the advisory committee does not currently have youth representation, the program hopes to in the future.

WIC / Supplemental Nutrition Program (SNP)
The WIC Program relies on family engagement to advance programmatic efforts in a number of ways.

- The WIC Approved Product List (APL) is routinely updated by adding new items submitted by families through the WIC Shopper app. This results in better shopping experiences by having all eligible foods available for purchase.
- Food packages are updated as needed to ensure the widest variety of foods possible meeting federal regulations are included for each category of participant.
- In the last year, there has been increased input from WIC caregivers about formula availability and formula options related to the formula supply shortages due to COVID and the formula recall.
- TN WIC requests review and feedback from Regional Leadership to accurately capture participant and community needs.
- TN WIC creates policy and guidance documents based on region/local requests from interactions with participants/families. All newly created policies and guidance documents are reviewed by Regional Leadership.

Adolescent Health

Rape Prevention Education (RPE) Program
The RPE program engages community members in prevention of sexual violence in youth by organizing community advisory boards and implementation of programs. The Rape Prevention Education Community Advisory Board meets quarterly to discuss changes to the RPE state action, discuss sexual violence issues in youth, and discuss prevention strategies. The RPE programs are implemented by ten organizations to provide trainings to community members on sexual violence and to collaborate with the community to organize RPE strategies.

Tennessee Stop Tobacco and Revolutionize Our New Generation (TNSTRONG) Program
The TNSTRONG Ambassadors are a group of youth, aged 13-19 years old, who have that have committed to a two-year program that focuses on advocating nicotine prevention and cessation among their communities. This group supports the Tobacco Use, Control and Prevention program to advance their goals in a number of ways. This group:

- Attends a 2-day onboarding training where the students and chaperones/parents are trained on initiatives for nicotine prevention and cessation programs.
- Helps plan and implement the TNSTRONG Summit which brings together approximately 450 youth and chaperones from throughout Tennessee for a statewide tobacco prevention conference.

- Provides peer support by implementing programs within their schools such as Nicotine Free Teams in which team members pledge to be nicotine free. Additionally, they assist Public Health Educators and Prevention Coalitions to provide programs within the schools that focus on nicotine prevention.
- Provides input on marketing and educational materials that are utilized to promote nicotine prevention and cessation, including the development of logos and press releases for the TNSTRONG Summit. Furthermore, they help promote the recruitment of ambassadors for the TNSTRONG program.
- Works with schools, prevention coalitions and health departments to review tobacco free policies to create more universal/comprehensive policies within their schools and communities. To help establish new school policies they present relevant information to school boards and city councils.
- Provides ongoing feedback in relation to improving initiatives for nicotine prevention and cessation programs.

Traumatic Brain Injury (TBI) Program

The TBI program collaborates with TBI survivors, family members, caregivers, and service professionals through many avenues including a governor-appointed TBI Advisory Council, a quinquennial (5 years) TBI Needs Assessment, support groups, and the development of educational materials. The TBI Advisory Council is comprised of five (5) members who are either TBI survivors, family members, and caregivers who aid in advising the TBI Program in developing program policies and procedures and make recommendations to better serve the TBI community. Council members along with the TBI community aid in providing feedback and recommendations via the TBI Needs Assessment and aiding in reviewing educational material before it is shared with the public.

Title V/MCH Block Grant Program

Family Voices of Tennessee (FVTN), community organizations, parents of CYSHCN, other individuals with lived experience, and youth are all active participants in the MCH Block Grant process. In 2019, TDH partnered with FVTN and other sites to host focus groups with families as part of the five-year Title V Needs Assessment. TDH was intentional in providing opportunities for all to participate, there were meetings held during normal working hours and meetings held at night and on the weekend to ensure that youth and family members would be able to participate. FVTN also assisted with other aspects of the block grant development process. For instance, the FVTN Director and former AMCHP Family Scholar and Delegate served alongside the the CYSHCN Director to co-chair the Spring 2019 MCH Stakeholder Meeting breakout for CYSHCN in which key MCH partners provided input on the selection of priority areas and national performance measures for the new 5-year grant cycle. TDH continues to have diverse representation, support and participation from families in the MCH Stakeholder Meetings, now referred to as MCH Partner Meetings, that are organized twice yearly for the 10 priority areas identified through the Needs Assessment.

Children and Youth with Special Health Care Needs (CYSHCN)/ Children Special Services (CSS)

Family and youth engagement is at the heart of all programmatic activities that are implemented in Tennessee's Title V CSHCN Program, Children Special Services (CSS). The CSS Advisory Committee includes representation from a parent of a special needs child/consumer member from the Middle Tennessee region. Committee meetings focus on issues related to the management and operation of the CSS program (Tennessee's Title V CSHCN Program) as well as broader issues impacting all CYSHCN. Family members also participate in the annual statewide professional development training for Children's Special Services staff. Parents spoke about how Tennessee's Title V CSHCN program had impacted their family and provided care coordinators and administrative staff with guidance on how to engage families and partner in the care of their child with special health care needs. This was particularly impactful for the 100th anniversary of the CSS program.

During FY18, the CYSHCN staff developed a state-wide youth workgroup comprised of multiple state departments and local agencies that target youth with special health care needs ranging from 14-24 years of age. Agencies in

this work group include Departments of Health, Education, Mental Health and Substance Abuse Services, Intellectual and Developmental Disabilities, Human Services (Vocational Rehabilitation), Labor (Workforce and Development), Children's Services, TN Voices and Family Voices of Tennessee. This group initially met to strategize around recruitment and retention of members, however realized that many of them have the same requirements and concerns regarding youth engagement and involvement. The workgroup meets monthly in which agency and youth council updates, new projects and effective advice are shared.

Tennessee's Title V CSHCN staff, with support from Tennessee Disability Pathfinder, Family Voices of Tennessee (FVTN), Transition Tennessee, and Tennessee Department of Health and Substance Abuse Services, are actively planning this year's youth- and family-led conference, themed "Climb Every Mountain: Youth Leading the Way. The conference will focus on trainings that empower youth to own their independence. Sessions will cover youth resiliency, mental health, and community resources; and for the first time ever, a breakout session is planned especially for families. During the family session, participants will learn about Tennessee Disability Pathfinder and provide feedback on establishing a family advisory council. The amazing TikTok sensations, Nurse Fe and Amarion, will also make a featured appearance to share their experiences and barriers related to Amarion's special healthcare needs as a 20 year-old transition aged youth. The Youth Advisory Council (YAC) members all follow Amarion's journey and look forward to having them attend this year's conference as guest speakers.

Additionally, TDH continues to partner with FVTN and provides funds to ensure the Parent-to-Parent mentoring program can continue to provide parent matching, mentoring and build skills and capacity for parents to be active, engaged partners in their child's health. The CSHCN Program has implemented a number of activities in partnership with FVTN to further expand parent involvement including development of training and leadership opportunities. Significant accomplishments include:

- Youth, parents and family members participate in youth and parent led training and workshops that include training on partnering in decision-making, self-advocacy, transition and reinforcing expectations with their health care provider for comprehensive and coordinated care.

- TDH contracts with FVTN to hire parent and youth consultants to assist with the coordination of family and youth activities and the coordination of the youth advisory committee.

- TDH and FVTN collaborated on several projects during this reporting period and co-presented at AMCHP's annual conferences regarding the importance of Family Led Organizations and State Title V agencies working together to strengthen youth and family engagement. Supported by TDH, FVTN's peer support program successfully matched more than 50 families with trained parent mentors for emotional and informational support. FHW collaborated with FVTN and LEND to strengthen the Youth Advisory Committee (YAC). Many YAC members graduated from highschool and transitioned to higher education which led to a drop in membership. Before this shift, the YAC elected a new chairperson who is being mentored in leadership by FVTN and TDH. Currently there are seven active members who continue to meet and focus on several priorities, i.e., self-advocacy, funding opportunities, transition – speaking to your provider and member recruitment and retention. The Family Voices' Youth Coordinator and the FHW CYSHCN Integrated System of Services Coordinator have primary responsibility for this committee and continue to engage LEND participants who assist with planning and facilitating meetings. During FY 2021, YAC participants and their families received training on self-advocacy, leadership and "speaking to your elected officials". As stated above, the YAC was heavily involved in the planning and implementation of the annual summer youth and family conference. This year's theme was *"Advocating for U(s)."* Youth and parents were keynote speakers and panelists throughout the two day event. Youth and parents also attended Disability Day on the Hill virtually

and participated in legislative forums individually and in groups. The Youth Advisory Council utilized several virtual platforms to continue mentoring and meeting with youth from different programs. Lastly, several members of the youth advisory council continue to participate in Disability Day on the Hill and have opportunities to speak with their legislators.

The CYSHCN program continues to work towards system building for all children and maintains partnerships with numerous other internal and external partners, including TEIS, EBHV, the TN Council on Developmental Disabilities, TN Department of Labor and Workforce Development, TN AWARE, the Council on Children's Mental Health, Tennessee Voices for Children, LEND, TN Disability Pathfinders, Vocational Rehabilitation, Tennessee Commission on Children and Youth, Transition Tennessee and several employment programs and task forces for children with and without disabilities. The CYSHCN program also continues working towards improving the quality of care across systems, the department's CHANT program has increased opportunities for engagement, navigation and resource referral for all children and families. Collaborative efforts with TennCare, TNAAP and other public health programs are aimed at building systems and improving quality of care across systems. The CYSHCN program also promotes program and policy change for system building and is engaged in the Division's efforts around creating optimal health for all and works to ensure health equity is included in CYSHCN, Division, and Departmental policies and procedures.

Input from families and youth is essential for improving outcomes in all MCH populations. FHW will continue to seek opportunities to increase capacity to implement, support and sustain quality engagement between families and staff, at all levels of the system.

III.E.2.b.iii. MCH Data Capacity

III.E.2.b.iii.a. MCH Epidemiology Workforce

MCH Epidemiology Workforce

FHW recognizes the value of using data to understand population health in order to implement programs that meet the health needs of the MCH population. As a division, significant investments have been made to increase data analysis capacity over the last decade. In 2010 there were zero epidemiologists within the division, now there are twenty-five including one CDC Senior Maternal and Child Health Epidemiology Program Assignee and one CDC/CSTE Applied Epidemiology Fellow. All twenty-five epidemiologists are fulltime staff members who support individual programs, or multiple programs, within the division as well as Tennessee's Title V/MCH Program. In 2023, the Overdose Response Coordination Office was integrated into the Division of Family Health and Wellness and brought two additional epidemiologists into the Division.

Funding Structure

Most epidemiologists are paid through federal grants within their specific sections based on the individual programs they support. However, for many a portion of their salary comes from the MCH/Title V Program. Due to limited state hiring abilities, some epidemiologists come in as contract employees. Of the twenty-five epidemiology positions, 16 are state positions, seven are contract staff positions, and two are external positions (CDC and CSTE). Contracted epidemiology positions cover areas of birth defects, maternal deaths due to violence, diabetes, NAS, EDHI, pediatric mental health, and suicide.

Epidemiologist positions hired in 2022 – 2023 include positions to support the following grants and state legislative requirements. Due to hiring processes at the state level, both epidemiologists were hired through contracts rather than state positions. Additionally, one epidemiologist transferred into a new role to support the Maternal Health Innovation grant due to the conclusion of another grant. Of note, the newborn hearing epidemiologist hired interned with the State Laboratory as an epidemiologist prior to being hired in his current role.

- Suicide (Epi I contract)
- Newborn Hearing (Epi I contract)

There are also existing vacancies among epidemiologists hired in contract roles, including:

- CHANT (Epi I)
- Maternal Deaths due to Violence (Epi I contract)

Education and Training

Of the twenty-five epidemiologists, five hold terminal degrees in epidemiology or statistics. The others possess master's degrees in either epidemiology, biostatistics, healthcare informatics, quantitative psychology, or health policy. Together, there are over 120 years of experience working in the field of epidemiology.

Data Visualization
Selected epidemiology staff supporting Reproductive and Women's Health will attend a 2-day data visualization training workshop with Stephanie Evergreen through support of the Maternal Health Innovation grant in July 2023.

Title V Technical Assistance
Over the past year, TN has partnered with their Title V Program Officer to explore applying for technical assistance

for epidemiology and statistics capacity, using current examples of the increase in home births across the state.

Roles and Responsibilities

The epidemiologists provide broad support for data analysis and program evaluation across FHW and specialized support in each section including reproductive and women's health, supplemental nutrition, injury prevention and detection, early childhood initiatives, chronic disease prevention and health promotion, perinatal infant and pediatric care, and children and youth with special healthcare needs. The specific programs within those sections include:

- Reproductive and Women's Health:
  - Family Planning, Perinatal Regionalization, Presumptive Eligibility, Sexual Risk Avoidance Education, Breast and Cervical Cancer Screening Program, Maternal Health Innovation
- Perinatal Infant and Pediatric Care
  - Newborn Metabolic Screening, Newborn Hearing Screening, Childhood Lead Poisoning Prevention
- Supplemental Nutrition
  - WIC, WIC Loving Support Program, Commodity Supplement Nutrition Program, Breastfeeding Hotline
- Injury Prevention and Detection
  - Infant Mortality Reduction, Child Fatality Review, Maternal Mortality Review, Maternal Deaths due to Violence, Traumatic Brain Injury, General Injury Prevention, Suicide Prevention
- Overdose Response Coordination Office
- Early Childhood Initiatives
  - Home Visiting, Healthy Start (state program, not federal healthy start), CHANT, NAS, Pediatric Mental Health Access
- Chronic Disease Prevention and Health Promotion
  - Preventive Health and Health Services Block Grant, Tobacco, Project Diabetes, Diabetes, Heart Disease, and Stroke (1815), Comprehensive Cancer, Rape Prevention and Education
- Children and Youth with Special Healthcare Needs
  - CSS, Birth Defects, Youth Advisory Council

Specific to MCH/Title V Program responsibilities, there is a programmatic and epidemiology lead for each priority. All other epidemiologists are assigned to a priority as additional support staff. They fill in as needed and broaden the bandwidth for data analysis work around each priority. This allows for more in-depth and therefore richer understanding of the health needs and programmatic impacts for each priority. They have a very active role in the comprehensive and ongoing needs assessment as well as state measure development and tracking for the annual action plan and report.

Additional MCH Epidemiology Capacity

CSTE Applied Epidemiology Fellowship

TDH matched with a CSTE Applied Epidemiology Fellow in August 2021 – May 2023. Emily Lumley provided additional capacity to inform health equity initiatives in the Title V Block Grant Action Plans, emergency preparedness and response activities, including both COVID-19 and MPOX, as well as the infant formula shortage. Emily also evaluated the fetal death surveillance system, identifying key recommendations for improvement. In May 2023, Emily Lumley transitioned to the Office of Vital Statistics at TDH as an Epidemiologist I. In August 2023, TDH welcomes a new CSTE Applied Epidemiology Fellow, Carissa Rodriguez, who will help support the 2025 MCH Block Grant Needs Assessment in addition to other activities.

Belmont University Intern

The Tennessee Birth Defect Surveillance System (TNBDSS) team was fortunate to gain the help of undergraduate intern Celeste O'Brien from Belmont University, who supported the program from May 2022 through June 2023. During this time, Celeste led and participated in several major projects that elevated the program's reach and visibility. She assisted in the redesign of the annual Birth Defects Legislative Report, helping to take this from something that was essentially unreadable, bland-looking, and overly long to a far more concise and visually appealing version. Another major redesign Celeste spearheaded was the creation of the new and improved TNBDSS website; Celeste transformed the old, out-of-date site into a user-friendly resource with expanded content to assist families and healthcare providers. In addition to helping to improve these existing materials, Celeste developed several new items, most notably the Birth Defects Data Dashboard. Celeste created this Tableau dashboard to increase data accessibility by allowing users to customize the data displayed by county, year range, and individual defect—a level of granularity not available in the annual data report or anywhere else. Celeste also used Canva to produce several infographics that have been shared widely within the department and beyond on subjects including premature birth, family planning, and pregnancy intention.

Vanderbilt MPH Interns

TDH welcomed two Vanderbilt Summer 2023 interns to FHW. One intern is working on implementing recommendations from the fetal death surveillance evaluation, including developing a fetal death surveillance report and fact sheet. Another intern is developing a perinatal health dashboard to meet local health department and community needs of key maternal and child health indicators and trends over time.

Title V Interns

TDH FHW is pleased to have matched again with Title V Interns focused on advancing health equity within the MCH/Title V priorities and emerging issues. In Summer 2023, the practicum students are joining members of the Tennessee Department of Health-Division of Family Health and Wellness to lead qualitative data collection project to inform efforts to connect community members to Family Planning resources within the state. Their activities include:

- Conducting key informant interviews with community members that represent minority groups within Tennessee.
- Developing a state-wide Family Planning resource guide that is inclusive of community identified and TDH Family Planning needs.

MCH Workforce Capacity Assessment

An annual survey is administered to all FHW epidemiologists to determine priorities for professional development opportunities. In 2023, additional questions related to employee connectedness and professional advancement were also included. There were 16 responses to the survey, for a response rate of 70%. Key takeaways from the survey included:

Development

All respondents strongly agreed/agreed they have the professional development resources needed to learn and grown as an epidemiologist, similar to 2022 survey results. Almost 2 in 3 respondents (63%) found the 2022 FHW Epi professional development series extremely or very helpful. The top 3 trainings in 2022 were: SAS SQL 1: Essentials, Migrating to ArcGISPro, and an introduction to ESSENCE, the TN syndromic surveillance system. Specific interests for further professional development opportunities in 2023 included: continuation of current opportunities, data equity, SAS certification, publishing Tableau dashboards, networking for early career/new epidemiologists, and opportunities to learn from different states. In 2023, one FHW epidemiologist completed the SAS Base Programming Certification.

There were a number of trainings TDH was able to offer to MCH epidemiologists funded by CDC Crisis Response Cooperative Agreement. They included: ArcGIS (Spatial Analysis with ArcGIS Pro), Tableau (Introductory, Intermediate, and Tableau training), SAS (Certification Program, eLearning Portal), and R (DataCamp). There were

three categories of SAS Certification offered to staff: SAS Base Programming, SAS Advanced Programming, and Statistical Business Analyst. TDH User Groups for SAS, ArcGIS, and R continued to meet on a regular basis.

Advancement

Since the 2022 survey administration, there was an increase in the percentage of respondents indicating “I have a clear understanding of the landscape for professional advancement as an FHW epidemiologist”: in 2023: 75% strongly agreed or agreed with that statement compared to 53% in 2022. Division Director Dr. Tobi Amosun met with FHW Epidemiologists in June 2022 to further discussion around FHW epidemiologist professional advancement. Areas where respondents noted FHW can better support epidemiology professional advancement goals included:

- Continue advocacy for Epi III position establishment
- Create protected time for projects (less meetings)
- Provide clear guidance on development needed to advance in professional epi series
- Communicate constructive criticism to focus on development
- Increase collaboration between epis and programs as well as community partners

Additionally, TDH Leadership is currently exploring adding Advanced SAS Certification to the State “Approved Professional Certifications for Salary Increase” list.

Social Connectedness

Among respondents, 44% strongly agreed and 50% agreed they have the support needed to do their job well. With most work still being conducted in a remote environment, there were identified needs to provide more informal opportunities to hear about the work other MCH epidemiologists are doing. In July 2022, FHW epis started to come together to share successes and challenges in their work on a bi-monthly basis. At six months, 57% found this meeting to be extremely or very helpful. In 2023, survey respondents reported that FHW can continued to improve social connectedness through being more intentional to introduce new epidemiologists in FHW, identifying epidemiologists to discuss challenges with and double check data and coding for errors. Additionally, epidemiologists voiced the need for continued advocacy for Epidemiologist III positions in FHW.

III.E.2.b.iii.b. State Systems Development Initiative (SSDI)

The SSDI grant complements the MCH Block grant by setting aside funds for MCH data infrastructure. This ensures that staff have MCH data collection and analysis capacity. Staff are then able to leverage this capacity to make data informed decisions, particularly for program planning. This in turn facilitates the creation of effective programs, which leads to health improvements in the MCH population.

The SSDI grant supports direct, consistent, electronic, and timely access to data by coordinating with the Division of Vital Records and Statistics (VRS), Division of Population Health Assessment (PHA) and Office of Informatics and Analytics (OIA) within TDH. The SSDI coordinator and MCH/Title V Director maintain the data sharing relationship between these divisions. This relationship enables FHW epidemiologists to have access to many datasets. As data sharing issues arise, they are discussed and resolved in a way that addresses the needs and concerns of all divisions.

FHW epidemiologists have direct, consistent, electronic access to these data:

- Vital Records Birth
- Vital Records Death
- Vital Records Birth-Death Linked
- Vital Records Fetal Death
- Youth Risk Behavior Surveillance System (YRBSS)
- Behavioral Risk Factor Surveillance System (BRFSS)
- Pregnancy Risk Assessment Monitoring System (PRAMS)
- Hospital Discharge
- Vital Records Induced Termination of Pregnancy
- Population Estimation
- Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE)

The FHW epidemiologists have direct consistent, electronic, timely access to these FHW datasets:

- Patient Tracking and Billing Management Information System (direct care in LHDs)
- Women, Infants, and Children (WIC)
- Newborn Bloodspot Screening
- Newborn Hearing Screening
- Newborn Screening for Critical Congenital Heart Disease
- Evidence-Based Home Visiting
- Healthy Start (Tennessee specific program)
- Tobacco Quitline
- Baby and Me Tobacco Free
- Neonatal Abstinence Syndrome Surveillance
- Child Fatality Review
- Maternal Mortality Review
- Traumatic Brain Injury Registry
- Tennessee Birth Defects Registry
- Children’s Special Services (Title V CSHCN program)
- Childhood Lead Screening

If FHW epidemiologists outside of these programs need to access this data, they can access it by coordinating with the epidemiologist for that program.

Current Dataset Linkages:

- The Division of Vital Records and Statistics houses all vital record data - which includes birth, death and fetal death. The only continual linkage completed is between birth and death certificate data. The division links other datasets on an ad hoc basis when requests are submitted. The main barrier to continuous linkage of additional datasets is staff time needed to maintain the linkages.
- The epidemiologist within FHW's Supplemental Nutrition section links WIC data with birth certificate data to assess breastfeeding data.
- The epidemiologist within the Injury Prevention section links TBI data with death certificate data quarterly to identify and remove any non-survivor patients from their survivor list.
- The epidemiologist within the Injury Prevention section links death and birth data for routine identification of child and maternal deaths for the Child & Maternal Mortality Review programs.
- The epidemiologist within the Newborn Screening (NBS) program section links the newborn screening data to the birth certificate data weekly for multiple reasons: 1) to identify infants who were not screened so that they can be followed up with to complete screening, 2) to determine screening rates, and 3) to identify infants at high risk for mortality for outreach staff to intervene.
- The epidemiologist within the Tennessee Birth Defects Surveillance System program links hospital discharge data with birth certificate data to match identified birth defect cases with the birth record as well as death and fetal death data.
- The epidemiologist within the Chronic Disease Prevention and Health Promotion section links prenatal smoking cessation program (Baby & Me Tobacco Free) data to birth data annually to assess birth outcomes.

By ensuring access to MCH data, FHW epidemiologists are able to analyze and present information which programs can then use to make data informed decisions. For example, access to MCH data allows for population assessment, program development, and progress monitoring of the MCH Block grant Action Plan. At the beginning of each grant cycle FHW epidemiologists and program staff complete a needs assessment which provides data on the MCH population. FHW staff and other stakeholders use this data to select priorities for the upcoming grant cycle. Once the priorities are chosen an action plan is developed (i.e. program development) to impact each priority. Lastly FHW epidemiologists assist in developing process and outcome measures to measure the impact of the Action Plan on the health of the MCH population. Progress is monitored on each measure by FHW staff and other internal and external partners at the bi-annual public MCH partner meetings. Based on measurement performance and collective feedback received at the bi-annual meetings, FHW staff revise the Action Plan as needed to improve health impact.

The SSDI grant also supports key MCH data priority needs. For example, the SSDI coordinator has been supporting the building of the birth defects surveillance system for the state. This includes how birth defect data is collected, transferred, and stored within the system by uploading and matching birth defects cases to existing NBS cases. In 2022, remote electronic health records access will be obtained from the state's hospital systems. This will allow the birth defects and maternal mortality review teams to access medical records more securely, quicker, and in an electronic format. The birth defects team will also soon begin receiving access to admission discharge transfer payer claims data for quicker case identification compared to current hospital discharge data used. Also, in 2021-2022 the SSDI coordinator has been involved in the integration of birth data into the Integrated Data System (IDS) at TDH. This system already includes death data, hospital discharge, and controlled substance monitoring database data. The addition of birth data will allow FHW epidemiologists to better understand topics longitudinally, such as infant and maternal risk factors and outcomes among pregnant women who use opioids. Information such as this could be used to better serve the needs of the MCH population in general.
Over the last few years, a portion of the SSDI grant has been used to support training opportunities for FHW epidemiologists. This included data visualization training on Tableau software which resulted in the creation of nine data dashboards. A list of dashboard topics is below.

Tableau Dashboards

- Newborn Screening
- CHANT
- Child Fatality and Infant Mortality
- FHW Expenditure Tracker
- Lead in Water Testing in Tennessee Public Schools
- Monitoring Suicidal Behavior in TN
- NAS
- Neonatal Levels of Care
- SARS-CoV-2 Child
- QuitLine
- Prenatal Smoking Cessation (Baby & Me Tobacco Free)

FHW epidemiologists also receive additional training opportunities for SAS and ArcPro funded through the CDC Crisis Response Cooperative Agreement. Providing these training opportunities has resulted in the creation of several ArcPro maps, and prepared staff to be able to analyze data from the IDS once it is up and running.
Over the last year, a portion of the SSDI grant has been used to support opportunities for FHW epidemiologists and staff to attend various conferences virtually and in person. A list of conferences is below:

- Association of Maternal and Child Health Programs (AMCHP) Annual Conference
- CityMatCH Leadership and MCH Epidemiology Conference
- National Association of County and City Health Officials (NACCHO) 360
- Council of State and Territorial Epidemiologists (CSTE) Annual Conference

III.E.2.b.iii.c. Other MCH Data Capacity Efforts

State Partnership and Collaboration in Implementing National Surveys

Pregnancy Risk Assessment Monitoring System (PRAMS)
The MCH/Title V Program coordinator and CDC Senior Maternal and Child Health Epidemiology Program Assignee to Tennessee represent FHW on the PRAMS Steering Committee which is housed within TDH's Division of Population Health Assessment.
FHW representatives provided input to the PRAMS program on which topics should be added or removed for Phase 9 of the questionnaire to promote data-to-action efforts within the state. Phase 9 was implemented in the field starting in April 2023. This work will directly affect MCH data available to MCH programs on the health-related experiences of new mothers. PRAMS has also worked to decrease timelag for data analysis: 2021 PRAMS data were made available in April 2023. Additionally, in 2021, TN PRAMS exceeded the response rate threshold, and the data will also be included in national PRAMS analyses and other CDC publications.

National Survey for Children's Health Oversample
The MCH/Title V Program has partnered with Tennessee COVID-19 Health Disparities Initiative to fund an oversample of the state for the National Survey of Children's Health. The goal is to collect enough data that indicators can be stratified by race and ethnicity, specifically for priorities around children and youth with special health care needs. It is important to have this information to better understand where health disparities exist so they can be addressed and eliminated. Currently, the sample size for the state is too small to stratify for all measures. Initial data from the 2022 oversample in Tennessee should be available in October 2023.

Advances in Availability/Accessibility of State MCH Data Information Systems

Emerging Issues in Maternal and Child Health Grant
The division applied for and was awarded the Emerging Issues in Maternal and Child Health for FY2022 from MCHB. FHW used this grant to facilitate the addition of birth data to the TDH Integrated Data System (IDS) housed within the Office of Informatics and Analytics (OIA) at TDH. It also supported the training of FHW epidemiology staff on how to use the system and specific SAS training on data linkage and analysis. The linkage was successfully completed in Fall 2022 and access to two new FHW epidemiologists to conduct severe maternal morbidity analysis was granted in Spring 2023.

ASTHO PRAMS
Tennessee was selected to participate in a new learning community through ASTHO aimed at linking Pregnancy Risk Assessment Monitoring System (PRAMS) data to hospital discharge data. The goal of the project was to link 2019-20 PRAMS data to 2018-21 hospital discharge data. The analysis characterized women with and without prenatal and postpartum hospital encounters. The ASTHO project supported a temporary team member, dedicated only to completing the linkage. While we had abundant staff with knowledge/skill, existing bandwidth was limited. Had TDH tried to do this project only with existing staff, it would have taken much longer to execute. In 7 months, the project moved from our "to-do" list to a submitted conference abstract. The project was completed in May 2023.

Decreases in Hospital Discharge Data Reporting Lag
Prior to 2022, TDH Maternal Mortality Program was unable to use hospital discharge dataset (HDDS) to inform case identification efforts for pregnancy-associated mortality due to the lag time of access to the provisional data set. The CDC MCH Epidemiology Assignee worked with the Maternal Mortality Review (MMR) Program and the Division of Population Health Assessment to conduct a pilot project to increase timely access to HDDS data. Due to these efforts, the pilot project is systemwide and data for 2022 is available within 5.5 months compared to 9 months.

HDDS 2021 were used to inform MMR case identification efforts. The MMR Program reports there have been additional cases have been identified and verified in 2021 that otherwise would not have been found through other case identification methods. The 2021 MMR Report with full details of this additional case identification methodology and results will be released in Summer 2023.

TDH Data Portal Project
Presently, the Tennessee Department of Health (TDH) does not have a full service, single location for publicly available data and data products. Stakeholders, internal and external to TDH, seeking data would have to know what data they are looking for and where to look for it. Additionally, there is no catalog of all existing publicly available data and data products making maintenance, standardization, and governance extremely variable, distributed, and inefficient. This project aims to explore and implement a dynamic, public-facing TDH data portal to enhance data accessibility and availability, data quality, and data governance. This data portal would serve as a one-stop shop for publicly available TDH data and associated data products leveraging a variety of visualization techniques as well as links to existing data and data product pages currently available, via self-service features and data request functionality.

The data portal should be user friendly, permit users to extract and explore data using innovative visualizations that will include maps, tables, graphs, and reports. Existing resources, like the Office of Informatics and Analytics Integrated Data System (IDS), can be used to make available linked data integrated from various data sources from different divisions and make available following necessary security, privacy, and data steward requirements and needs. For the proof of concept, the aim will be to include data from at least 2 participating TDH organizations, including Public Health Assessment (PHA), Vital Statistics (VS), Family Health and Wellness (FHW), Environmental Epidemiology (EE), Primary Prevention (PP), and the Office of Informatics and Analytics (OIA).

Collection and Tracking of Real-Time Data

ESSENCE
TDH is applying syndromic surveillance to Title V-related issues. Currently, the Suicide Prevention Program, which aligns with the Title V cross-cutting Mental Health priority, uses ESSENCE to track suicide attempts among children 10-21 that result in emergency department utilization across Tennessee. TDH disseminates regional alerts when data are significantly higher than expected to partner organizations, including the Department of Education, to address potential clustering of cases through programmatic activities. Title V also uses ESSENCE to understand sexual violence and intimate partner violence among women of reproductive age to inform the Title V priority of decreasing pregnancy-associated deaths.

Neonatal Abstinence Surveillance
TDH reports on NAS have resumed since being on hold in 2021 due to the COVID-19 pandemic and resulting issues in data collection and data quality. The NAS Surveillance Program wanted to ensure that high-quality data is released and resumed monthly reports in addition to using hospital discharge data diagnosis codes for case identification to finalize its 2021 NAS Surveillance Report.

Welcome Baby Program
Welcome Baby is the Tennessee Department of Health's universal outreach program for newborns. The purpose of Welcome Baby is to:

- Provide timely information to address the needs of families with newborns
- Connect children and families with appropriate services in the community

- Screen for family and child risks at the time of a child's birth
- Improve utilization of community resources

Since the fall of 2013, the parents of every newborn in Tennessee receive a "Welcome Baby" packet in the mail. This packet is full of information helpful to new parents, even those with other children. Some families may also receive either a phone call or a voluntary outreach visit to receive additional information or support. This is accomplished through access to the provisional access to birth certificate data, which has had its timelag decreased through the implementation of VRISM. An algorithm is applied to all birth data that stratifies infants into three categories, based on the risk of infant mortality. Those in higher risk categories will receive specific outreach from the Call Center to help with assessment and program navigation services, if needed through CHANT.

Newborn Screening (NBS)
NBS has made steps to increase timeliness and decrease data entry by NBS staff using two new systems - Remote Diagnostics (RDx) and Hearing Device Uploads (HDU). Previously, audiologists had to fax or email in hearing diagnostic test results and NBS staff would enter each result into our internet-based Case Management System (iCMS). With RDx, audiologists can directly submit results electronically into iCMS, decreasing the time it takes for results to be entered into iCMS. RDx also allows the audiologist to mark upcoming appointments and view previous results for the child. HDU allows birthing hospitals to directly upload hearing screening results into iCMS from their hearing screening equipment. Previously, screening results had to either be mailed in along with dried blood specimens or emailed/faxed in separately if screening occurs after dried blood specimens were mailed in.

Creation of Data Review Boards

TDH Institutional Review Board
A FHW epidemiology staff representative serves on the TDH IRB. The Principal Investigator of PRAMS also sits on the IRB. Meetings are held monthly to review projects.

TDH Data Governance Board
The Data Release Committee (DRC) considers the strategic management of data throughout its lifecycle at Tennessee Department of Health. It includes defined principles and practices that support data availability, usability, quality, security and privacy. Key aims of our data governance program are to support the needs of data stewards and users, ensure transparency of data management roles and responsibilities throughout the department and establish standard, repeatable processes for effective data management. The MCH Epidemiology Assignee serves on this Committee, which meets monthly. Leadership of the Data Governance Board has changed in 2022.

Sharing Data with Partners

TDH has published reports, dashboards, and infographics on Title V-related activities that inform the MCH population. In recent years, reports have focused more on data visualization. Highlights include:

- Tennessee Birth Defects Data Report 2015 – 2019
- Positive Childhood Experiences among Tennesseans in 2021
- Tennessee NAS Annual Report 2021
- Newborn Screening Dashboard
- Suicide Prevention Report 2022
- Maternal Mortality in Tennessee 2017-2020
- 2022 Child Fatality Annual Report
- Tennessee Early Hearing Detection and Intervention Provider Infographic

Advances in Information Technology

Data Modernization

Part of the Epidemiology and Laboratory Capacity Cooperative Agreement supports data modernization. This year the team has been worked on two plans – a data modernization plan and a workforce development plan. Part of the workforce development plan was implemented this year including an academic lecture series on various data analysis topics.

EHR

TDH is building a new EHR for local health department use. The current system is fragmented between two systems – one for the electronic medical record and the other for scheduling, registration, orders and billing. The new system will combine all these tasks into one system, improving quality and efficiency in clinical care and public health data management.

Key Challenges

A key challenge faced when trying to improve the use of MCH data is funding to build data infrastructure. The SSDI grant is helpful in this area but it is small amount of money when it comes to data projects. It costs money to hire staff with the skills and expertise to build and analyze MCH information systems, not to mention the systems themselves. Currently, the SSDI position has been vacant since March 2023.

III.E.2.b.iv. MCH Emergency Planning and Preparedness

MCH Considerations in Emergency Operations Plan

State EOP

The State has a written EOP which outlines the department's all-hazards approach to managing events and emergencies that may exceed their day-to-day response capabilities. The EP aligns with state and federal emergency management documents and principles, and TDH's EPR team maintains and provides access to the current EOP base plan, annexes, and appendices.

The plan considers the need of pregnant people, infants, and children, including those with special health care needs. Specifically, the plan pre-identifies vulnerable populations that require special medical needs or have access and functional needs and determines resource gaps while identifying related contingency options. The EOP also includes a plan to monitor the health and medical needs of vulnerable populations within the community and implement response actions to address them. This includes developing protocols to provide timely and effective medical care to MCH populations, coordinating with healthcare providers to ensure that MCH patients receive the care they need, and ensuring that emergency response personnel have the training and resources necessary to address the unique needs of the MCH populations during emergency events.

To ensure the plan remains current and effective, each component of the EOP is reviewed and updated at least once every two years. This review process reflects changes in procedures and capabilities, as well as the identification of deficiencies that require corrective action. This year, the new MCH EPR Program Director served as a member of the Vulnerable Populations Subgroup Committee and the Disability Functional and Access Needs Committee, ensuring that these response plans addressed the specific needs of the MCH population.

Title V representatives have monthly coordination calls with the EPR team to ensure collaboration and coordination of efforts, specifically in the EPR needs assessment.

Incident Management Structure

The IMS is dependent upon the specific incident. For example, during COVID-19, the Deputy Commissioner who oversees the Division of Family Health and Wellness was a part of the Mission Coordination Group, who oversaw the Direction & coordination Officers. During COVID, the MCH Epidemiology Assignees co-led the enhanced pregnancy surveillance group, which was under the Operations: Surveillance and Response Team and Investigations group. For monkeypox, the CDC/CSTE Applied Epidemiology Fellow was on the Data Support team.

Critical Gaps Identified and Addressed

Capacity for MCH EPR Activities

Title V Leadership identified a gap in MCH Emergency Preparedness and Response based on state reporting from AMCHP's Public Health Emergency Preparedness and Response Checklist for Maternal and Infant Health as well as early experiences in COVID-19 pandemic response. Through CDC Foundation, TDH was able to hire an MCH Emergency Preparedness and Response Program Director in March 2022. The role of this position is to coordinate Title V EPR efforts with internal and external partners to prioritize emergency preparedness, response, and recovery efforts among the Tennessee MCH population.

Over the last year, this position has worked closely with the TDH EP program to implement the COPEWELL Population Vulnerability, Inequality, and Deprivation (PVID) model to assess statewide emergency preparedness and identify areas of vulnerability for MCH populations.

Coordination with Public Health Programs

Monthly TDH EPR/MCH Collaboration Calls
This position has facilitated ongoing collaboration between Title V and the TDH EPR team, including monthly coordination calls. Priority areas for the group have included preparedness efforts and coordination of needs assessments, data analysis and surveillance, and responses for COVID-19, monkeypox, and parechovirus as well as collaboration around the infant formula shortage.

National Presentations
- In January 2022, the MCH Epidemiology Assignee was an invited presenter for AAP Disaster Recovery ECHO "Applying Lessons Learned During Disaster and Pandemic Recovery"
- In April 2022, the Director of Strategic Initiatives gave a presentation to NAACHO on "Assessing Tennessee's Emergency Preparedness and Response for Maternal and Infant Health During Emergencies"

American Academy of Pediatrics Enhancing Systems of Care Project
Co-led by TDH and parents at the Tennessee Chapter of Family Voices, this project focuses on gaps in discharge planning for emergency preparedness specifically for children sent home with electricity-dependent medical equipment. This need was identified through centering the needs of families in determining gaps in systems of care in emergencies. Members of this group include TDH MCH, TDH EPR, TN Chapter of Family Voices, and clinicians from 2 children's hospitals in TN. Formative focus groups and key informant interviews held with children with special health care needs and parents of these children, and NICU hospital discharge staff shed light on current gaps in discharge education as well as understanding the role of utility companies during emergencies.

Building off of what was gleaned in Phase 1 of this project, the team decided to participate in Phase 2 which began in September 2022. During this phase, the team aims to develop and/or procure resources to ensure that emergency planning for the unique needs of technology-dependent infants and children with special health care needs is addressed throughout the hospital discharging planning process. The team agreed that expanding the team to include parents and youth was a critical step to ensure that individuals with lived experience continue to inform this work; and thus, the Tennessee Systems of Care Task Force was birthed. The Meetings are held monthly throughout the project with quarterly reports to AAP.

Children and Youth with Special Health Care Needs EPR Decal & Toolkits
- The Emergency Alert Decals and Magnets were developed to alert first responders and emergency personnel that there is a child or youth with a special health care need in the home or vehicle. As of July 1, 2022, all 11,000 decals and magnets that were ordered had been distributed. A press release was launched on May 26, 2021, which sparked the interest of countless agencies across the state. CYSHCN worked with local health departments, fire departments, police departments, highway patrol, hospitals, family resource centers, schools, family readiness groups with the Army, and community partners to get these distributed. 333 families connected with TDH directly to request the decals and magnets. Requested decals were disseminated to families located across the state, including Memphis, Cordova, Franklin, Knoxville, Gray, Johnson City, Harriman, Oliver Springs, and Oak Ridge, among many other locations. The program continues to receive requests, especially from hospitals and first responders, for the decals. There are plans to order more soon.
- The Emergency Toolkits were designed to assist families in emergency situations, especially after the tornados and floods took place. The toolkits are composed of adult and youth masks, hand sanitizer, a first aid kit, a flashlight, a document holder, a resource card, and a fillable checklist. All the items are secured in a backpack light enough for youth or adults to carry. A total of 10,000 toolkits were ordered and as of Fall 2022, all 10,000 have been sent out. CYSHCN staff worked closely with all regional and metro health departments, Family Voices of TN, local parks, recreation centers, and daycares. CSHCN plans to collaborate with EBHV,

schools, and hospitals to distribute the toolkits.

Data Assessment and Surveillance

COVID-19 Pandemic

- Pregnancy and Infancy: the CDC MCH Epidemiology Assignee co-leads the statewide COVID-19 pregnancy surveillance group with the Viral Hepatitis Program Director. Data linkages are performed quarterly with a public dashboard available. Updates are provided at each statewide Perinatal Advisory Committee meeting (3x/year). Chart abstraction using a sampling approach continues to prioritize maternal, infant, and fetal deaths and infant COVID-19 cases. Infant follow-up with chart abstraction occurs for those sampled through 6 months of age. COVID-19 pregnancy surveillance calls are held monthly with members from EPR and Title V. Additionally, TDH is participating in a stillbirth project with CDC among pregnant people with COVID-19 infection in pregnancy.
- Pediatric: Dashboards for pediatric COVID-19 cases and MIS-C are updated on a regular basis and available publicly. The CDC/CSTE Applied Epidemiology Fellow has worked with internal and external partners to share COVID-19 pediatric vaccination and provider inventory maps to identify priority populations for outreach.
- Communications materials were also created and available in English, Spanish, Arabic, Kurdish, and Somali due to an identified critical gap of COVID-19 disproportionately impacting people of color.
- PRAMS data were analyzed to determine preparedness among recently pregnant people, with the development of an infographic.

Monkeypox

- The CDC/CSTE Applied Epidemiology Fellow is on the data support team in the Incident Command Structure for monkeypox.
- If cases of monkeypox were to occur in pregnant people, SET-NET may be activated.

MCH Priority Populations Preparedness Maps

- Using the CDC's Division of Reproductive Health guidance, the CDC/CSTE Applied Epidemiology Fellow calculated estimates of pregnant people at any given time point statewide and by county and visualized these data through county maps. In addition, maps of infants <1 and children <5 years were also created by county to inform EPR efforts at the county and regional level. These resources will be included in the EPR Needs Assessment process and are also included in the Ongoing Needs Assessment portion of this report.
- Members of the EPR team created an internal pediatric bed capacity dashboard to inform bed availability and transfers. They are also currently working on doing this for behavioral health pediatric bed capacity as well.

Infant Formula Shortage

- Working with EPR partners, the CDC/CSTE Applied Epidemiology Fellow conducted analyses in ESSENCE using CDC's National Syndromic Surveillance Program's queries to better understand the impact of the infant formula shortage among Tennessee infants and their families. Queries included: formula recall, formula shortage, malnutrition, water intoxication/hyponatremia. Since the February 2022 recall, there have been 131 ED visits with a discharge diagnosis of water intoxication/hyponatremia and 88 hospital admissions among infants. There have been 357 ED visits with a chief complaint including formula recall and 418 ED visits with a chief complaint including formula change.

Training

Preparedness Exercises

In August 2022, the CDC/CSTE Applied Epidemiology Fellow attended the concurrent disasters tabletop exercise, held in Nashville, TN and facilitated by the CSTE in partnership with the CDC national Center of Environmental Health, Agency for Toxic Substances and Disease Registry, and the National Environmental Health Association (NEHA). The concurrent disaster scenario was an ice storm during the first 6-months of a novel respiratory virus global pandemic. The group, which consisted of a range of local and state public health staff, talked through the weather event and ensuing power outage, discussing issues such as deprioritizing pandemic activities and shifting capacity to the response, working with first responders and hospitals, impacts on vulnerable communities, and potential direct and indirect health impacts.

Incident Management Structure (IMS):

- Incident Command Center Training: In July 2022, select Title V staff were invited to attend a refresher training for Basic Incident Command System held by the TDH Emergency Preparedness and Response Office. The training has not been repeated since that time.

III.E.2.b.v. Health Care Delivery System

III.E.2.b.v.a. Public and Private Partnerships

Tennessee's modern efforts at health reform began in 1994 with the introduction of TennCare, Tennessee's Medicaid program. Given the significant overlap in priority population and the opportunity for population health improvement, TDH partners extensively with the agency. The TennCare program operates under a Section 1115 waiver from the Centers for Medicare and Medicaid Services (CMS) in the United States Department of Health and Human Services. Unlike traditional fee-for-service Medicaid, TennCare is an integrated, full-risk, managed care program.

TDH has developed arrangements whereby traditional public health services, including family planning, STI screening and treatment, EPSDT, and tuberculosis screening and treatment are provided in county health departments and generally reimbursed without a primary care provider referral. TDH has current Participating Provider Agreements with all three TennCare (Medicaid) MCO plans (Amerigroup, BlueCare, United Healthcare Community Plan), DentaQuest (TennCare dental), Magellan (TennCare pharmacy), Humana (private insurance), Cigna (private insurance), Aetna (private insurance), Oscar Health Plan (ACA marketplace), Bright Healthcare (ACA marketplace), Medicare (flu/pneumonia credentialed in all county health departments and all Federally Qualified Health Centers are credentialed Part A providers), and Blue Cross Blue Shield of Tennessee (ACA marketplace and private insurance). Traditional public health services (i.e., family planning, STI screening and treatment, EPSDT, tuberculosis screening and treatment, vaccines) are billable to these third-party plans. In most cases, these services are available to third party plan members without a primary care provider referral.

TDH continues to partner with the TennCare MCOs to set up an electronic portal for referral of pregnant women who smoke to connect them with cessation counseling and incentives which are billable services reimbursed by the MCOs. TDH was able to prove efficacy of this model with state tobacco prevention funds and then partner with the MCOs to sustain this important public health intervention as a billable service. This has been a significant achievement for TDH, TennCare, and the MCOs.

Over the past five years, the Department has greatly expanded its ability to bill third party insurance by negotiating contracts with carriers. Nonetheless, the state has been significantly impacted by increasing premiums in the federally run health insurance marketplace. There are three marketplace plans in the state, and increasingly only one plan is offered in any given area. State and federal discussions are rapidly evolving and have the potential to dramatically affect insurance coverage and access for Tennesseans.

Partnership

The scope of MCH/Title V partnership with TennCare extends far beyond reimbursement for MCH services in local health departments. The agencies partner together in multiple population health priorities. For example, TennCare, TDH, and the MCOs meet at least quarterly with the Tennessee Chapter of the American Academy of Pediatrics to coordinate efforts around EPSDT, immunizations, PCMH, and emerging population health priorities. In addition, the MCH/Title V director connects regularly with TennCare in contexts such as the NAS subcabinet, TIPQC, STI monthly meetings, and on an ad hoc basis. TennCare has intentionally included input from TDH and the MCH/Title V Program regarding the implementation of its episodes of care model for payment reform. Additionally, the agencies support the perinatal quality collaborative rollout of its quality bundles for substance-exposed mothers and neonates which is now in sustainment, co-authored a special legislatively required report on neonatal abstinence syndrome in 2017 and another on the landscape of doulas in Tennessee in 2022, and they continue to work closely to prepare the annual co-authorship of the legislatively-required diabetes report.

More detailed examples are highlighted in the Program Partnership Listing supporting document.

New Innovative Health Care Delivery Models

TennCare is seeing positive results from several changes it has made to how health care is paid for and delivered in Tennessee. The state's innovative programs are resulting in improvements in the care of TennCare members, as well as significant programmatic savings. Tennessee's Health Care Innovation Initiative is moving from paying for volume to paying for value. The mission is to reward health care providers for high quality and efficient treatment of medical conditions and help maintain member's health over time. Tennessee is leading by example through the TennCare program and Tennessee state employee's benefits administration in hopes other stakeholders are asked to join in statewide payment and delivery system reform.

The Tennessee Health Care Innovation Initiative has three strategies, primary care transformation, episodes of care, and long-term services and supports. Primary care transformation focuses on the role of the primary care provider in promoting the delivery of preventive services and managing chronic illnesses over time. The initiative has developed an aligned model for Patient Centered Medical Homes (PCMH), Tennessee Health Link for TennCare members with the highest behavioral health needs as well as a shared care coordination tool that allows providers to identify and track the closure of gaps in care linked to quality measures. Episodes of care focus on the health care delivered in association with acute health care events such as a surgical procedure or an inpatient hospitalization. Episodes encompass care delivered by multiple providers in relation to a specific health care event. The long-term services and supports (LTSS) component focuses on improving quality and shifting payment to outcomes-based measures for the QuILTSS program and for enhanced respiratory care.

MCH/Title V Funding for Gap-Filling Health Care Services to MCH Populations

Tennessee continues to use MCH/Title V funding to provide gap-filling services to MCH populations. Examples include:

Children's Special Services: MCH/Title V funding supports care coordination as well as reimbursement for direct services (inpatient/outpatient hospitalizations, physician office visits, laboratory testing, medications, supplies, durable medical equipment, and therapies). Payment for medical services is available for children with a chronic physical diagnosis whose family income is at or below 200% of the federal poverty level. in 2017, CSS piloted increasing the income eligibility to 225% of federally poverty level in one region successfully. As of January 1, 2020, income eligibility has increased to 225% statewide.

Breast and Cervical Cancer Screening: MCH/Title V funding is used to support screening and diagnostic services for uninsured or underinsured women at or below 250% of the federal poverty level. This funding augments other federal funding (CDC) as well as dedicated state appropriations and funding from the Susan G. Komen Foundation.

Family Planning: MCH/Title V funding augments federal Title X funding, state appropriations, and patient billing collections. In CY 2021, 70% of individuals served through the program were at or below 100% of the federal poverty level and 96% were at or below 250% of the federal poverty level.

EPSDT: MCH/Title V funding provides funding for EPSDT visits for uninsured children in local health departments. Likewise, children seen in WIC, immunization clinic, or adolescents in family planning clinics are offered EPSDT services if desired by the family in cooperation with TennCare to increase screening rates across the state. TDH provided 19,283 of TennCare EPSDT visits in the state in CY 2021. TennCare, TDH, and the MCOs share data to outreach to target counties to increase adherence to the AAP periodicity schedule. TDH is enhancing efforts to

connect EPSDT visits to the medical home via CHANT pathways.

III.E.2.b.v.b. Title V MCH – Title XIX Medicaid Inter-Agency Agreement (IAA)

TDH Efforts for Outreach and Enrollment

TDH has undertaken several efforts to assist clients seeking services in public health departments to access public insurance or insurance available through the health insurance marketplace. In the 89 rural counties, there are at least two (and in many cases more) options for obtaining assistance with Medicaid and ACA insurance enrollment. TDH clinic management staff can provide clients with information (verbal and written) about how to access enrollment assistance for these plans. In all clinic sites, TDH staff provides presumptive eligibility determination for Medicaid for pregnant women and for individuals diagnosed with breast or cervical cancer. CHANT utilizes part of its screening and assessment process to determine if families have health insurance. If they indicate that they do not have insurance, or if they do not know who their assigned MCO/PCP is, they are assisted with applying for TennCare/Medicaid and connected to their MCO/PCP. All CHANT team members are being trained on how to determine presumptive eligibility for pregnant women and assist with applications for the Marketplace and CHIP. Furthermore, TDH staff assists pregnant women without insurance or residency status with obtaining CoverKids (Tennessee's CHIP) health insurance for the duration of their pregnancy.

A map was developed in 2014-15 that indicated the locations of state agencies and partners across the state who could assist with insurance enrollment and outreach. The map and list of referral sources was shared with both local and regional health department leadership. Local staff have this map and resource listing as a tool to assist patients in finding navigator and application assistance services.

Clinical Application Coordinators (CACs) are also available in 16 counties (Stewart County, Gibson County and all 14 counties of the Upper Cumberland Region) as well as in metro health departments. These CACs provide outreach and on-site enrollment services in communities across the state for marketplace plans. Additionally, the TDH Breast and Cervical Cancer Screening Program (partially funded by Tennessee's MCH/Title V Program) and the Ryan White HIV/AIDS Program each have one CAC in each rural region to assist with outreach and on-site enrollment efforts. Care coordinators for CSS also assist with enrollment through the marketplace and with appeals for third-party payer denials.

In all clinic sites, TDH staff provides presumptive eligibility (PE) determination for Medicaid for pregnant women and for individuals diagnosed with breast or cervical cancer. TDH has begun including a checklist for those who qualify for Presumptive Eligibility or CoverKids enrollment. This checklist includes in simple terms what Medicaid could request to prevent their coverage from being dropped after the Presumptive period ends. The checklist includes how to sign up and use TennCare Connect so the applicant can manage their Medicaid coverage and contact information on their own. Several health departments provide lists of resources available locally for pregnant women, but this varies by county and region. Central Office reviews equity data from enrollments to determine which communities or groups are being underserved and working to provide services and outreach to those underserved groups and communities.

In CY 2020, TDH assisted 8,988 presumptive eligibility and CoverKids applicants. TDH conducts routine training with local staff on changes in the Medicaid enrollment process to ensure that eligible persons can be served.

Healthcare Financing

TennCare services are offered through managed care entities. Medical, behavioral, and Long-Term Services and Supports are covered by "at-risk" Managed Care Organizations (MCOs). All of TennCare's MCOs have recently been ranked among the top 100 Medicaid health plans in the country. The care provided by TennCare's MCOs is

assessed annually by the National Committee for Quality Assurance (NCQA) as part of the state's accreditation process.[1] In addition to the MCOs, there is a Pharmacy Benefits Manager for coverage of prescription drugs and a Dental Benefits Manager for coverage of services to children under age 21.

Policy Waivers and State Plan Amendments

A Katie Beckett Waiver program was signed into Tennessee state law in May 2019. TennCare subsequently submitted an amendment request to the Centers for Medicare and Medicaid Services (CMS) to implement the program in September 2019. CMS approved the request in November 2020. The program was made available to families that same month. Within two months 849 referrals were received; 600 were received the first day. As of January 2021, 290 children have been enrolled in the program.

The Katie Beckett Program helps kids in Tennessee with disabilities and complex medical needs under the age of 18. The Katie Beckett Program provides care for children under the age of 18 with disabilities and complex medical needs whose parent's income may make them ineligible for Medicaid.

Katie Beckett Part A assists children in Tennessee with the most significant disabilities or complex medical needs. A child must meet the "institutional" level of care but want to receive care in the home. Children in Part A receive full Medicaid Benefits and also can get up to $15,000 in nonmedical services called home and community-based services. A child must have private insurance and a premium may be required based on the family's income.

Katie Beckett Part B is for children in Tennessee who have disabilities and complex medical needs who do not qualify for care in a medical institution. They meet "at risk" level of care. Children in Part B do not receive Medicaid. Families get up to $10,000 a year in services to care for their child. Families can spend the money in Part B in any or all of 5 different ways: a card to pay for medical expenses, paying for a child's private insurance premium, getting paid back for certain services including non-traditional therapies, hiring your own staff to provide respite and supportive home care or having a community provider for services.

Due to the COVID-19 pandemic, a new law addressing telemedicine was enacted in August of 2020 and will remain in place through April 2022. This new law requires health insurers to cover virtual care the same way they would in-person care. Specifically, the new law establishes payment and reimbursement parity between telehealth and in-person visits, removes geographic requirements on original service location and expands the list of healthcare providers who are permitted to provide telehealth services most notably, to include drug addiction counselors. These changes remove many barriers to care and help to reduce possible transmission of COVID-19 infection through person-to-person contact.

Title V/Title XIX Joint Policy Making

MCH/Title V Director and direct supervisor meet monthly with Title XIX's Chief Medical Officer to discuss joint efforts and brainstorm solutions to common challenges. Regular meetings also occur for joint workgroups addressing EPSDT, CHANT, and PE. Over the last year these meetings have produced formal contracts between the two agencies to address the health department's role in EPSDT services for children, care coordination for families including CSHCN (CHANT), immunization outreach, data sharing, and additional support for presumptive eligibility and care coordination for pregnant women.

[1] https://www.tn.gov/tenncare/information-statistics/annual-reports.html

III.E.2.c State Action Plan Narrative by Domain

State Action Plan Introduction

The purpose of the MCH/Title V Program is to broadly support and improve the health of the maternal and child population in Tennessee. This is done by identifying priority needs and working with partners to leverage program capacity to meet those needs, which ultimately improves health outcomes for women, infants, children, and families across the state. Tennessee's MCH/Title V Program works to convene MCH stakeholders at least twice a year, so that all programs serving these populations can be strategically aligned statewide. This strategic alignment is imperative for utilizing resources efficiently and assuring the greatest impact.

The MCH Block grant works within a life course framework, operationalized by the population health domains below. Through these domains the MCH population is subdivided into time periods that represent important stages in life. States are required to choose at least one priority within each domain, ensuring that priorities are spread across the life course.

Population Health Domains:

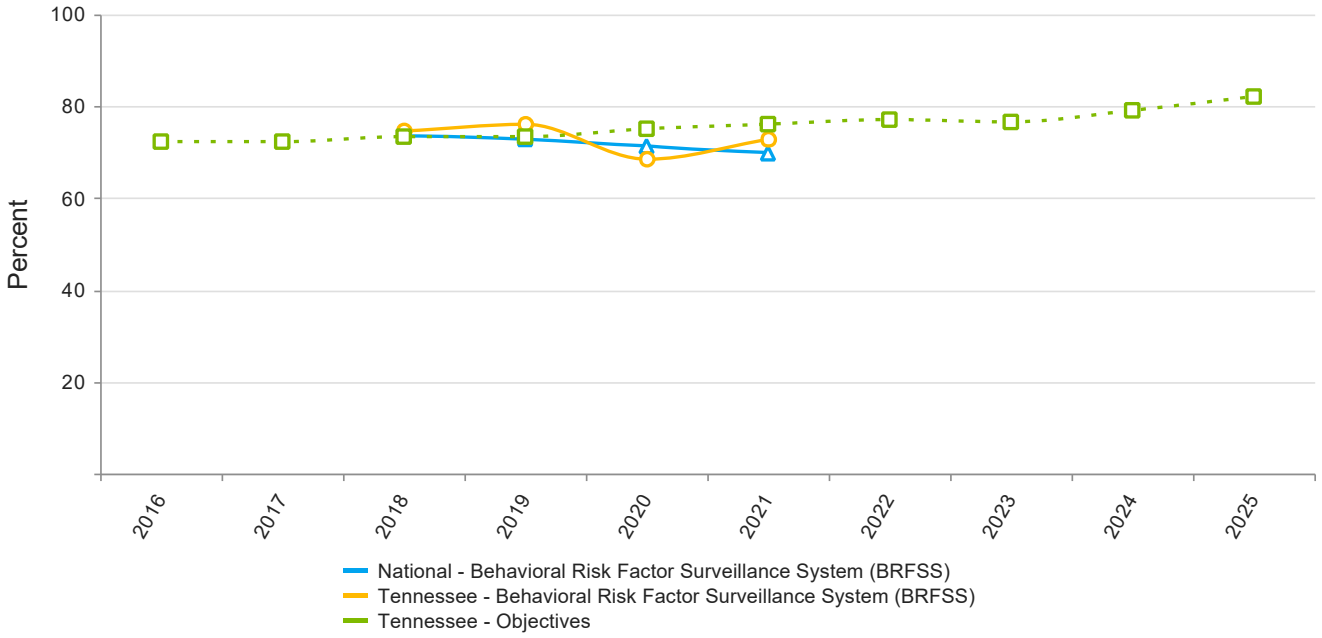
- Women/Maternal Health
- Perinatal/Infant Health
- Child Health
- Adolescent Health
- Children with Special Health Care Needs (CYSHCN)
- Cross-cutting/Life Course

Utilizing information gathered through the comprehensive needs assessment, the Tennessee Title V/MCH program identifies priority areas and then assembles teams to work on each area. Each FHW senior leader, and their program/epidemiology staff, are entrusted to lead at least one priority. The teams are responsible for developing action plans, creating logic models (included in supporting documents), implementing the plans, reporting on progress, and measuring success. All of this is done in collaboration with stakeholders at multiple touchpoints throughout the year.

Women/Maternal Health

National Performance Measures

NPM 1 - Percent of women, ages 18 through 44, with a preventive medical visit in the past year
Indicators and Annual Objectives



Federally Available Data					
Data Source: Behavioral Risk Factor Surveillance System (BRFSS)					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective			75	76	77
Annual Indicator		74.6	76.0	68.3	72.6
Numerator		875,792	897,415	808,894	868,079
Denominator		1,174,631	1,180,193	1,185,003	1,195,830
Data Source		BRFSS	BRFSS	BRFSS	BRFSS
Data Source Year		2018	2019	2020	2021

Previous NPM-1 BRFSS data for survey year 2017 that was pre-populated under the 2018 Annual Report Year is no longer displayed since it is not comparable with 2018 survey data.

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	76.5	79.0	82.0

Evidence-Based or –Informed Strategy Measures

ESM 1.1 - Create pre/posttests to assesses provider knowledge of and confidence using PATH (Parenthood/Pregnancy Attitude, Timing, and How important is pregnancy prevention).

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			Yes
Annual Indicator		No	No
Numerator			
Denominator			
Data Source		TDH	TDH
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	Yes	Yes	Yes

ESM 1.2 - Percent of family planning encounters that occur via telehealth

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			0.4
Annual Indicator		0.3	1.2
Numerator			
Denominator			
Data Source		PTBMIS	PTBMIS
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	0.8	1.6	3.2

ESM 1.3 - Number of women receiving patient navigation for women's health services

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			250
Annual Indicator		0	0
Numerator			
Denominator			
Data Source		REDCap	REDCap
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	250.0	250.0	250.0

ESM 1.4 - Percent of births covered by hospitals implementing data-driven, clinical recommendations

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			65
Annual Indicator		55	55
Numerator			
Denominator			
Data Source		NVSS	NVSS
Data Source Year		2020	2021
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	75.0	85.0	90.0

ESM 1.8 - Percent of recommendations with who/what/when components

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			75	79
Annual Indicator			68	68
Numerator				
Denominator				
Data Source			MMR Program	MMR Program
Data Source Year			CY 2020	CY 2021
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	84.0	89.0	94.0

State Performance Measures

SPM 1 - Percent of new mothers whose pregnancy was intended

Measure Status:	Active

State Provided Data					
	2018	2019	2020	2021	2022
Annual Objective	49.9	49.9	62	62	63
Annual Indicator	50.6	51.5	62	59	59
Numerator					
Denominator					
Data Source	PRAMS	PRAMS	PRAMS	PRAMS	PRAMS
Data Source Year	2015	2017	2016-2018	2020	2021
Provisional or Final ?	Provisional	Final	Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	63.0	64.0	64.0

SPM 2 - Percent of facilities implementing patient safety recommendations

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			12.5	63
Annual Indicator		54	25	44
Numerator				
Denominator				
Data Source		MMR Annual Performance Review Report	MMR Annual Performance Review Report	MMR Annual Performance Review Report
Data Source Year		2019	2020	2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	66.0	69.0	72.0

SPM 3 - Percent of community level recommendations implemented

Measure Status:	Inactive - Replaced			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			10	12.5
Annual Indicator			15	0
Numerator				
Denominator				
Data Source			MMRIA and ERASE MM APR document	n/a
Data Source Year			2020	n/a
Provisional or Final ?			Final	Final

SPM 23 - Number community level recommendations implemented

Measure Status:	Active
State Provided Data	
	2022
Annual Objective	
Annual Indicator	13
Numerator	
Denominator	
Data Source	MHTF/Community Grants
Data Source Year	2021
Provisional or Final ?	Final

Annual Objectives		
	2024	**2025**
Annual Objective	15.0	16.0

State Outcome Measures

SOM 1 - Rate of pregnancy-associated mortality to live birth

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			95.6	93.2
Annual Indicator		78.3	124.5	124.5
Numerator				
Denominator				
Data Source		MMRIA and birth records	MMRIA and birth records	MMRIA and birth records
Data Source Year		CY 2019	CY 2020	CY 2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	90.9	89.5	88.2

SOM 2 - Rate of pregnancy-related mortality to live births

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			25.6	23.5
Annual Indicator		28.6	58.5	58.5
Numerator				
Denominator				
Data Source		MMRIA and birth records	MMRIA and birth records	MMRIA and birth records
Data Source Year		CY 2019	CY 2020	CY 2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	22.0	21.8	20.5

State Action Plan Table

State Action Plan Table (Tennessee) - Women/Maternal Health - Entry 1	
Priority Need	
Decrease pregnancy-associated mortality	
NPM	
NPM 1 - Percent of women, ages 18 through 44, with a preventive medical visit in the past year	
Objectives	
Increase the percent of women, ages 18-44, with a preventive medical visit in the past year from 70% on October 1, 2020 to 82% on September 30, 2025.	
Strategies	
Increase surveillance of maternal deaths	
ESMs	Status
ESM 1.1 - Create pre/posttests to assesses provider knowledge of and confidence using PATH (Parenthood/Pregnancy Attitude, Timing, and How important is pregnancy prevention).	Active
ESM 1.2 - Percent of family planning encounters that occur via telehealth	Active
ESM 1.3 - Number of women receiving patient navigation for women's health services	Active
ESM 1.4 - Percent of births covered by hospitals implementing data-driven, clinical recommendations	Active
ESM 1.5 - Percent of birthing hospital providers trained reporting a change in knowledge	Inactive
ESM 1.6 - Percent of non-clinical members participating in the action group	Inactive
ESM 1.7 - Percent of postpartum women with positive screenings for depression (using a validated screening tool) who will receive resources/education or referrals for professional services	Inactive
ESM 1.8 - Percent of recommendations with who/what/when components	Active

NOMs

NOM 2 - Rate of severe maternal morbidity per 10,000 delivery hospitalizations

NOM 3 - Maternal mortality rate per 100,000 live births

NOM 4 - Percent of low birth weight deliveries (<2,500 grams)

NOM 5 - Percent of preterm births (<37 weeks)

NOM 6 - Percent of early term births (37, 38 weeks)

NOM 8 - Perinatal mortality rate per 1,000 live births plus fetal deaths

NOM 9.1 - Infant mortality rate per 1,000 live births

NOM 9.2 - Neonatal mortality rate per 1,000 live births

NOM 9.3 - Post neonatal mortality rate per 1,000 live births

NOM 9.4 - Preterm-related mortality rate per 100,000 live births

NOM 10 - Percent of women who drink alcohol in the last 3 months of pregnancy

NOM 11 - Rate of neonatal abstinence syndrome per 1,000 birth hospitalizations

NOM 23 - Teen birth rate, ages 15 through 19, per 1,000 females

NOM 24 - Percent of women who experience postpartum depressive symptoms following a recent live birth

State Action Plan Table (Tennessee) - Women/Maternal Health - Entry 2

Priority Need

Increase family planning

SPM

SPM 1 - Percent of new mothers whose pregnancy was intended

Objectives

Increase the percentage of mothers whose pregnancy was intended from 62% on October 1, 2020 to 64% on September 30, 2025.

Strategies

Increase knowledge, awareness, and usage of reproductive life plans through PATH across the state of Tennessee

Increase rural access to family planning services through telehealth

Increase access to women’s health services by addressing and eliminating barriers to care through client navigation

State Action Plan Table (Tennessee) - Women/Maternal Health - Entry 3

Priority Need

Decrease pregnancy-associated mortality

SPM

SPM 2 - Percent of facilities implementing patient safety recommendations

Objectives

Increase the percent of facilities implementing patient safety recommendations from 24% on October 1, 2020 to 33% on September 30, 2025.

Strategies

Increase evidence-based education at hospitals on topics identified by the Maternal Mortality Review Committee (MMRC)

State Action Plan Table (Tennessee) - Women/Maternal Health - Entry 4

Priority Need

Decrease pregnancy-associated mortality

SPM

SPM 23 - Number community level recommendations implemented

Objectives

Increase the number of community level recommendations implemented from 2 on October 1, 2020 to 8 on September 30, 2025.

Strategies

Increase surveillance of maternal deaths.

State Action Plan Table (Tennessee) - Women/Maternal Health - Entry 5

Priority Need

Decrease pregnancy-associated mortality

SOM

SOM 2 - Rate of pregnancy-related mortality to live births

Objectives

Decrease the rate of pregnancy-related mortality to live births from 25.6 per 100,000 live births on October 1, 2020 to 20.5 per 100,000 live births on September 30, 2025.

Strategies

Increase evidence-based education at hospitals on topics identified by the Maternal Mortality Review Committee (MMRC)

State Action Plan Table (Tennessee) - Women/Maternal Health - Entry 6

Priority Need

Decrease pregnancy-associated mortality

SOM

SOM 1 - Rate of pregnancy-associated mortality to live birth

Objectives

Decrease pregnancy-associated mortality from 51 on October 1, 2020 to 42 on September 30, 2025.

Strategies

Increase access to services through community agency involvement to improve maternal health outcomes

Priority: Increase Access to Family Planning Services

MCH/Title V Funding: The Family Planning priority team is administratively led by the Reproductive and Women's Health section within the Division of Family Health and Wellness of the TDH. The Reproductive and Women's Health (RWH) section includes the Family Planning, Presumptive Eligibility, Breast and Cervical Screening (BCS), Adolescent Pregnancy Prevention, Sexual Risk Avoidance Education, and Rape Prevention Education Programs. Family Planning program efforts are partially funded by MCH/Title V funds. Additionally, the RWH Section Chief and BCS Program Director are partially funded by MCH/Title V, and the BCS Administrative Assistant 2 is fully funded by MCH/Title V.

Interpretation of Performance Data on selected NPMs, SPMs, and SOMs:

SPM 1: Percent of new mothers whose pregnancy was intended

Baseline for this SPM was 62% based on a three-year average for 2016-2018. The objective for grant year 1 was to maintain this measure at 62%. Grant year 1 performance was based on 2020 PRAMS data during which time the percent of new others whose pregnancy was intended was 59%. Compared to baseline, the difference was not statistically significant, and the objective was therefore met. Data from the 2021 PRAMS are not yet available.

Family Planning client numbers decreased significantly during the pandemic. Although numbers are slowly rebounding, numbers have still not reached pre-pandemic levels. Access to family planning services continues to increase as services are now available within health departments, via telehealth, and in an adolescent clinic in Northeast TN. Many outreach and educational events that were postponed or held virtually are transitioning to in-person and back into communities.

Accomplishments and Challenges (based on FY2022 Action Plan):

Strategy 1: Increase knowledge, awareness, and usage of reproductive life plans through PATH across the state of Tennessee

Supporting Evidence for Strategy 1: A reproductive life plan (RLP) is a set of personal goals about having or not having children which is based on each individual's own values, goals, and resources[1]. Family planning providers play a key role in helping both women and men to reflect on their reproductive intentions, to complete a RLP and to access appropriate services to meet their RLP goals. PATH is a client-centered approach to assess parenthood/pregnancy attitude, timing and the importance of pregnancy prevention. PATH can be used with any gender, sexual orientation or age. PATH is designed to facilitate listening and efficient client-centered conversations about preconception care, contraception and fertility as appropriate. PATH training is critical to ensuring a skilled family planning workforce that can provide client-centered, non-coercive, and culturally competent services[2].

Activity 1a: Facilitate PATH trainings with various internal and external partners, including TPCA, TPHA, colleges and universities, rural health clinics, federally qualified health centers, etc.

Report 1a: PATH training was conducted with university staff in Title X Family Planning clinic sites, including the University of Tennessee Southern, University of Tennessee Martin, University of Memphis, East Tennessee State University, and Middle Tennessee State University. Additionally, the RWH Clinical Trainer provided PATH training at the Tennessee Charitable Care Network's (TCCN) annual conference. There were approximately 15 in attendance during the session at TCCN. Approximately half were

community health workers. All attendees were from varying rural health and charitable clinics.

Activity 1b: Provide community outreach and education surrounding the importance of a reproductive life plan and birth spacing to faith-based communities and community partners.

Report 1b: Family Planning Administrators conduct community outreach and education about reproductive life planning and family planning services. Education was presented at 22 community and faith-based events and shared with community partners.

Activity 1c: Create pre- and post-PATH training evaluations to identify gaps in learning.

Report 1c: Due to competing priorities, we were unable to complete pre- and post-PATH training evaluations; and therefore, there is no update to report for **ESM 1.2**.

Activity 1d: Increase assessment with PATH with non-family planning clients within TDH.

Report 1d: Multiple Metro health departments initiated discussions to incorporate reproductive life planning into STI visits. Sullivan County Health Department staff recently implemented PATH assessments during STI visits. As a result, they have increased their number of male family planning clients. Family planning is continuing discussions with Community Health Services to encourage the use of PATH for reproductive life planning and assessment during primary care visits.

Challenges Issues Related to Implementation of Strategy 1:

Insufficient provider knowledge coupled with competing priorities during medical visits has resulted in a lack of PATH assessment in non-family planning clients in the local health departments. This is compounded by an inefficient and time-consuming medical record system. Reproductive life planning is part of the nursing orientation module. However, CHS has not implemented formal PATH training.

Strategy 2: Increase rural access to family planning services through telehealth

Supporting Evidence for Strategy 2: TDH seeks to ensure that minority communities, individuals residing in underserved rural and urban areas, and individuals with disabilities can reap the benefits of telehealth by overcoming barriers to care. These barriers can include taking time off work, transportation, childcare, and confidentiality, among others. Telehealth has the potential to help clients overcome these barriers and improve access to care[3].

Activity 2a: Promote Family Planning Telehealth services through key stakeholders and community partners using flyers, posters, social media posts, and other identified promotional materials.

Report 2a: Baseline for **ESM1.3** was 0.2% based on federal fiscal year 2020. The objective for grant year 1 (i.e., fiscal year 2021) was to maintain this percentage at 0.2%. The actual percentage for fiscal year 2021 was 0.3% which exceeded the objective. The objective for grant year 2 (i.e., fiscal year 2022) was 0.4%. The actual percentage for fiscal year 2022 was 1.2%, which exceeded the objective.

Telehealth promotion has proven vital in increasing telehealth visits. Promotion efforts included a digital mass media campaign, sharing palm cards, social media posts, and posting flyers and posters in health departments and community spaces. Health educators, family planning nurses, and other Family Health & Wellness staff across the state continue to promote telehealth. Collaboration with rural health department leadership has helped establish telehealth best practices and promote services.

Activity 2b: Create, disseminate, and evaluate a client satisfaction survey to identify areas for program improvement.

Report 2b: The telehealth satisfaction survey was created and implemented in October 2021. It is available in both English and Spanish. 190 responses were received as of September 29, 2022. Survey results are overwhelmingly positive, with the most common benefit cited as not having to wait for an in-person appointment. Over 90% of respondents noted that scheduling was easy, the provider met their needs, and they would recommend Family Planning telehealth to their friends and family.

Activity 2c: Continue to expand telehealth services in additional rural health regions by providing additional education and training to key staff.

Report 2c: Family Planning Administrators have continued to partner with local/regional health educators to promote telehealth services and provide promotional materials. Family Planning telehealth is currently being implemented in all but two rural health department regions.

Activity 2d: Establish partnerships with health clinics at colleges and universities to refer clients for family planning telehealth services.

Report 2d: Family planning administrators, health educators, and central office staff continuously provide educational and promotional materials that include reproductive life planning/PATH and information about FP telehealth to community partners, including colleges and universities. Family planning administrators have collaborated with various health clinics at university/college sites, including, University of Tennessee Southern, University of Tennessee Martin, University of Memphis, East Tennessee State University, and Middle Tennessee State University. The spring digital ad campaign specifically targeted college-age individuals, and this information was shared with university staff.

Challenges Related to Implementation of Strategy 2:
Due to competing public health concerns and priorities, COVID, natural disasters, decreased funding, reduced staff availability, and staff attrition, the implementation, and rollout of telehealth has been delayed. Some rural counties continue to experience limited access to technology and transportation difficulties.

Strategy 3: Increase access to women's health services by addressing and eliminating barriers to care through client navigation.

Supporting Evidence for Strategy 3: There are many health inequities surrounding women's health,

obstetrics, and gynecology. Client navigation can support efforts to address barriers to care and help to reduce these disparities[4].

Activity 3a: Develop a scope of service for client navigation contracts that, at a minimum, identify target or priority populations and expectations of the contracted organization.

Report 3a: A scope of service was finalized in early 2022, and the contracts were implemented on August 1, 2022. Prior to finalization, the scope was presented to the grantees (five metro health departments), any concerns they had were addressed, and ideas for implementing activities appropriately were discussed. In each metro, we discussed implementation of the new scope of service with new and existing partners to highlight the resource that is now available. Additionally, we are working with each contracted agency to identify resources and support based on their specific population needs. This may include connections to housing authorities, TennCare advocacy or support groups, location of specialty providers, etc.

Activity 3b: Contract with health departments, community clinics, healthcare facilities, or Federally Qualified Health Centers to secure women's health client navigators.

Report 3b: Each of the 5 (five) metro health departments has contracted to support client navigation for women's health. These contracts are ongoing but have a minimum 2-year pilot. Additionally, the Tennessee Breast and Cervical Screening Program has implemented 3 (three) contracts for community patient navigators with a health system and two Federally Qualified Health Centers which are located in Davidson and Shelby Counties and in rural East Tennessee. These contracts are single-year contracts that will be providing ongoing technical assistance to support sustainability. Each entity serves a different area and addresses its population of need.

Activity 3c: Update the navigation tracking tool in REDCap to ensure accurate tracking of clients' barriers and resolutions.

Report 3c: The REDCap tool is being finalized and will be implemented with several partners to collect client barriers, specifically for the breast and cervical cancer care continuum and presumptive eligibility for TennCare. Additional edits to include primary care medical home assessment and other key items are being added to the tool.

Activity 3d: Provide navigation services according to identified scope while identifying and addressing disparities in care.

Report 3d: Grant years 1 and 2 were used to establish funding for women's health navigators and implement contracts for these services, The objective for **ESM 1.6** (Number of women receiving patient navigation for women's health services) was zero (0) in grant year 1 and 250 in grant year 2. Unfortunately, contracts did not go into effect until August 2022 and grantees did not have enough time to start providing navigation services before the end of the grant year (i.e., the number of women receiving navigation services in grant year 2 was zero (0). However, these services are expected to begin in grant year 3.

Challenges Related to Implementation of Strategy 3: Many of the metro health departments had a delay in hiring positions to support the new contracts. This was in part due to processes in place that required a contract to start before a position could be posted. While activities have started, they are being implemented slower than anticipated to ensure ample time to onboard staff.

Update on Other Women/Maternal Health Programs Supported by MCH/Title V:

Breast and Cervical Cancer Screening: BCS utilizes MCH/Title V funds for the new Women's Health Navigator contracts in the metro health departments. Additionally, funding is used to provide direct clinical services related to breast and cervical cancer screening and diagnostics. These funds also support ongoing technical assistance to ensure the sustainability of navigation efforts.

Family Planning: The Tennessee Family Planning Program utilizes MCH/Title V Funds to support direct family planning services in local and metro health departments. Funding is also used to support county, regional, and central office staff.

Priority: Decrease Pregnancy-Associated Mortality

MCH/Title V Funding: The Pregnancy-Associated Mortality priority team is administratively led by the Violence, Injury Prevention and Detection section within the Division of Family Health and Wellness of TDH. The Violence, Injury Prevention and Detection section includes SIDS/SUID prevention, infant mortality reduction, fetal death review, child fatality review, maternal mortality review, violence and injury prevention, traumatic brain injury, as well as suicide prevention. The maternal mortality reduction efforts are funded by state and other federal funds. While MCH/Title V does not directly fund these activities, it does fund staff who support maternal mortality reduction efforts, including the Section Chief and the program's administrative assistant.

Interpretation of Performance Data on selected NPMs, SPMs, and SOMs:

NPM 1: Percent of women, ages 18 through 44, with a preventive medical visit in the past year
The objective established for FY2022 to have 76 percent of women, ages 18 through 44, with a preventive medical visit in the past year was exceeded by 5.5%. In FY2022, the percent of women with a preventive medical visit within the past year increased to 81.5%, compared to 79.1% in FY2021.

This increase was due to the changing dynamics of the pandemic. More healthcare facilities have added additional time for preventive care and people have felt a little safer going to the doctor. Additionally, the Reproductive and Women's Health program partners with other programs across the state to promote annual wellness exams for women on an on-going basis.

SPM 2: Percent of facilities implementing patient safety recommendations
Per communications with TIPQC, the Severe Maternal Hypertension project, now in sustainment, was implemented in 15 out of 59 birthing hospitals, the new Intraventricular Hemorrhage pilot launched in 6 out of 59 hospitals, and SIMS education occurred in 27 out of 59 birthing hospitals during this reporting period. The total unduplicated count of individual birthing hospitals that participated in the implementation of patient safety recommendations lead by TIPQC was 31 facilities. Also, a total of 20 non-birthing hospitals implemented recommendations through THA. In FY 2022, the percent of hospitals implementing patient safety recommendations increased to 43% (51), compared to 30% (35) in FY2021.

Non-birthing hospitals were erroneously left out of the reporting for FY2021, increasing the total number of facilities implementing patient safety recommendations from 15 of 59 birthing facilities to 35 out of 116 total facilities during that timeframe. Implementation of patient safety recommendations saw an increase in FY2022 due to varying opportunities offered, like SIMS trainings. There was also a strong push to educate healthcare professionals, and the public on the rising of maternal mortality and morbidity.

SPM 3: Number of community level recommendations implemented
In FY2022, there were 13 community level recommendations implemented. This is a decrease from FY2021, where 18 community level recommendations were implemented. Nonetheless, the 13 community level recommendations implemented exceeded the FY2022 objective of six. After each quarterly Maternal Mortality Review Committee meeting community level recommendations are distributed to the Maternal Health Task Force, distributed to THA's non-birthing hospitals, and uploaded to our Maternal Mortality Review website.

SOM 1: Rate of pregnancy-associated mortality to live births
At the time this report was prepared (April 2023), CY 2021 maternal deaths had not been reviewed in their entirety and a finalized data set was not available. Therefore, the status of this measure is TBD.

The priority team reported that the rate of pregnancy-associated mortality was lower than the projected objective for FY 2020 with a rate of 78.3, but higher than the objective for FY 2021 with a rate of 124.5 per 100,000.

SOM 2: Rate of pregnancy-related mortality to live births
At the time this report was prepared (April 2023), CY 2021 maternal deaths had not been reviewed in their entirety and a finalized data set was not available. Therefore, the status of this measure is TBD.

The priority team reported that the rate of pregnancy-related mortality was higher than the projected objective for FY 2020 with a rate of 28.6 and a rate of 58.5 in FY 2021.

Accomplishments and Challenges (based on FY2022 Action Plan):

Strategy 1: Increase surveillance of maternal deaths

Supporting Evidence for Strategy 1: There is moderate evidence to suggest maternal mortality review provides comprehensive information on causes of death, preventability, contributing factors, and leads to actions improving maternal deaths.

Activity 1a: Identify pregnancy-associated deaths and facilitate state Maternal Mortality review Committee meetings. The Committee will identify age, race and place for each death reviewed to identify disparities.

Report 1a: Review meetings were planned and facilitated quarterly by the MMR program. By December 2021, all pregnancy-associated deaths occurring in 2020 had been reviewed. The MMR Annual Report was released in April 2022 and included data on age, race and place of deaths.

The review of deaths is a partnership with all the agencies represented on the committee including TennCare, THA, various hospitals, March of Dimes, Department of Mental

Health, and Substance Abuse Services and TennCare MCOs.

Activity 1b: Through the Maternal Mortality Review Committee, determine the relatedness of all deaths to pregnancy, contributing factors, cause(s) of death, and preventability of all deaths. For each pregnancy-related death determine age, race, and place of death to identify disparities. For each pregnancy-related death, the MMRC will determine the cause as specified by PMSS.

Report 1b: The MMRC met 5 times throughout the year to review deaths and to determine relatedness of each case. The annual report released in April 2022 highlights data from the 2020 deaths including a total of 98 women who died during pregnancy or within a year of the end of pregnancy. Almost half (47%) of these deaths were determined by the MMRC to be pregnancy-related. Data was analyzed for the report to identify disparities and a chart was included. Non-Hispanic Black women were 2.5x more likely to die than white women. Data was analyzed for both metro vs. rural and grand region of the state to assess disparities in place. The MMRC discussed preventability for each case and 89% of pregnancy-related deaths were deemed preventable with 24% having a good chance of being prevented.

The review of deaths is a partnership with all the agencies represented on the committee including TennCare, THA, various hospitals, March of Dimes, Department of Mental Health, and Substance Abuse Services and TennCare MCOs.

Activity 1c: Develop recommendations for preventing subsequent maternal deaths based upon MMRC findings and for inclusion in the Maternal Mortality annual report and dissemination to relevant stakeholders quarterly. These recommendations include reference to specific disparities, contributing factors, and cause(s) of death identified in the reviews.

Report 1c: Recommendations are developed after each quarterly review meeting. These recommendations are based on the deaths reviewed during that meeting, thus creating a more real-time alert on emerging issues (e.g., for deaths with COVID-19 as a contributing factor) being seen during reviews. During this reporting period, the alerts were sent to hospitals and posted on the maternal mortality website on October 13, 2021, January 20, 2022, and June 27, 2022.

At the time this report was prepared (April 2023), CY 2021 maternal deaths had not been reviewed in their entirety and a finalized data set was not available to determine **the percent of recommendations with who/what/when components (ESM 1.12)**. Therefore, the status of this measure is TBD. During FY 2021, the priority team reported that 68% of recommendations included a who/what/when component.

Challenges Issues Related to Implementation of Strategy 1: Hospital Discharge Data identified an additional 40 potential cases for CY 2021. Due to the increased number of cases for 2021, the timeline for completion of case abstractions in comparison to 2020 has been a challenge. This has also put an increased demand on our MMRC members, resulting in more meetings than anticipated to review all the cases.

Strategy 2: Increase evidence-based education at hospitals on topics identified by the Maternal Mortality Review Committee (MMRC).

Supporting Evidence for Strategy 2: There is moderate evidence to suggest provider education, such as continued medical educational opportunities appear to be effective.

Activity 2a: Contract with Tennessee Hospital Association (THA) and Tennessee Initiative for Perinatal Quality Care (TIPQC) to provide training to birthing hospitals on top causes leading to maternal death as identified by the MMRC. Birthing hospitals in the grand region of the state with the highest disparities will be given top priority for training.

Report 2a: During FY2022, 55% of hospital statewide births were covered by facilities implementing data-driven, clinical recommendations (**ESM 1.8**), which was lower than the annual objective of 65%. Ongoing challenges in the hospital setting related to staffing may have attributed to the goal not being met. Specific to TIPQC, their selection of quality improvement (QI) projects is informed through a voting process at their annual conference, followed by research on the availability of existing resources, and the feasibility of implementation. TIPQC holds promotional webinars and sends out marketing material to highlight upcoming projects. All hospitals receive an invitation to be a part of these QI projects; however, the decision to participate is ultimately left up to the leadership at each facility.

A contract was in place with THA to provide education on pre-eclampsia, eclampsia and/or hypertension during pregnancy and the postpartum period and postpartum hemorrhage. These educational opportunities were offered to emergency department staff at non-delivering hospitals. Blood pressure simulators are utilized to demonstrate proper blood pressure measurements as that is a critical piece in identification and treatment. Left behind is a resource notebook so that if ED staff need ready access to those checklists, treatment algorithms, etc., then they have those all together in one place.

TIPQC offered simulation training to birthing hospitals and EMS on maternal hypertension and hemorrhage. Upon completion of the training, a maternal simulator, a supply kit, and a resource notebook was provided for each facility to use in future simulation training exercises. Over 250 attendees, a majority of which were healthcare professionals, attended the 2022 TIPQC Annual Meeting. A total of 32 Speakers Bureau presentations were offered to 1,323 participants in 2021, and covered topics included health equity, management of acute hypertension, maternal hemorrhage, and perinatal mood disorders. TIPQC's "Healthy Mom, Healthy Baby" Podcast, had a total all-time download of 15,200, with an average of 1,516 downloads per 90 days.

Challenges Issues Related to Implementation of Strategy 2:
TIPQC and THA successfully delivered training on top causes leading to maternal deaths. Challenges faced during the implementation were the nursing and nursing manager staff changes which led to capacity issues, hindering participation in some of these efforts.

Strategy 3: Increase access to services through community agency involvement to improve maternal health outcomes

Supporting Evidence for Strategy 3: There is moderate evidence to suggest that expanded insurance coverage is effective.

Activity 3a: Convene a maternal health task force, with a minimum of 25 members, quarterly to highlight innovative and best practices for preventing maternal death. The task force will include membership from the Office of Minority Health and Disparities Elimination to represent vulnerable populations.

Report 3a: Task force meetings were convened quarterly with over 80 individuals joining the task force. Each meeting highlighted evidence-based practices to address the MMRC recommendations. The meeting on July 27, 2022 focused on timely treatment of severe maternal hypertension.

Activity 3b: Fund a minimum of 3 community agencies to implement MMR recommendations on top causes of maternal death identified by the MMRC. Proposals will be evaluated on how well they are addressing at-risk populations.

Report 3b: In CY2022, four agencies received funding to implement MMR recommendations. East Tennessee College of Nursing, East Tennessee Department of Pediatrics, Renewal House, and University of Tennessee were funded to implement projects addressing the 2021 recommendations. Recommendations being addressed include: education on seatbelt use, education on intranasal naloxone, protocols for treatment of substance use, resources for improving maternal mental health, education for gun owners on firearm safety, best practices for provider preeclampsia management, implicit bias training for healthcare staff, provider screening and management of high-risk conditions, protocols and treatment of cardiac conditions, preconception counseling, and education to women on establishing early pregnancy diagnosis and prenatal care. In addition, health disparities were addressed within each implemented activity.

Partners in this work include East Tennessee State University (ETSU) Pediatrics and School of Nursing, The University of Tennessee, and Renewal House.

Activity 3c: Increase the number of women of childbearing age participating in family planning and well woman visits by expanding and promoting telehealth to better reach those people in areas at risk for pregnancy-associated deaths.

Report 3c: Baseline for **ESM1.3**, percent of family planning visit that occur via telehealth, was 0.2% based on federal fiscal year 2020. The objective for grant year 1 (i.e., fiscal year 2021) was to maintain this percentage at 0.2%. The actual percentage for fiscal year 2021 was 0.3% which exceeded the objective. The objective for grant year 2 (i.e., fiscal year 2022) was 0.4%. The actual percentage for fiscal year 2022 was 1.2%, which exceeded the objective.

Telehealth promotion has proven vital in increasing telehealth visits. The average number of clients seen has tripled since last year. The Tennessee Family Planning Program launched a mass media campaign in March 2022. Messaging was comprised of multiple mediums, including videos, print ads, and social media messaging. These

messages were shared on television, radio, and social media platforms. Health educators, family planning nurses, and other Family Health & Wellness staff across the state continue to promote telehealth. Collaboration with rural health department leadership has helped establish telehealth best practices and promote services.

In November of 2021, Community Health Services also began seeing Family Planning clients via telehealth. FP clients have been seen via telehealth in 39 counties, and there are plans to continue to expand.

Activity 3d: Increase the number of women applying for presumptive eligibility by implementing an outreach plan and collaborating with community partners to reach vulnerable populations.

Report 3d: The Presumptive Eligibility Program has made progress in partnering with various organizations across the state. The Presumptive Eligibility Program has worked with Homeland Heart (a Doula non-profit who works with African American women in Nashville), Choices Chattanooga (a crisis pregnancy center), Firefly (a program within Vanderbilt University Medical Center that works with pregnant and post-natal women with opioid misuse), and Open Door Pregnancy and Resource Center (a crisis pregnancy center in Robertson County) to inform them of the PE program and how their clients can access our services. The Presumptive Eligibility Program is working on identifying other partners based on health equity needs of the population we work with.

Challenges Issues Related to Implementation of Strategy 3:

Great strides have been made throughout the last year to connect with the community regarding ways to improve maternal health outcomes. Due do unforeseen contracting delays, ETSU School of Nursing was unable to complete certain services outlined in their contract to address the MMR recommendations and The University of Tennessee experienced barriers implementing their project within the expected timeframe. ETSU Pediatrics and Renewal Nurse had a successful grant cycle and reported no challenges.

1. American College of Obstetricians and Gynecologists' Committee on Health Care for Underserved Women. Committee Opinion No. 654: Reproductive Life Planning to Reduce Unintended Pregnancy. Obstet Gynecol. 2016 Feb;127(2):e66-9. doi: 10.1097/AOG.0000000000001314. PMID: 26942389.
2. Hipp, S.L., Chung-Do, J. and McFarlane, E., 2019. Systematic review of interventions for reproductive life planning. Journal of Obstetric, Gynecologic & Neonatal Nursing, 48(2), pp.131-139.
3. McKenney, K. M., Martinez, N. G., & Yee, L. M. (2018). Patient navigation across the spectrum of women's health care in the United States. *American journal of obstetrics and gynecology*, *218*(3), 280–286. https://doi.org/10.1016/j.ajog.2017.08.009
4. Polinski JM, Barker T, Gagliano N, Sussman A, Brennan TA, Shrank WH. Patients' Satisfaction with and Preference for Telehealth Visits. J Gen Intern Med. 2016;31(3):269-275. doi:10.1007/s11606-015-3489-x

Priority: Increase Access to Family Planning Services

Objective for SPM 1: Increase the percentage of mothers whose pregnancy was intended from 62% on October 1, 2020, to 64% on September 30, 2025.

Description: Between 2016 and 2020, 39% of new mothers in Tennessee said that their pregnancy was unintended (i.e., it was mistimed or unwanted), while 18% said they were unsure how they felt about their pregnancy (PRAMS). Unintended pregnancies were most common among Black non-Hispanic mothers (63%), followed by Hispanics (42%) and White non-Hispanics (32%). The prevalence of unintended pregnancies decreased with increasing maternal age. Among teens less than 18 years of age, 93% of pregnancies resulting in a live birth were unintended. This compares to 54% among women aged 18-24 and 32% among those aged 25 and older.

To estimate what percentage of the eligible population is being served by the Tennessee Family Planning program, we compared the number of unique female clients seen in 2019 (the first full year prior to COVID) who were 19-44 years of age and uninsured, to the estimated number of uninsured females aged 19-44 in the population (family planning program data and American Community Survey). State-wide, the program is serving approximately 18% of the potentially eligible population. Within individual counties, this percentage ranged from 5% to 85%. There were 54 counties (out of 95) that served less than 21% of the eligible population [24 nonurban counties (i.e., micropolitan and noncore) and 20 urban counties (i.e., large core, large fringe, medium, and small metros)], highlighting geographic disparities in the need for family planning services.

Disparity Elimination Focus: While race, age, and other disparities will be analyzed, the focus will be on geographic disparities. Out of the 95 counties served by the family planning program, only 54 are serving more than 21% of the eligible population. More than half of these counties are classified as nonurban. The goal is to increase the utilization of family planning services and women's health services in these areas and reach clients facing place-based disparities through the Strategies described below.

The following strategies and activities are planned for *October 1, 2023, to September 30, 2024*:

Strategy 1: Increase access to Family Planning Services through Telehealth

Supporting Evidence for Strategy 1: TDH seeks to ensure that minority communities, individuals residing in underserved rural and urban areas, and individuals with disabilities can reap the benefits of telehealth by overcoming barriers to care. These barriers can include taking time off work, transportation, childcare, and confidentiality. Telehealth has the potential to help clients overcome these barriers and improve access to care.

Activity 1a: Identify three (3) key partners to help promote Family Planning Telehealth services through the dissemination of, but not exclusive of, flyers, posters, social media posts, and radio interviews.

Activity 1b: Create statewide or regional partnerships with A Step Ahead Foundation Affiliates to reduce barriers for clients.

Activity 1c: Partner with at least one (1) library in each grand region to provide designated space for telehealth appointments.

Activity 1d: Provide quarterly satisfaction survey summary data to key partners to show success and encourage participation and referral to Family Planning telehealth.

Activity 1e: Continue telehealth expansion, focusing on counties serving less than 21% of eligible clients

Strategy 2: Increase access to women's health services by addressing and eliminating barriers to care through client navigation.

Supporting Evidence for Strategy 2: Many health inequities surround women's health, obstetrics, and gynecology. Client navigation can support efforts to address barriers to care and help to reduce these disparities.

Activity 2a: Provide navigation services according to identified scope while identifying and addressing disparities in care.

Activity 2b: Collaborate with at least four (4) new internal and/or external partners to assist with resource gathering and ensure the continuation of care.

Activity 2c: Promote the navigation program by developing marketing materials that are culturally and linguistically appropriate for diverse populations.

Activity 2d: Perform at least four (4) outreach events to identify community members needing services and initiate navigation.

Strategy 3: Establish connections with diverse community leaders to build partner relationships and strengthen long-standing collaborations

Supporting Evidence for Strategy 3: Engaging community members in problem-solving solutions to issues that affect them is one of the fundamental principles of public health. The most effective way to achieve public health goals, especially eliminating disparities in health status, is to actively engage those experiencing the problems in every aspect of addressing them. Community engagement means involving community members in all activities—from identifying the relevant issues and deciding how to address them to evaluating and sharing the results with the community.

Community engagement is a strong value and fundamental practice of public health. The importance of engaging the community is grounded in the belief that the public has a right to participate. The public health community believes that by using our "collective intelligence" and working together, we will more accurately identify problems and develop more elegant and effective solutions. We also believe that conflict will be minimized if people have had a chance to "buy into" the process.

Community engagement is a vital part of conducting a community health assessment and a community health improvement plan, both required components of the Local Public Health Assessment and Planning cycle.

Activity 3a: Establish partnerships with at least one (1) college or university health clinic to provide direct family planning services.

Activity 3b: At the 3rd quarter Information and Education (I&E) Committee meeting, request nomination of new members that encourages diversity and representation of family planning clients in Tennessee.

Activity 3c: Work with TennCare and MCOs to identify at least one (1) area of collaboration to increase family planning services

Activity 3d: Promote family planning services in TDH and partner newsletters and presentations at key community and partner conferences and meetings

Activity 3e: Establish partnerships with at least one (1) organization operating a mobile health unit, including but not limited to Ballad Health, Project Rural Recovery and Knox County HD.

Planned Partnerships:

- Rural and Metro health departments
- Community Health Services within TDH
- FQHCs/rural health clinics
- Colleges and Universities
- Reproductive Health National Training Center
- National Clinical Training Center for Family Planning
- Faith-based communities
- Tennessee Primary Care Association
- Tennessee Public Health Association
- A Step Ahead Foundation
- Tennessee Initiative for Perinatal Quality Care
- TennCare & MCOs
- Association of Maternal and Child Health Programs
- Association of State and Territorial Health Officials
- STI/HIV Program
- Tennessee Charitable Care Network
- Men’s Health Network
- Music City PrEP
- Evidence-based Home Visiting
- Housing Authority
- Chambers of Commerce
- Sexual Assault Centers
- Rural Health Recovery
- Vaccine Preventable Disease Immunizations Program
- Project Access
- Tennessee State Library Association
- Sister Reach
- Rural Health Association
- Office of Minority Health and Disparities Elimination
- Communication and Media Relations
- Ballad Health

- Centerstone
- Upstream
- Tennessee Mental Health and Substance Abuse Services

Contextual Factors:
- Available funding
- Access to Technology
- National Program Guidelines and Policies
- Political Environment
- Socioeconomic Factors
- Competing telehealth programs within CHS
- Willingness of partners to work with programs

Assumptions:
- State funding will be secure throughout the program period
- Staff with the necessary skills and abilities can be recruited, hired, and retained
- Continuation of essential health services
- Continued support of increased access to care
- Establishment of I&E committee

Priority: Decrease Pregnancy-Associated Mortality

Objective for NPM 1: Increase the percent of women, ages 18-44 years, with a preventive medical visit in the past year from 70.0% on October 1, 2020 to 82.0% on September 30, 2025.

Objective for SPM 2: Increase the percent of facilities implementing patient safety recommendations from 24% on October 1, 2020 to 72% on September 30, 2025.

Objective for SPM 3: Increase the number of community level recommendations implemented from 2 on October 1, 2020 to 8 on September 30, 2025.

Description: Disparities exist among women who die during pregnancy or within a year of pregnancy. Among all deaths that occurred, non-Hispanic Black women were 1.5 times as likely to die during or within a year of pregnancy compared to non-Hispanic White women. The disparity is much greater among pregnancy-related causes of death, where non-Hispanic Black women are 3.9 times as likely to die from pregnancy-related causes compared to non-Hispanic White women. The highest risk age group was women forty and older. This group was nearly four times as likely to die within one year of pregnancy compared to women less than 30. There was also a disparity in place of pregnancy-associated mortality. The West and Shelby County area had the highest rate (124.1) while Mid-Cumberland had the lowest (57.5).

Disparity Elimination Focus: The team will focus on addressing place and race-based disparities. There is a large difference in rate of pregnancy-associated death in Shelby County/West TN, and many of the causes of death in this region of the state have been determined to be preventable. Additionally, non-Hispanic black women are more likely to die overall and even more likely to die from pregnancy-related causes.

The following strategies and activities are planned for *October 1, 2023 to September 30, 2024*:

Strategy 1: Increase surveillance of maternal deaths

Supporting Evidence for Strategy 1: There is moderate evidence to suggest maternal mortality review provides comprehensive information on causes of death, preventability, contributing factors, and leads to actions improving maternal deaths.

Activity 1a: Identify pregnancy-associated deaths and facilitate state Maternal Mortality Review Committee meetings. The Committee will identify age, race and place for each death reviewed to identify disparities.

Activity 1b: Through the Maternal Mortality Review Committee, determine the relatedness of all deaths to pregnancy, contributing factors, cause(s) of death, and preventability of all deaths. For each pregnancy-related death determine age, race, and place of death to identify disparities. For each pregnancy-related death, the MMRC will determine the cause as specified by Pregnancy Mortality Surveillance System.

Activity 1c: Develop and disseminate recommendations to prevent pregnancy-associated deaths quarterly and annually.

Strategy 2: Increase evidence-based education at hospitals on topics identified by the Maternal Mortality Review Committee (MMRC).

Supporting Evidence for Strategy 2: The is moderate evidence to suggest that provider education, such as continued medical educational opportunities is effective.

Activity 2a: Contract with Tennessee Hospital Association (THA) and Tennessee Initiative for Perinatal Quality Care (TIPQC) to provide training to birthing and non-birthing hospitals on top causes leading to maternal death as identified by the MMRC.

Activity 2b: Provide funding and technical assistance to TIPQC to increase infrastructure for hospital participation in the AIM bundles.

Strategy 3: Increase access to services through community agency involvement to improve maternal health outcomes.

Supporting Evidence for Strategy 3: There is moderate evidence to suggest that expanded insurance coverage is effective.

Activity 3a: Increase the number of women applying for presumptive eligibility by implementing an outreach plan and collaborating with community partners to reach vulnerable populations.

Activity 3b: Convene a multi-disciplinary maternal health task force a minimum of quarterly and ensure diverse representation. Utilize the maternal health task force members to finalize the maternal health strategic plan with strategies to address disparities and implement recommendations.

Activity 3c: Provide training on the danger assessment to community agencies and healthcare providers with a focus on the area of the state with the highest rate of pregnancy-associated deaths due to homicide.

Activity 3d: Develop a media campaign to create maternal health awareness and highlight resources for maternal health complications. Media campaign will focus on areas of the state with the highest disparities in pregnancy-associated mortality.

Activity 3e: Promote the use of telehealth for family planning visits.

Planned Partnerships: TIPQC, THA, Maternal Health task force, maternal mortality review committee, presumptive eligibility program

Contextual Factors:

- TIPQC and THA have a long-standing history of statewide education to providers.
- TIPQC only has capacity to assist providing hospitals with implementing one AIM bundle at a time
- Participation in training is voluntary

Assumptions:

- Funding will be secure throughout the course of the project.
- Training healthcare providers and community partners will improve maternal health outcomes
- Identifying specific information about pregnancy-associated deaths will improve our prevention efforts

Perinatal/Infant Health

National Performance Measures

NPM 3 - Percent of very low birth weight (VLBW) infants born in a hospital with a Level III+ Neonatal Intensive Care Unit (NICU)
Indicators and Annual Objectives

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data				
	2019	2020	2021	2022
Annual Objective			85	85.5
Annual Indicator	84.5	84.5	80	82
Numerator				
Denominator				
Data Source	Birth Statistical System	Birth Statistical System	Birth Statistical System	Birth Statistical System
Data Source Year	CY 2018	CY 2019	CY 2020	CY 2021
Provisional or Final ?	Final	Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	86.0	86.5	87.0

Evidence-Based or –Informed Strategy Measures

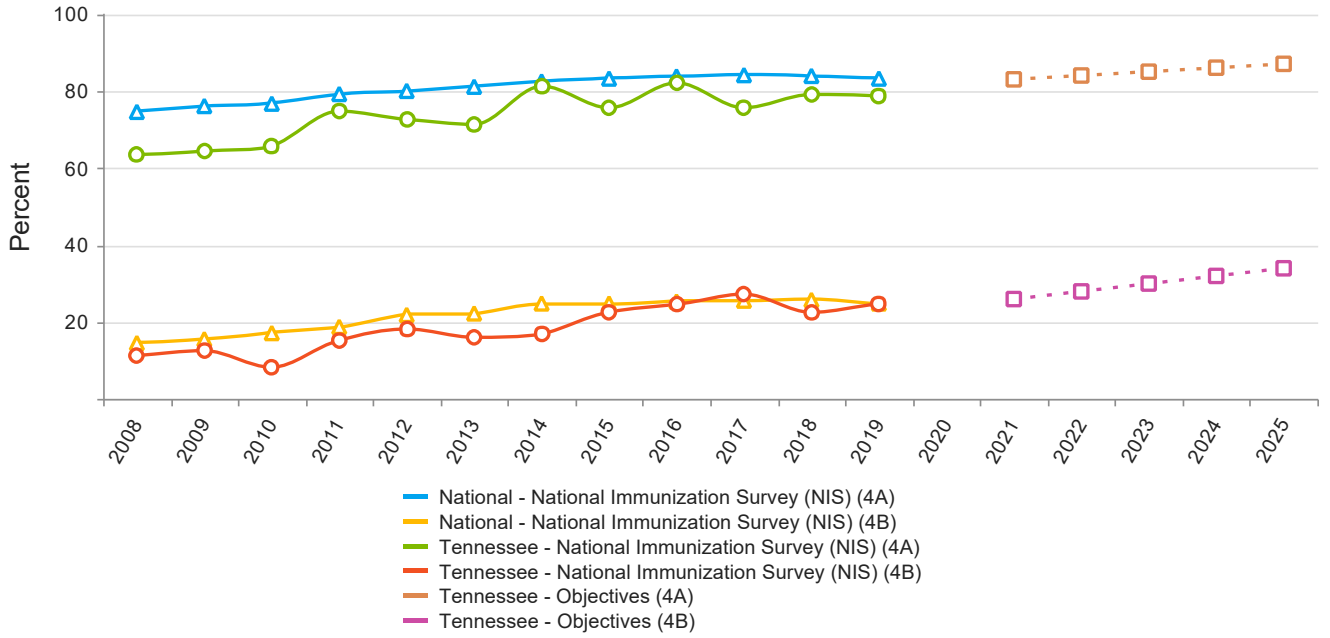
ESM 3.1 - Percent of Tennessee birthing hospitals participating in perinatal quality collaborative projects

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			33	33
Annual Indicator		41	43.3	36.2
Numerator				
Denominator				
Data Source		TIPQC	TIPQC	TIPQC
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	33.0	33.0	33.0

NPM 4 - A) Percent of infants who are ever breastfed B) Percent of infants breastfed exclusively through 6 months Indicators and Annual Objectives



NPM 4A - Percent of infants who are ever breastfed

Federally Available Data				
Data Source: National Immunization Survey (NIS)				
	2019	**2020**	**2021**	**2022**
Annual Objective			83	84
Annual Indicator	82.2	75.8	79.1	78.8
Numerator	63,360	53,802	60,163	58,108
Denominator	77,089	70,947	76,011	73,742
Data Source	NIS	NIS	NIS	NIS
Data Source Year	2016	2017	2018	2019

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	85.0	86.0	87.0

NPM 4B - Percent of infants breastfed exclusively through 6 months

Federally Available Data				
Data Source: National Immunization Survey (NIS)				
	2019	**2020**	**2021**	**2022**
Annual Objective			26	28
Annual Indicator	24.5	27.2	22.4	24.9
Numerator	18,257	19,012	16,600	17,966
Denominator	74,506	69,987	73,999	72,238
Data Source	NIS	NIS	NIS	NIS
Data Source Year	2016	2017	2018	2019

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	30.0	32.0	34.0

Evidence-Based or –Informed Strategy Measures

ESM 4.1 - Number of credentialed lactation professionals within WIC

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			166	176
Annual Indicator		156	148	159
Numerator				
Denominator				
Data Source		WIC Monitoring Reports	WIC Monitoring Reports	WIC Monitoring Reports
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	186.0	196.0	206.0

ESM 4.2 - Percent of Breastfeeding Welcomed Here (BFWH)-designated businesses with ideal workplace lactation policies

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			0	0
Annual Indicator			0	38
Numerator				
Denominator				
Data Source			BFWH Tracking Spreadsheet	BFWH Tracking Spreadsheet
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	0.0	0.0	0.0

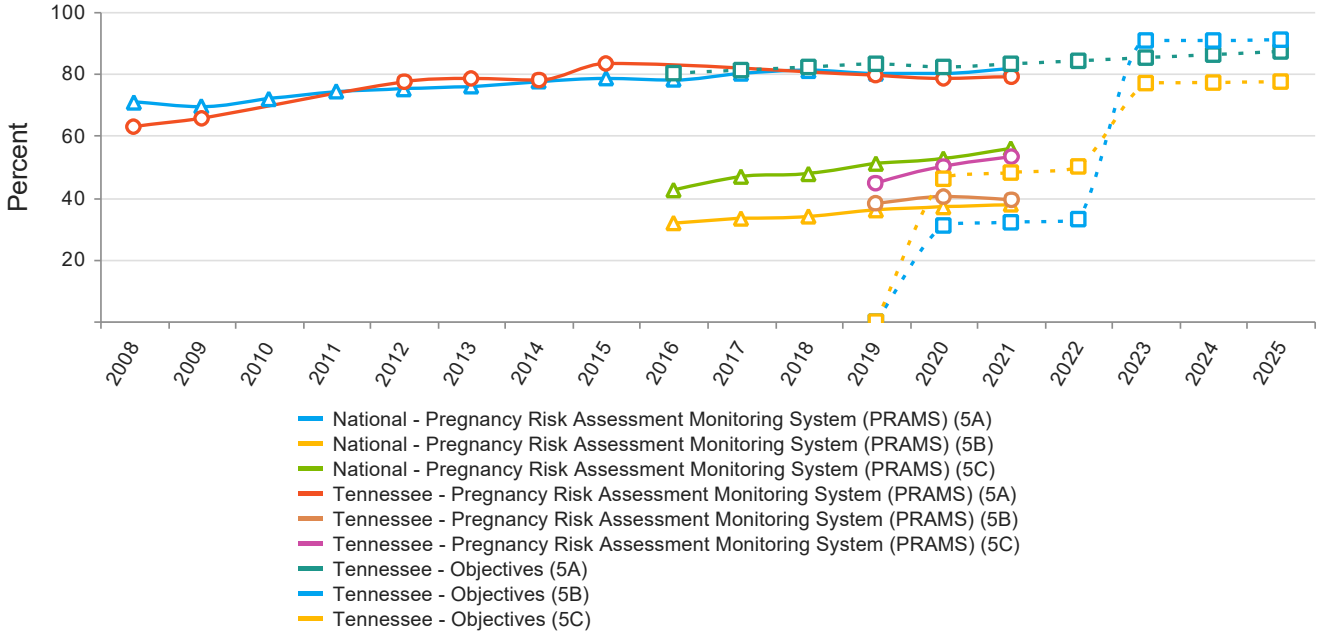
ESM 4.3 - Recognition process implemented for Breastfeeding Welcomed Here (BFWH)-designated businesses

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			Yes	Yes
Annual Indicator			No	No
Numerator				
Denominator				
Data Source			BFWH Tracking Spreadsheet	BFWH Tracking Spreadsheet
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	Yes	Yes	Yes

NPM 5 - A) Percent of infants placed to sleep on their backs B) Percent of infants placed to sleep on a separate approved sleep surface C) Percent of infants placed to sleep without soft objects or loose bedding
Indicators and Annual Objectives



NPM 5A - Percent of infants placed to sleep on their backs

Federally Available Data					
Data Source: Pregnancy Risk Assessment Monitoring System (PRAMS)					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective	82	83	82	83	84
Annual Indicator	83.0	83.0	79.4	78.4	79.1
Numerator	63,387	63,387	59,805	58,480	60,875
Denominator	76,381	76,381	75,369	74,548	76,934
Data Source	PRAMS	PRAMS	PRAMS	PRAMS	PRAMS
Data Source Year	2015	2015	2019	2020	2021

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	85.0	86.0	87.0

NPM 5B - Percent of infants placed to sleep on a separate approved sleep surface

Federally Available Data			
Data Source: Pregnancy Risk Assessment Monitoring System (PRAMS)			
	2020	**2021**	**2022**
Annual Objective	31	32	33
Annual Indicator	37.9	40.1	39.4
Numerator	27,572	29,031	28,955
Denominator	72,769	72,337	73,461
Data Source	PRAMS	PRAMS	PRAMS
Data Source Year	2019	2020	2021

State Provided Data					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective		0	31	32	33
Annual Indicator	0	0	92	89.5	79.2
Numerator					
Denominator					
Data Source	No data source	No data source	PRAMS	PRAMS	PRAMS
Data Source Year	No data	No data	2019	2020	2021
Provisional or Final ?	Final	Final	Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	90.5	90.5	90.8

NPM 5C - Percent of infants placed to sleep without soft objects or loose bedding

Federally Available Data			
Data Source: Pregnancy Risk Assessment Monitoring System (PRAMS)			
	2020	**2021**	**2022**
Annual Objective	46	48	50
Annual Indicator	44.8	50.2	53.3
Numerator	32,496	36,072	39,426
Denominator	72,533	71,863	73,951
Data Source	PRAMS	PRAMS	PRAMS
Data Source Year	2019	2020	2021

State Provided Data					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective		0	46	48	50
Annual Indicator	0	0	76.7	80	52.9
Numerator					
Denominator					
Data Source	No data source	No data source	PRAMS	PRAMS	PRAMS
Data Source Year	No data	No data	2019	2020	2021
Provisional or Final ?	Final	Final	Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	76.8	77.0	77.3

Evidence-Based or –Informed Strategy Measures

ESM 5.1 - Percent of hospitals receiving national recognition or implementing approved safe sleep policy

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			100	100
Annual Indicator			100	100
Numerator				
Denominator				
Data Source			TDH	TDH
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	100.0	100.0	100.0

ESM 5.2 - Number of diaper bags with safe sleep educational materials distributed

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			663	676
Annual Indicator		1,636	1,928	1,932
Numerator				
Denominator				
Data Source		TDH	TDH	TDH
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	690.0	704.0	718.0

State Performance Measures

SPM 4 - Percent of Tennessee newborns who initiated breastfeeding

Measure Status:	Active

State Provided Data					
	2018	2019	2020	2021	2022
Annual Objective	82	84	80.7	81.2	81.7
Annual Indicator	80.9	80.8	80.6	81.2	81.1
Numerator					
Denominator					
Data Source	TDH PHA - Birth Statistical System	TDH PHA - Birth Statistical System	TDH PHA - Birth Statistical System	TDH PHA - Birth Statistical System	TDH PHA - Birth Statistical System
Data Source Year	CY2017	CY2018	CY2019	CY2020	CY2021
Provisional or Final ?	Final	Final	Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	82.2	82.7	83.2

SPM 5 - Percent of safe sleep diaper bag recipients who reported making a behavioral change in their infant sleep practices because of the items included in the bag

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			47
Annual Indicator		45	44
Numerator			
Denominator			
Data Source		TDH	TDH
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	50.0	52.0	55.0

State Action Plan Table

State Action Plan Table (Tennessee) - Perinatal/Infant Health - Entry 1	
Priority Need	
Increase breastfeeding	
NPM	
NPM 4 - A) Percent of infants who are ever breastfed B) Percent of infants breastfed exclusively through 6 months	
Objectives	
Increase the percent of infants who were ever breastfed from 83% on October 1, 2020 to 84% on September 30, 2025.	
Strategies	
Cultivate a diverse community of professional lactation support through education and training opportunities across health care disciplines	
ESMs	Status
ESM 4.1 - Number of credentialed lactation professionals within WIC	Active
ESM 4.2 - Percent of Breastfeeding Welcomed Here (BFWH)-designated businesses with ideal workplace lactation policies	Active
ESM 4.3 - Recognition process implemented for Breastfeeding Welcomed Here (BFWH)-designated businesses	Active
NOMs	
NOM 9.1 - Infant mortality rate per 1,000 live births	
NOM 9.3 - Post neonatal mortality rate per 1,000 live births	
NOM 9.5 - Sudden Unexpected Infant Death (SUID) rate per 100,000 live births	

State Action Plan Table (Tennessee) - Perinatal/Infant Health - Entry 2

Priority Need

Decrease infant mortality

NPM

NPM 5 - A) Percent of infants placed to sleep on their backs B) Percent of infants placed to sleep on a separate approved sleep surface C) Percent of infants placed to sleep without soft objects or loose bedding

Objectives

Increase the percent of infants placed to sleep on their backs from 82% on October 1, 2020 to 87% on September 30, 2025.

Increase the percent of infants placed to sleep on a separate approved sleep surface from 31% on October 1, 2020 to 36% on September 30, 2025.

Increase the percent of infants placed to sleep without soft objects or loose bedding from 46% on October 1, 2020 to 56% on September 30, 2025.

Strategies

Reduce infant sleep-related deaths, with outreach focused on regions with the highest infant mortality rates, the highest reported number of sleep-related deaths, and the widest racial disparity among sleep-related deaths (West TN, Shelby and Davidson)

ESMs	Status
ESM 5.1 - Percent of hospitals receiving national recognition or implementing approved safe sleep policy	Active
ESM 5.2 - Number of diaper bags with safe sleep educational materials distributed	Active

NOMs

NOM 9.1 - Infant mortality rate per 1,000 live births

NOM 9.3 - Post neonatal mortality rate per 1,000 live births

NOM 9.5 - Sudden Unexpected Infant Death (SUID) rate per 100,000 live births

State Action Plan Table (Tennessee) - Perinatal/Infant Health - Entry 3

Priority Need

Decrease infant mortality

NPM

NPM 3 - Percent of very low birth weight (VLBW) infants born in a hospital with a Level III+ Neonatal Intensive Care Unit (NICU)

Objectives

Increase the percent of VLBW infants born in a hospital with a Level III+ NICU from 84.5% on October 1, 2020 to 87% on September 30, 2025.

Strategies

Improve perinatal health outcomes through quality improvement and regionalization efforts

ESMs	Status
ESM 3.1 - Percent of Tennessee birthing hospitals participating in perinatal quality collaborative projects	Active

NOMs

NOM 8 - Perinatal mortality rate per 1,000 live births plus fetal deaths

NOM 9.1 - Infant mortality rate per 1,000 live births

NOM 9.2 - Neonatal mortality rate per 1,000 live births

NOM 9.4 - Preterm-related mortality rate per 100,000 live births

State Action Plan Table (Tennessee) - Perinatal/Infant Health - Entry 4

Priority Need

Increase breastfeeding

SPM

SPM 4 - Percent of Tennessee newborns who initiated breastfeeding

Objectives

Increase the percent of Tennessee newborns who initiate breastfeeding from 80.6% on October 1, 2020 to 83.2% on September 30, 2025.

Strategies

Re-enforce lactation policies that positively influence breastfeeding practices in the workplace

State Action Plan Table (Tennessee) - Perinatal/Infant Health - Entry 5

Priority Need

Decrease infant mortality

SPM

SPM 5 - Percent of safe sleep diaper bag recipients who reported making a behavioral change in their infant sleep practices because of the items included in the bag

Objectives

Increase the percent of safe sleep diaper bag recipients who reported making a behavioral change in their infant sleep practices because of the items included in the bag from 43% on October 1, 2020 to 55% on September 30, 2025.

Strategies

Reduce infant deaths due to prematurity and low birthweight by reducing infant exposure to tobacco

Priority: Increase Breastfeeding

MCH/Title V Funding: The breastfeeding priority team is administratively led by the Supplemental Nutrition section within the Division of Family Health and Wellness of the TDH. The Supplemental Nutrition section includes WIC, commodity supplemental food program, seniors' farmers market, and breastfeeding. Most of the breastfeeding initiation activities are funded by other federal grants and Tennessee's 24-hour breastfeeding hotline is partially funded by MCH/Title V. Additionally, the Deputy Director for the section is fully funded by MCH/Title V.

Interpretation of Performance Data on selected NPMs, SPMs, and SOMs:

SPM 4: Percent of Tennessee newborns who initiated breastfeeding
Breastfeeding initiation among Tennessee newborns slightly decreased from 81.2% in 2020 (Year 1) to 81.1% in 2021 (Year 2). This rate did not meet the fiscal year objective of an initiation rate of 81.7%.

Infant feeding choices as a health prevention imperative is complicated by societal norms; education/training of individuals, healthcare providers, and families; and personal efficacy. The COVID-19 pandemic and cultural shifting continued during this time creating isolation, general fear and uncertainty for families who may have otherwise been in a time of apprehensive joy and community. Within this time healthcare providers were also under considerable stress, facing staff shortages and personal/professional losses. Given the stresses and holes in family support systems during 2021 a stable initiation rate confirms the base cultural status of human milk as the infant feeding choice in Tennessee.

Accomplishments and Challenges (based on FY2022 Action Plan):

Strategy 1: Cultivate a diverse community of professional lactation support through education and training opportunities across health care disciplines

Supporting Evidence for Strategy 1: HCP who identify as racial or ethnic minorities are more likely to provide care to underserved populations and group diversity is shown to improve task related outcomes.[1,2]

While physicians feel they received adequate education on lactation, patients report they do not receive sufficient information from their PCP. However, additional skill targeted education with HCPs is shown to improve knowledge, attitudes, and confidence related to lactation support.[3, 4] Increased breastfeeding rates for practices have also been documented.[5]

Increased presence of lactation counselors and other supports are shown to increase breastfeeding duration through the first year of life.[6,7] Staff training in advanced lactation provides community-wide lactation counseling through the local health departments and increases the access to lactation support across the state. Increased referral and use of the hotline are an added layer of access, especially in those areas with little access to lactation professionals.[8]

Activity 1a: Advertise the 20-hour lactation curriculum to health care providers that serve in communities with low breastfeeding engagement

Report 1a: In Year 2, the Breastfeeding Team:

- Identified hospitals serving birthing families who predominately identify as African

American. Four possible hospital partners were identified. The curriculum is not available, and the hospitals have not yet been contacted.

- Researched updated Baby Friendly Hospital Initiative training requirements. Training requirements have changed from being based on a set number of education hours to competency-based outcomes.
- Researched and reviewed established training opportunities to meet some or all the Baby Friendly requirements and inclusion of health equity or bias topics.
- Added focus to pursue partnership with black Doula groups who support African American birthing people to determine self-identified training needs.

Activity 1b: Provide advanced lactation training to WIC public health nutritionists and nursing staff within local health departments, focusing on areas with limited community breastfeeding support professionals

Report 1b: **ESM 4.1,** number of credentialed lactation professionals within WIC, increased from 148 in Year 1 to 159 in Year 2. This number did not meet the fiscal year objective of 176 credentialed lactation professionals within WIC. Several factors may have contributed to not meeting the Year 2 to objective. (1) Vacant positions limited availability for existing staff to complete trainings for certification and recertification. (2) Existing online training continued to be challenging for staff to be successful due to technical barriers. (3) In-person training was not as available during 2022.

In Year 2, an informal group to support in-person CLC or CLS training in the state was established with partners from East Tennessee Children's Hospital, Knox County Health Department, Knox County Breastfeeding Coalition, UT Medical Center Knoxville. The group has scheduled an in-person CLS training which will be held in Knoxville, June 2023. Additionally, recertifications were completed for 47 staff during FY2022 to maintain advanced lactation credentials as Certified Lactation Counselors.

Activity 1c: Re-establish connection between birthing hospitals and Tennessee Breastfeeding Hotline services to ensure lactation support at discharge

Report 1c: Advertising for the Tennessee Breastfeeding Hotline was placed in the Tennessee Nursing Association newsletter in February 2022 and August 2022 https://tna.nursingnetwork.com/:

An informal Q&A and materials were provided at the Tennessee Initiative for Perinatal Quality Care (TIPQC) Annual meeting (March 2022). An informal Q&A and materials were also provided at the 2022 Tennessee Breastfeeding Symposium (June 2022) supported by the Tennessee Breastfeeding Coalition and the Office of Minority Health in the Division of Health

Disparities Elimination. Materials continue to be provided to local county health department clinics to promote the Tennessee Breastfeeding Hotline to WIC participants, physicians, and the public.

Challenges Issues Related to Implementation of Strategy 1: During calendar year 2021 and FFY 2022, limited staffing continued to be a challenge to move strategies forward.

Strategy 2: Re-enforce lactation policies that positively influence breastfeeding practices in the workplace

Supporting Evidence for Strategy 2: Within the community, partnerships are vital to create system and environmental change.[9, 10] **"**Effective workplace breastfeeding interventions activate three mechanisms: 1) awareness of the intervention, 2) changes in workplace culture, manager/supervisor support, co-worker support and physical environments, and 3) provision of time.**"** [11] By systematically evaluating and addressing the barriers to workplace accommodations TDH will improve workplace support in areas with low access to supports[12, 13] and promote those businesses with best practices[10].

Activity 2a: Assess workplace lactation policies for businesses with BFWH designation

Report 2a: The Tennessee Breastfeeding Welcomed Here website denotes businesses that have taken the pledge to become a designated BFWH site. A recognition process for Breastfeeding Welcomed Here (BFWH)-designated businesses was not implemented **(ESM 4.3)** in Year 2. After further review and analysis of the survey results that were collected in Year 1, businesses agree that the website designation and BFWH information recognizes their businesses; however, they were not interested in or not sure about a tiered recognition system. The recognition process has developed into ongoing research to better assess what businesses need. New recognition ideas are being explored, and the ongoing promotion of BFWH sites will continue to be implemented throughout the state.

During Year 2, the number of businesses with the designation remained unchanged. The BFWH website lists 1,241 businesses that continue to remain a BFWH designation that:

- Demonstrates their support for breastfeeding
- Makes a commitment through a pledge
- Displays the BFWH window decal visibly.

This decal helps moms identify public locations where they can breastfeed comfortably and encourages the perception that breastfeeding is normal, accepted, and welcomed. By taking the "Breastfeeding Welcomed Here" pledge businesses agree to provide an environment where breastfeeding mothers are able to sit anywhere and enjoy a welcoming attitude from staff, management, and other patrons while breastfeeding.

Activity 2b: Acknowledge BFWH-designated businesses that have established lactation workplace policies for employees

Report 2b: There are 1,241 BFWH designated sites that have remained status quo from FY 2021 to FY 2022. In partnership with students from UT Knoxville, Knox County Health Department

piloted a survey in Knox County Breastfeeding Welcomed Here designated businesses. Thirty-eight percent (38%) of Breastfeeding Welcomed Here designated businesses that responded to the survey had ideal workplace lactation policies (**ESM 4.2)**. Other responses collected from Knox County businesses provided useful information to pursue marketing opportunities as part of the "award" for pursuing best practices.

In Year 2, Knox County Health Department also lead a partnership with students from UT Knoxville to complete the Knox County assessment. Results from this project, indicated that marketing posts were more successful in Instagram and educational posts had more success on Facebook and Twitter. This was a key start to learn more from businesses about established breastfeeding support in the workplace

Activity 2c: Promote Breastfeeding Welcomed Here (BFWH) designation in rural areas and among minority-owned businesses

Report 2c: Ongoing discussions with the Chronic Disease and Health Promotion will continue to incorporate relationships with childcare facilities.

Challenges Issues Related to Implementation of Strategy 2: During calendar year 2021 and FFY 2022 limited staffing continued to be a challenge to move strategies forward.

Update on Other Perinatal/Infant Health Programs Supported by MCH/Title V:

Breastfeeding Hotline: The Tennessee Breastfeeding Hotline, staffed by International Board-Certified Lactation Consultants (IBCLC), is available to nursing mothers and partners, their families, expectant mothers, and health care providers seeking breastfeeding support and information. The Tennessee Breastfeeding Hotline operates 7 days a week, 24 hours a day. Individuals are welcome to call the Tennessee Breastfeeding Hotline anytime they need support, regardless of language barriers. Interpretative services available directly include Spanish, French, Arabic, and Mandarin.
The Tennessee Breastfeeding Hotline provides accurate, up-to-date information for common breastfeeding issues. Call volume to the Tennessee Breastfeeding Hotline increased from 4,287 calls in Year 1 to 4,538 calls in Year 2.

Priority: Decrease Infant Mortality

MCH/Title V Funding: Infant Mortality priority team is administratively led by the Perinatal, Infant and Pediatric Care section within the Division of Family Health and Wellness of TDH. The Perinatal, Infant and Pediatric Care section includes Newborn Screening (NBS), Childhood Lead Poisoning Prevention, and Perinatal Regionalization. Infant mortality reduction efforts are funded by state and other federal funds. While MCH/Title V does not directly fund the infant mortality reduction activities highlighted in the annual report, funds are used to partially support programs within this section, including Newborn Screening and Childhood Lead Poisoning. The MCH/Title V Block Grant fully funds the Section Chief, the perinatal regionalization program director, newborn hearing follow-`up program director, and two administrative assistants, and it also partially funds three NBS administrative assistants in the Perinatal, Infant and Pediatric Care section.

Interpretation of Performance Data on selected NPMs, SPMs, and SOMs:

SPM 5: Percent of safe sleep diaper bag recipients who reported making a behavioral change in

their infant sleep practices because of the items included in the bag
This indicator was measured by data obtained from the Evidence Based Home Visiting (EBHV) and Community Health Access & Navigation in Tennessee (CHANT) programs. In FY2022, 44% of EBHV and CHANT safe sleep diaper bags recipients, combined, reported making behavioral changes in their infant sleep practices because of the items included in the bag. Based on the follow-up reports obtained, the sleep sack was the most successful intervention tool that contributed to a behavioral change in FY2022. There was a slight decrease compared to FY2021 (45%); however, this change is not statistically significant.

Providing families with infant items to be able to practice safe sleep contributes to the behavior change. This includes providing a crib so there is a safe surface, two sleep sacks to eliminate the use of blankets, and education through text and in person so the caregivers know what infant safe sleep is. The “Calm Baby Gently” book is also provided as a tool to help caregivers that are overwhelmed with the task of caring for a new infant, that it is okay to set baby down if they are crying. Of the caregivers that stated they changed a behavior due to the items and education from the diaper bags, over 60% stated the sleep sack contributed to the behavior change.

NPM 3: Percent of very low birth weight (VLBW) infants born in a hospital with a Level III+ Neonatal Intensive Care Unit (NICU)
Between CY2020 and CY2021, the percentage of VLBW births that took place at level 3 or level 4 facilities increased slightly from 80% to 82%, but still fell short of the state objective of 85.5% for federal FY2022. However, when looking at the distribution of VLBW deliveries across perinatal regions, this objective was exceeded by the West (92.4%), Northeast (91.7%) and Southeast (89.2%) regions. Only the Middle (80.5%) and East (53.4%) regions fell below the objective. The low percentage in the East region, which can be attributed to a high number of VLBW births occurring at a level 2 facility acquiring care at a closely affiliated level 4 facility, reduced the state’s overall performance.

NPM 5: (A) Percent of infants placed to sleep on their backs
In FY2022, 79.1% of all infants in Tennessee were placed to sleep on their backs. This measure is 0.6% points higher than FY2021’s value and less than the projected objective for FY2022.

Infant safe sleep education is provided to all caregivers with newborns at the hospital. Every hospital in Tennessee has a policy that includes educating families on infant safe sleep including that all infants should be placed on their back.

NPM 5: (B) Percent of infants placed to sleep on a separate approved sleep surface
The proportion of infants that slept on approved surface (i.e., crib, bassinet, or Pack & Play) in FY2022 was 79.2%, the lowest value in three years. In comparison to prior years, the FY2022 is 10.3% points lower than FY2021 value and 12.8% points lower than FY2020 values.

The AAP infant safe sleep recommendations emphasize the importance of using a safety approved sleep surface that is flat. This is the education provided to families through the hospitals, evidence-based home visiting programs, and care coordination programs.

NPM 5: (C) Percent of infants placed to sleep without soft objects or loose bedding
In FY2021 80.0% of infants were placed to sleep without soft objects or loose bedding. This decreased to 52.9% in FY2022.

This drastic decrease in the percentage of infants being placed to sleep without soft object or loose bedding underscores the importance of continued safe sleep education and ongoing evaluation of the underlying barriers to practicing safe sleep.

Accomplishments and Challenges (based on FY2022 Action Plan):

Strategy 1: Reduce infant sleep-related deaths, with outreach focused on regions with the highest infant mortality rates, the highest reported number of sleep-related deaths, and the widest racial disparity among sleep-related deaths (West TN, Shelby and Davidson)

Supporting Evidence for Strategy 1: There is emerging evidence to suggest hospitals implementing a safe sleep policy will reduce sleep-related deaths. There is also emerging evidence to suggest educating caregivers will change their behavior.

Activity 1a: Increase the percent of birthing hospitals recognized as a National Cribs for Kids certified hospital or with an approved safe sleep policy.

Report 1a: ALL TN birthing hospitals have the BEST policy and half of them have the recognition; this value has not changed from FY2020 to FY2022.

The program worked with birthing hospitals to apply for the BEST award. The award includes criteria around having a safe sleep policy. Safe sleep educational materials and portable cribs were provided to hospitals to assist them with implementing a safe sleep policy.

Activity 1b: Improve infant caregiver safe sleep behaviors through the education provided by the safe sleep diaper bag project in Evidence Based Home Visiting Programs and care coordination (CHANT) programs.

Report 1b: In FY2022, the CHANT and EBHV distributed 1932 diaper bags across Tennessee, representing an increase of 4 more bags disseminated in FY2021. Providing families with infant items to be able to practice safe sleep contributes to the behavior change. This includes providing a crib so there is a safe surface, two sleep sacks to eliminate the use of blankets, and education through text and in person so the caregivers know what infant safe sleep is. The “Calm Baby Gently” book is also provided as a tool to help caregivers that are overwhelmed with the task of caring for a new infant, that it is okay to set baby down if they are crying. Of the caregivers that stated they changed a behavior due to the items and education from the diaper bags, over 60% stated the sleep sack contributed to the behavior change.

Challenges Issues Related to Implementation of Strategy 1:

There were many staff transitions and vacancies within the TDH in 2022. The Child Fatality Review program director of 7 years resigned, leaving the position vacant for 2 months. The SDY Coordinator and the Infant Mortality Coordinator, both of which promote safe sleep, were vacant for many months. All of these vacancies were filled as of 6/1/2023.

Local CFR teams had an increase in the number of deaths to review which led to a delay in the completion of our 2021 death review cohort. Understanding the underlying mechanisms in the regional variation of sleep-related deaths has proven to be complex. However, completing the cohorts allows us to gain further insight into sleep-related deaths.

Safe sleep PSAs were developed and broadcasted on television in the areas with the widest racial disparity among sleep-related deaths. However, it has still been challenging reaching caregivers. These safe sleep PSAs are being rebroadcasted to a more focused audience.

Strategy 2: Improve perinatal health outcomes through quality improvement and regionalization efforts

Supporting Evidence for Strategy 2: A 2017 review of three online databases (Johns Hopkins University) showed moderate evidence for continuing education of hospital providers plus state guidelines/policy. TIPQC projects educate hospital providers. Tennessee has had regionalization guidelines in place for decades for all levels of perinatal care and for both obstetrics and neonatal care.

Activity 2a: Support quality improvement collaborative projects for hospitals regarding care for high risk maternal and/or neonatal patients.

Report 2a: In FY2022, 36.2% of all birthing hospitals across Tennessee participated in perinatal collaborative project. The ESM 3.1 for FY2022 was higher than the targeted objective (33%) but lower than FY2021 (43.3%) measure.

Tennessee's perinatal quality collaborative (TIPQC) worked with hospital teams throughout the year to wrap up and put into sustainment the joint OUD/OEN project, continue the Safe to Sleep project, and begin development of new projects on optimal cord clamping and promotion of vaginal deliveries. All TIPQC projects include a focus on health equity. Twenty-two podcasts were developed, posted, and advertised on both maternal and newborn topics. Training was provided for each project and on post-birth warning signs. Simulation training was provided for hospital teams and EMS. 520 attendees were at the two-day Annual Meeting which had national speakers on maternal and newborn topics and workshops for the project teams.

Challenges Issues Related to Implementation of Strategy 2:

Participation from hospitals varies significantly depending upon the topics of the individual projects, the needs and interests of the specific hospital for improvement work, and the staff available at the hospital to participate long term in a quality improvement project. Participation will continue to vary from year to year.

Strategy 3: Reduce infant deaths due to prematurity and low birthweight by reducing infant exposure to tobacco

Supporting Evidence for Strategy 3: AMCHO considers the Baby and Me Program as a best practice/evidence-based model. Details from three states including Tennessee are included on the AMCHP Innovation Station website.

Activity 3a: Support tobacco cessation among women of childbearing age or individuals living with an infant < 1 year by providing nicotine replacement therapy (NRT) to individuals through the local health

departments.

Report 3a: The percent of eligible women who enrolled in the Baby & Me Tobacco Free™ program (ESM 14.2.6) increased from FY2021 (11.3%) to FY2022 (12.3%) but fell short of its goal for FY2022 of 14.1%.

The Baby & Me Tobacco Free™ program has experienced continued difficulties in recruiting pregnant women who smoke to enroll in the program. These difficulties are due, in part, to ongoing issues stemming from the COVID-19 pandemic including disruptions to internal and external referral sources and limited staff capacity and increased turnover. The Tobacco Control Program (TCP) continues to work with internal and external partners to streamline referral processes and identify new referral sources across the state.

Activity 3b: Promote enrollment in Baby and Me Tobacco Free to reduce smoking during pregnancy.

Report 3b: The Tobacco Control Program continues to work with internal and external partners to streamline referral processes and identify new referral sources across the state to increase enrollment in its prenatal smoking cessation program, Baby & Me Tobacco Free™. Additionally, TCP has created and implemented new promotional materials on TDH's social media platforms and has made traditional promotional materials (posters, banners, etc.) available to local health departments across the state.

Challenges Issues Related to Implementation of Strategy 3:

During the COVID-19 pandemic, many of the Baby & Me Tobacco Free (BMTF) program's existing internal referral processes were put on pause while staff were diverted to the pandemic response. As local health departments have returned to normal operations in clinic, referral processes have had to be reestablished or modified to account for changes in clinic workflows and federal waivers. Consequently, enrollment in and referrals to BMTF remained low following the pandemic response, varying greatly between regions and counties.

Update on Other Perinatal/Infant Health Programs Supported by MCH/Title V:

Child Fatality Review/SIDS Training: **T**DH contracted with MTSU to conduct a death scene investigation training in December 2021. The training was online, and participants were able to complete at their own pace within a two-week timeframe. A safe sleep training was also facilitated by MTSU and held in May 2022

NAS Surveillance: During FY2022, a full-time epidemiologist was hired to support the program's increasing data needs. The epidemiologist drafted the 2022 NAS Annual Data Report, which features new analyses obtained from linking hospital discharge data and vital records.

The NAS Public Health Nurse was also hired during FY2022; she provides one-on-one technical assistance and support to facilities who have been unable to keep up with NAS reporting due to the demands of the pandemic and staffing shortages. She also runs daily REDCap quality assurance reports and follows up with hospitals as needed. Through these efforts, the program's data completeness, timeliness, and accuracy continue to improve.

Finally, a NAS case management module was completed. The module will be utilized by the program to refer infants with NAS and their families to support services.

Newborn Screening (Genetics and Hemoglobinopathies): All babies born in Tennessee are screened at birth for genetic disorders, hearing, and critical congenital heart disease (CCHD). Laboratory tests are run at the State Laboratory; follow-up is done by nurse case management with referrals to the tertiary centers, Tennessee Early Intervention System, Children's Special Services, and Family Voices as appropriate. During FFY22, the Genetics Advisory Committee met three times. A virtual all day educational summit was held in September and October on all things newborn screening; 100 providers attended from 28 birthing facilities; 11were midwives. A new Remote Diagnostic Entry system was launched in February for audiologists to enter follow-up visit and diagnostic testing results directly into the Neometrics system; three trainings were provided for Audiologists. The newborn screening rules were changed to require collection of the dried blook spot between 24 and 36 hours. The algorithm for CCHD was revised to remove a third rescreen when failing. An interactive public dashboard for newborn screening hospital and home birth data was created and launched; it has been widely publicized through presentations and a publication.

Newborn Hearing Screening: In Tennessee, all babies are required to be screened for hearing prior to discharge from the birthing facility. Referrals are made by the facility to pediatricians, audiologists or hearing centers of those babies who failed the hearing screen for follow up screening and then diagnostics; nurse case management in newborn screening does tracking and follow-up on these babies. Babies diagnosed with hearing loss are referred to Tennessee Early Intervention System, Family Voices PEARS, Children's Special Services, and the genetics centers. The program director for hearing is funded through the MCH Block Grant. During FFY22, the program implemented a system of direct loading of the screening results from selected hospitals into the Neometrics system. The program's advisory committee and learning community met to update stakeholders and solicit feedback on program operations. Students at universities with graduate audiology programs assist, at no cost, with follow-up with those families for which the program has not yet received information on the results of follow-up from the failed hearing screen.

Perinatal Regionalization: For state fiscal year 2021, the five regional perinatal centers provided care for 3,406 high risk neonates and 16,206 high risk maternal patients, provided 101,842 consultations by center staff, and provided 7,132.5 hours of education on high-risk perinatal care. The Perinatal Advisory Committee met three times during the year, monitoring the data on COVID and pregnancy and hepatitis C infection. An expert work group of the advisory committee reviewed and revised the *Educational Objectives for Nurses, Levels I, II, III, IV and Neonatal Transport Nurses*.

Tennessee Birth Defects Surveillance System: The Tennessee Birth Defects Surveillance System (TNBDSS) made great strides during this timeframe to accomplish the activities outlined in the 5-year CDC Cooperative Agreement to enhance state birth defects surveillance. TNBDSS expanded its data sources for faster and more robust case finding, case agreement, and case verification and is partnering with other TDH programs for secure data sharing to ensure program alignment. Also, in January 2022, TNBDSS participated in the Harvard T.H. Chan School of Public Health Evaluation Practicum. Harvard graduate students were paired with the program to prepare a program evaluation plan to monitor data quality. Additionally, TNBDSS was chosen to participate in the AMCHP Graduate Student Epidemiology Program Maternal and Child Health program. The summer intern evaluated PRAMS Survey data, focusing on Social Determinants of Health and their impact on birth outcomes for women in Tennessee, to inform program planning. Furthermore, TNBDSS partnered with the Tennessee Initiative for Perinatal Quality Care's podcast to discuss program highlights, goals, and findings. This podcast was released in the fall of 2022.

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Priority: Increase Breastfeeding

Objective for SPM 4: Increase the percent of Tennessee newborns who initiate breastfeeding from 80.6% on October 1, 2020 to 83.2% on September 30, 2025.

Disparity Description: Tennesseans experience breastfeeding initiation disparities based on a variety of sociodemographic factors. Disparities occur by mother's age, with initiation rates being highest in the 35-39 age group (85.5%) and lowest in the <20 age group (71.1%). Breastfeeding initiation disparities exist between racial and ethnic groups, with initiation at 73.2% for Non-Hispanic African Americans, 82.7% for Non-Hispanic Whites, and 85.0% for Hispanic/Latinos. Breastfeeding initiation rates differ by place, including disparities by county, rural vs. urban areas, and TN WIC regions. Lower mother education levels are associated with lower breastfeeding initiation rates: less than high school 69.2%, high school/GED 71.2%, some college 83.9%, and college graduate 94.0%. Breastfeeding initiation disparities exist based on WIC status, with the initiation rate being 72.1% in mothers who had prenatal participation in WIC and 85.8% in mothers who did not have prenatal participation in WIC. Breastfeeding initiation rates also differ by marital status. Married individuals had a breastfeeding initiation rate of 88.6%, while non-married individuals had an initiation rate of 72.0%. Disparities in breastfeeding duration are also observed based on age, race, place, education, WIC status, and marital status.

Data source: 2020 Birth Statistical System. Prepared December 2021.

Disparity Elimination Focus: The team will prioritize addressing the racial disparity observed in breastfeeding initiation. Increasing breastfeeding in-Hispanic African American families can reduce the risk of adverse health conditions like high blood pressure and type 2 diabetes, which Non-Hispanic African Americans also disproportionately experience. The goal is to increase breastfeeding initiation and duration rates for non-Hispanic African Americans through Strategy 1 below.

The following strategies and activities are planned for *October 1, 2023 to September 30, 2024*:

Strategy 1: Cultivate a diverse community of professional lactation support through education and training opportunities across health care disciplines

Supporting Evidence for Strategy 1: HCP who identify as racial or ethnic minorities are more likely to provide care to underserved populations and group diversity is shown to improve task related outcomes.[1,2]

While physicians feel they received adequate education on lactation, patients report they do not receive sufficient information from their PCP. However, additional skill targeted education with HCPs is shown to improve knowledge, attitudes, and confidence related to lactation support.[3, 4] Increased breastfeeding rates for practices have also been documented.[5]

Increased presence of lactation counselors and other supports are shown to increase breastfeeding duration through the first year of life.[6,7] Staff training in advanced lactation provides community-wide lactation counseling through the local health departments and increases the access to lactation support across the state. Increased referral and use of the hotline are an added layer of access, especially in those areas with little access to lactation professionals.[8]

Activity 1a: Advertise the 20-hour lactation curriculum to health care providers that serve in

communities with low breastfeeding engagement. Advertisement efforts will be prioritized for birthing hospital delivery staff at hospitals identified as serving a large non-Hispanic African American delivery population.

Activity 1b: Provide advanced lactation training to WIC public health nutritionists and nursing staff within local health departments, focusing on rural areas with limited community breastfeeding support professionals –WIC participant race, ethic, or language concordance.

Activity 1c: Re-establish connection between birthing hospitals and Tennessee Breastfeeding Hotline services to ensure lactation support at discharge. Additional outreach to re-establish a connection with the hotline will be planned for birthing hospitals identified as serving a large non-Hispanic African American delivery population.

Activity 1d: Engage at least four birthing hospitals to conduct a needs assessment in order to gather information on their training needs, barriers, perceived diversity of staff, and healthcare workers perceptions of doulas

Activity 1e: Engage with African American doula groups to learn about their training needs and their perceptions of health care workers as it relates to breastfeeding.

Strategy 2: Re-enforce lactation policies that positively influence breastfeeding practices in the workplace

Supporting Evidence for Strategy 2: Within the community, partnerships are vital to create system and environmental change.[9, 10] **"**Effective workplace breastfeeding interventions activate three mechanisms: 1) awareness of the intervention, 2) changes in workplace culture, manager/supervisor support, co-worker support and physical environments, and 3) provision of time.**"** [11] By systematically evaluating and addressing the barriers to workplace accommodations TDH will improve workplace support in areas with low access to supports[12, 13] and promote those businesses with best practices[10].

Activity 2a: Assess workplace lactation policies for businesses with BFWH designation

Activity 2b: Acknowledge BFWH-designated businesses that have established lactation workplace policies for employees

Activity 2c: Promote Breastfeeding Welcomed Here (BFWH) designation in rural areas and among minority-owned businesses

Activity 2d: Create marketing and education materials for Tennessee workplaces that reflect new workplace lactation policies put into place by the PUMP Act

Planned Partnerships:

- Department of Economic & Community Development
- Tennessee State University
- Meharry Medical College
- Eastern Tennessee State University

- Tennessee Hospital Association
- Tennessee County Health Councils
- TDH Office of Minority Health
- Local area Chamber of Commerce

Contextual Factors:

- Competing or supporting initiatives sponsored by other agencies.
- Socioeconomic factors of the target audience.
- The motivations and behavior of the target population.
- Social norms and conditions that either support or hinder your outcomes in reaching disparate populations, such as the background and personal experiences of participants.

Assumptions:

- Funding will be secure throughout the course of the project.
- Professionals, businesses, and families will be encouraged to attend learning sessions.
- Staff with the necessary skills and abilities are dedicated to fulfilling the strategies and activities.
- Partnerships or coalitions are encouraged to address each strategy and participate in activities.
- Policy adoption can lead to individual behavior change.

Priority: Decrease Infant Mortality

Objective for NPM 5: Increase the percent of infants placed to sleep on their backs from 82.0% on October 1, 2020, to 87.0% on September 30, 2025.

Objective for NPM 5: Maintain at least 89.5% of infants being placed to sleep on a separate approved sleep surface throughout September 30, 2025.

Objective for NPM 5: Increase the percent of infants always or almost always placed asleep alone from 75% on October 1, 2020, to 85% on September 30, 2025.

Objective for NPM 3: Increase the percent of VLBW infants born in a hospital with a Level III+ NICU from 84.5% on October 1, 2020, to 87.0% on September 30, 2025.

Disparity Description: The overall infant mortality rate for TN in 2021 was 6.2 deaths per 1,000 live births. Racial disparity continues to exist among infants who die in TN. The black infant mortality rate (2021 data is 10.8 deaths per 1,000 live births) continues to be more than double the white infant mortality rate (2021 data is 5.1 per 1,000 live births) in 2020. This has been a consistent ratio for over the last 5 years. Infant sleep-related deaths are preventable deaths that occur while an infant is in a sleep environment; these deaths accounted for 23% of all infant deaths in 2020. While non-Hispanic white infants account for the majority of sleep-related infant deaths in Tennessee. Over the past five years, non-Hispanic black infants (rate of 2.6 per 1,000 births) were cumulatively 3 times as likely to suffer a sleep-related fatality as non-Hispanic white infants (1.2 per 1,000 live births). Disparity also exists by location. In 2020, the regions with the highest number and rates of sleep-related infant deaths included the metropolitan areas of Shelby County, Davidson County and Mid-Cumberland Region. The leading factors in infant sleep-related deaths include unsafe bedding or toys in the sleeping area (86% of deaths), infant not sleeping in a safety approved crib or bassinet (69% of deaths), infant sleeping with another person (58% of deaths), and infant not sleeping on his/her back (56% of deaths).

Disparity Elimination Priority Area: Infant deaths related to an unsafe sleep environment account for 23% of all infant deaths, are the 3rd leading factor in deaths amongst non-Hispanic black infants and are 100% preventable. The team will focus on reducing racial disparities observed within regions with the highest reported number of sleep-related infant deaths through Strategy 1 below.

The following strategies and activities are planned for *October 1, 2023, to September 30, 2024*:

Strategy 1: Reduce infant sleep-related deaths, with outreach focused on regions with the highest infant mortality rates, the highest reported number of sleep-related deaths, and the widest racial disparity among sleep-related deaths (West TN Region, Shelby County, Davidson County, East Region, and Mid-Cumberland Region).

Supporting Evidence for Strategy 1: There is emerging evidence to suggest hospitals implementing a safe sleep policy will reduce sleep-related deaths. There is also emerging evidence to suggest educating caregivers will change their behavior.

Activity 1a: Increase the percent of birthing hospitals recognized as a National Cribs for Kids certified hospital or with an approved safe sleep policy that aligns with the AAP Safe Sleep Recommendations.

Activity 1b: Improve infant caregiver safe sleep behaviors through the education provided by the safe sleep diaper bag project in Evidence Based Home Visiting Programs and care coordination (CHANT) programs.

Activity 1c: Identify and engage new community partners (i.e., doulas, mental health, fatherhood-related interest groups, universities/HBCUs, etc.) with trusted ties to non-Hispanic Black communities in Shelby County, West Region, Davidson County, East Region, and Mid Cumberland Region.

Activity 1d: Broadcast public service announcements. Special emphasis will be placed on including culturally competent messaging and materials that resonate with non-Hispanic black parents and caregivers.

Strategy 2: Improve perinatal health outcomes through quality improvement and regionalization efforts.

Supporting Evidence for Strategy 2: A 2017 review of three online databases (Johns Hopkins University) showed moderate evidence for continuing education of hospital providers plus state guidelines/policy. Tennessee Initiative for Perinatal Quality Care (TIPQC) projects educate hospital providers. Tennessee has had regionalization guidelines in place for decades for all levels of perinatal care and for both obstetrics and neonatal care.

Activity 2a: Support quality improvement collaborative projects for hospitals regarding care for high risk maternal and/or neonatal patients.

Strategy 3: Reduce infant deaths due to prematurity and low birthweight by reducing infant exposure to tobacco.

Supporting Evidence for Strategy 3: The United States Preventive Services Task Force recommends providing behavioral interventions for cessation to pregnant persons who use tobacco.

Activity 3a: Support tobacco cessation among women of childbearing age or individuals living with an infant < 1 year by providing nicotine replacement therapy (NRT) to individuals through the Tennessee Tobacco QuitLine.

Activity 3b: Promote enrollment in the State's evidence-based pregnancy smoking cessation program to reduce smoking during pregnancy.

Planned Partnerships:

- TIPQC
- Birthing hospitals
- Health care providers
- Regional Perinatal Centers
- The Tobacco Control Program's prenatal smoking cessation program plans to continue partnering with state Medicaid Managed Care Organizations for promotion and expanding utilization of the program.

Contextual Factors:

- TIPQC has a long-standing history of creating, promoting and implementing quality improvement projects with Tennessee birthing hospitals.
- TIPQC projects only work with birthing hospitals and their health care providers and only reach indirectly into the community health care providers.
- Contextual factors that may influence implementation, participation, and the achievement of outcomes include continued allocation of state funding for the Tobacco Control Program to support the pregnancy smoking cessation (PSC) program. Social norms that influence participation in the program also include stigma around joining a PSC. Socioeconomic factors that can hinder participation include lack of transportation or childcare. Additionally, lack of paid time off or paid sick leave may pose a barrier for participation. Competing programs offering similar incentives may limit the pool of potential participants. Finally, relapse of tobacco use following giving birth may hinder the retention of participants in the program.

Assumptions:

- Partnership with TIPQC can effectively address problems or reach into areas we cannot.
- TIPQC past experiences with QI projects show ability to succeed.
- Perinatal collaborations across the country continue to show improvement in birth outcomes through their projects.

Pregnancy smoking cessation:

- Training health care providers will improve birth outcomes.
- Adequate funding for program implementation and promotion
- Trained professionals will implement the program
- If we communicate the dangers of using tobacco during pregnancy, and incentivize them to quit, participants will quit.
- Vacancies within the local health departments will be filled

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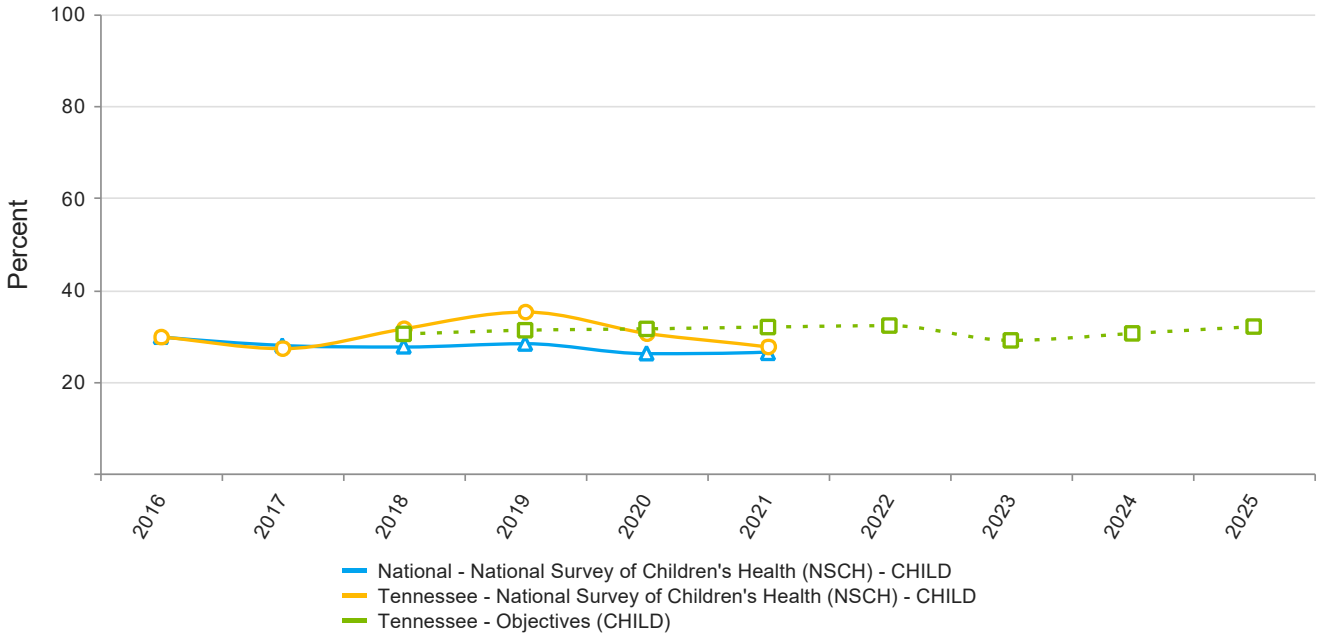
[13]Bai, Y. K., Wunderlich, S. M., & Weinstock, M. (2011). Employers' readiness for the mother-friendly workplace: an elicitation study. *Maternal & Child Nutrition*, *8*(4), 483–491. https://doi.org/10.1111/j.1740-8709.2011.00334.x

Child Health

National Performance Measures

NPM 8.1 - Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day
Indicators and Annual Objectives



Federally Available Data					
Data Source: National Survey of Children's Health (NSCH) - CHILD					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective	30.4	31.2	31.5	31.9	32.2
Annual Indicator	27.3	31.5	35.2	30.6	27.7
Numerator	140,812	163,612	176,434	148,444	137,097
Denominator	516,001	519,562	500,965	485,754	495,348
Data Source	NSCH-CHILD	NSCH-CHILD	NSCH-CHILD	NSCH-CHILD	NSCH-CHILD
Data Source Year	2016_2017	2017_2018	2018_2019	2019_2020	2020_2021

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	29.0	30.5	32.0

Evidence-Based or –Informed Strategy Measures

ESM 8.1.1 - Percent of physical education teachers receiving professional development related to 50% of PE class time spent in moderate to vigorous physical activity

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			5	15
Annual Indicator			0	0
Numerator				
Denominator				
Data Source			N/A	N/A
Data Source Year			N/A	N/A
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	25.0	35.0	45.0

ESM 8.1.2 - Percentage of TN counties in which trainings related to mental health and physical health have occurred

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			10
Annual Indicator			5.3
Numerator			
Denominator			
Data Source			TDH/CDHP Tracking Database
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	20.0	30.0	40.0

ESM 8.1.3 - Number of Gold Sneaker certified childcare facilities

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			700	800
Annual Indicator		549	643	643
Numerator				
Denominator				
Data Source		Gold Sneaker Database	Gold Sneaker Database	Gold Sneaker Database
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	900.0	950.0	1,000.0

ESM 8.1.4 - Percent of LHD primary care clinics writing HPHP prescriptions annually

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			25
Annual Indicator			57.1
Numerator			
Denominator			
Data Source			TDH
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	40.0	55.0	65.0

ESM 8.1.5 - Number of Healthy Parks Healthy Person prescriptions written

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			125	400
Annual Indicator		0	195	289
Numerator				
Denominator				
Data Source		TDEC HPHP Rx portal	TDEC HPHP Rx portal	TDEC HPHP Rx portal
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	550.0	700.0	850.0

ESM 8.1.6 - Percentage of TN counties with completed built environment projects

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			20	30
Annual Indicator			0	95
Numerator				
Denominator				
Data Source			OPP and Project Diabetes tracking databases	OPP and Project Diabetes tracking databases
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	40.0	50.0	60.0

ESM 8.1.7 - Percent of eligible venues offering the Double Up Food Bucks Program

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			35	45
Annual Indicator			0	76.2
Numerator				
Denominator				
Data Source			Nourish Knoxville tracking database	Nourish Knoxville tracking database
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	55.0	65.0	75.0

ESM 8.1.8 - Percent of staff with an increase in ACEs and TIC knowledge as evidenced by post training evaluation

Measure Status:	Inactive - Measure retired due to the unlikelihood of having the staff available to fulfill it.		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			80
Annual Indicator			0
Numerator			
Denominator			
Data Source			EBHV
Data Source Year			2022
Provisional or Final ?			Final

ESM 8.1.9 - Percent of families with improved protective factors score

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			50	52
Annual Indicator			49.9	50
Numerator				
Denominator				
Data Source			EBHV	EBHV
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	54.0	56.0	58.0

ESM 8.1.10 - Percent of families enrolled in CHANT care coordination who partially or fully complete pathways identified

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			41	42
Annual Indicator			42.6	45.2
Numerator				
Denominator				
Data Source			CHANT	CHANT
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	43.0	44.0	45.0

State Performance Measures

SPM 6 - Percent of schools with at least 50% physical education class time spent in moderate to vigorous physical activity

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			10	20
Annual Indicator			0	90.2
Numerator				
Denominator				
Data Source			N/A	2022 QPE Survey
Data Source Year			N/A	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	90.7	91.7	93.2

SPM 7 - Rate of Double Up Food Bucks purchases per SNAP recipient

Measure Status:	Inactive - Replaced		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			0
Annual Indicator			0
Numerator			
Denominator			
Data Source			n/a
Data Source Year			n/a
Provisional or Final ?			Final

SPM 8 - Percent of children with two or more ACEs

Measure Status:	Active

State Provided Data					
	2018	2019	2020	2021	2022
Annual Objective	27.5	24	23	22.5	22
Annual Indicator	24.6	24.1	20.1	0	21.5
Numerator					
Denominator					
Data Source	NSCH	NSCH	NSCH	N/A	NSCH
Data Source Year	2016	2017	2018	N/A	2020
Provisional or Final ?	Final	Final	Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	21.6	21.2	21.0

SPM 9 - Percent of substantiated child maltreatment cases among families served by home visiting programs

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			0.3	3.3
Annual Indicator		4.2	1.5	3.2
Numerator				
Denominator				
Data Source		EBHV	EBHV	EBHV
Data Source Year		2019	2020	2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	3.2	3.1	3.0

SPM 10 - Percent of caregivers who experience intimate partner violence and do not receive professional support services among families served by home visiting

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			7	5
Annual Indicator			0	0
Numerator				
Denominator				
Data Source			EBHV	EBHV
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	4.0	3.5	3.0

SPM 24 - Rate of Double Up Food Bucks purchases per SNAP recipient

Measure Status:	Active

State Provided Data	
	2022
Annual Objective	
Annual Indicator	18
Numerator	
Denominator	
Data Source	Nourish Knoxville tracking database
Data Source Year	2022
Provisional or Final ?	Final

Annual Objectives		
	2024	2025
Annual Objective	20.8	24.0

State Outcome Measures

SOM 3 - Percent of public school 6th graders who are overweight or obese

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			43.3	44.8
Annual Indicator		43.6	45	47.4
Numerator				
Denominator				
Data Source		CSH BMI Report	CSH BMI Report	CSH BMI Report
Data Source Year		2017-2018	2019-2020	2021-2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	47.0	46.5	46.0

SOM 4 - Percent of WIC recipients aged 2-4 years who are overweight or obese

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			31
Annual Indicator	31.2	32	28.7
Numerator			
Denominator			
Data Source	WIC	WIC	WIC
Data Source Year	CY 2020	CY 2021	CY 2022
Provisional or Final ?	Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	27.5	26.5	25.0

State Action Plan Table

State Action Plan Table (Tennessee) - Child Health - Entry 1	
Priority Need	
Decrease overweight and obesity among children	
NPM	
NPM 8.1 - Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day	
Objectives	
Increase the percentage of children ages 6-11 years who are physically active at least 60 minutes per day from 31.5% on October 1, 2020 to 40.0% on September 30, 2022.	
Strategies	
Support school-based efforts to promote physical activity and good nutrition	
ESMs	Status
ESM 8.1.1 - Percent of physical education teachers receiving professional development related to 50% of PE class time spent in moderate to vigorous physical activity	Active
ESM 8.1.2 - Percentage of TN counties in which trainings related to mental health and physical health have occurred	Active
ESM 8.1.3 - Number of Gold Sneaker certified childcare facilities	Active
ESM 8.1.4 - Percent of LHD primary care clinics writing HPHP prescriptions annually	Active
ESM 8.1.5 - Number of Healthy Parks Healthy Person prescriptions written	Active
ESM 8.1.6 - Percentage of TN counties with completed built environment projects	Active
ESM 8.1.7 - Percent of eligible venues offering the Double Up Food Bucks Program	Active
ESM 8.1.8 - Percent of staff with an increase in ACEs and TIC knowledge as evidenced by post training evaluation	Inactive
ESM 8.1.9 - Percent of families with improved protective factors score	Active
ESM 8.1.10 - Percent of families enrolled in CHANT care coordination who partially or fully complete pathways identified	Active

NOMs

NOM 19 - Percent of children, ages 0 through 17, in excellent or very good health

NOM 20 - Percent of children, ages 2 through 4, and adolescents, ages 10 through 17, who are obese (BMI at or above the 95th percentile)

State Action Plan Table (Tennessee) - Child Health - Entry 2

Priority Need

Decrease overweight and obesity among children

SPM

SPM 6 - Percent of schools with at least 50% physical education class time spent in moderate to vigorous physical activity

Objectives

Increase the percentage of public schools with at least 50% physical education class time spent in moderate to vigorous physical activity from 10% on October 1, 2020 to 60% on September 30, 2025.

Strategies

Promote Gold Sneaker voluntary recognition program for licensed childcare centers

State Action Plan Table (Tennessee) - Child Health - Entry 3

Priority Need

Increase prevention and mitigation of Adverse Childhood Experiences (ACEs)

SPM

SPM 8 - Percent of children with two or more ACEs

Objectives

Decrease the percent of children with two or more ACEs from 23% on October 1, 2020 to 21% on September 30, 2025.

Strategies

Increase knowledge and practice of ACE and Trauma Informed Care (TIC)

State Action Plan Table (Tennessee) - Child Health - Entry 4

Priority Need

Increase prevention and mitigation of Adverse Childhood Experiences (ACEs)

SPM

SPM 9 - Percent of substantiated child maltreatment cases among families served by home visiting programs

Objectives

Decrease the percent of investigated child maltreatment cases among families served by home visiting programs from 3.3% on October 1, 2020 to 3.0% on September 30, 2025.

Strategies

Ensure a strong start for children by promoting a healthy parent-child attachment through implementation of home visiting programs throughout the 95 counties of Tennessee

State Action Plan Table (Tennessee) - Child Health - Entry 5

Priority Need

Increase prevention and mitigation of Adverse Childhood Experiences (ACEs)

SPM

SPM 10 - Percent of caregivers who experience intimate partner violence and do not receive professional support services among families served by home visiting

Objectives

Decrease the percent of caregivers who experience intimate partner violence and do not receive professional support services among families served by home visiting programs from 8.0% on October 1, 2020 to 3.0% on September 30, 2025.

Strategies

Intervene to lessen immediate and long-term harms by linking families to health and social services

State Action Plan Table (Tennessee) - Child Health - Entry 6

Priority Need

Decrease overweight and obesity among children

SPM

SPM 24 - Rate of Double Up Food Bucks purchases per SNAP recipient

Objectives

Increase the rate of Double Up Food Bucks purchases per 1000 SNAP recipients in the targeted counties from 18.03 on October 1, 2021 to 23.95 on September 30, 2025.

Strategies

Promote policy, systems, and environmental change (PSE) strategies to increase physical activity and promote access to healthy food and beverages.

State Action Plan Table (Tennessee) - Child Health - Entry 7

Priority Need

Decrease overweight and obesity among children

SOM

SOM 3 - Percent of public school 6th graders who are overweight or obese

Objectives

Decrease the percent of public school 6th graders who are overweight or obese from 43.3% on October 1, 2020 to 41.9% on September 30, 2025.

Strategies

Partner with healthcare providers to promote physical activity counseling during well-child visits

State Action Plan Table (Tennessee) - Child Health - Entry 8
Priority Need
Decrease overweight and obesity among children
SOM
SOM 4 - Percent of WIC recipients aged 2-4 years who are overweight or obese
Objectives
Decrease the percent of WIC recipients ages 2-4 years who are overweight or obese
Strategies
Partner with healthcare providers to promote physical activity counseling during well-child visits

Priority: Reduce Overweight and Obesity Among Children

MCH/Title V Funding: The TDH Overweight and Obesity Among Children priority team is administratively led by the Chronic Disease Prevention and Health Promotion section within the Division of Family Health and Wellness of TDH. The Chronic Disease Prevention and Health Promotion section includes Chronic Disease and School Health, Tobacco Prevention and Control, Diabetes Prevention, the Preventive Health Block Grant, Poison Control, and Gold Sneaker. The childhood overweight and obesity reduction efforts are mostly funded by state and other federal funds; however, MCH/Title funds are used to cover state school health nurse consultant services. Additionally, the Deputy Medical Director who provides leadership to this section is fully funded by MCH/Title V.

Interpretation of Performance Data on selected NPMs, SPMs, and SOMs:

SPM 6: Percent of schools with at least 50% physical education class time spent in moderate to vigorous physical activity

This is the first year of data collection and monitoring for this performance measure, as the question was only added to the annual Quality Physical Education (QPE) survey for the 2022 administration. The actual value of 90.2% far exceeded the target of 20.0%, which was based on expert estimation but no actual baseline data until now. The priority team has adjusted target values for 2023-2025 accordingly. The Tennessee Department of Education (TDOE) has focused much attention on this issue over the past two years, which is showing an impact.

The strong partnership with TDOE contributed to the improvement of SPM 6. The TDH Overweight and Obesity Among Children priority team facilitated several meetings with the TDOE Physical Activity/Physical Education State Coordinator and the Wellness Resource Coordinator to discuss program activities, collaborative efforts, professional development opportunities, performance measures, data collection, and survey revisions to support the MCHBG strategies and activities. The ability to incorporate relevant questions into the QPE related to the work being conducted in the school was instrumental in measuring and reporting progress.

SPM 24: Rate of Double Up Food Bucks purchases per SNAP recipient

This is the first year of data collection and monitoring for this performance measure, as no previous baseline data existed, and therefore, there was no 2022 target value. The actual 2022 value of .01803 reflects the high number of SNAP recipients (80,636) in the six priority counties compared to the relatively low, but growing, number of Double Up Food Bucks (DUFB) transactions (1,454). The program is sponsored and promoted by Nourish Knoxville, which has been expanding the reach of the initiative over the past few years. Based on the expected rate of expansion, the team has set modest target values for 2023-2025.

Nourish Knoxville has made a conscious effort to expand its reach through communication and marketing. A new flyer was development in English and Spanish for the first time. The flyer was distributed to local social services such as Second Harvest for regional distribution, Interfaith Health Clinic, and Centro Hispano. A press release was released to announce that all Knoxville farmers' markets now accept SNAP and offer DUFB to SNAP users. The story was picked up by the local NBC affiliate WBIR. In addition, WBIR, WATE, and WVLT all conducted live spots at New Harvest Farmers' Market and the Program Coordinator spoke on all offered programs including DUFB.

SOM 3: Percent of public school 6th graders who are overweight or obese

The data source for this outcome measure is the TODE Coordinated School Health Weight Status (BMI) report. The report highlights data from annual direct measurement of height and weight among public school students statewide. However, staff could not obtain these measurements for the 2020-2021 academic year due to widespread school

closings from COVID. The 2021-2022 Weight Status (BMI) report had not been released at the time this update was completed. Therefore, data from the 2019-2020 academic year remains the most recent data available. The overweight/obesity team reported the risk of overweight or obesity actually increased to 45.0% in 2021, from the baseline of 43.64% in 2017-18, which is a statistically significant difference.

The team will be able to determine the outcome of this measure when data is available in 2023.

SOM 4: Percent of WIC recipients aged 2-4 years who are overweight or obese
The source for this outcome measure is the TN WIC program database. There is usually a lag time of one year between the MCH fiscal year and the most recent, complete WIC data. Therefore, data from CY2021 remain the most recent, as the WIC program has not yet completed data collection for height and weight in CY2022.

In 2021, the risk of overweight or obesity in TN WIC recipients ages 2-4 increased slightly to 32.0% from 31.2 in 2020, but the rate was substantially higher compared to pre-COVID levels (i.e., 25.5% in 2019). However, during the pandemic, the WIC program waived the requirement for in-person height and weight measurements, which could have greatly biased the results. Other aspects of the pandemic that limited opportunities for physical activity outside the home could have been a factor as well.

NPM 8.1: Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day
The combined 2020-2021 National Survey of Children's Health (NSCH) percentage of TN children ages 6-11 who are physically active at least 60 minutes every day was 27.7%. This rate represented almost a three-point decline (i.e., higher risk) compared to the 2019-2020 value of 30.6% and was short of the Year 2 target by almost four points. Although the decline was not statistically significant, there appears to be a less healthy trend developing for this measure, as the baseline value was 31.5%. Despite the NSCH being the definitive source for MCH national performance and outcome measures, the state sample size is small even after combining years of data. Therefore, the confidence interval around percentages is fairly broad and the sensitivity for determining statistical

Although the data does not show an improvement in the NPM, the partnership between TDH and TDOE has been integral in providing professional development opportunities for school staff and public health educators. Trainings focused on Focused Fitness, Out of School Time and incorporating physical activities during class time.

Accomplishments and Challenges (based on FY2022 Action Plan):

Accomplishments include expanding programs to reach unserved and/or underserved populations, increasing collaborative efforts with internal and external partners, providing professional development opportunities addressing physical activity, nutrition, and youth mental health, and addressing way to improve data collection for reporting.

Challenges include postponing programs due to lack of staffing and restructuring, lack of data available for reporting, and finding ways to accurately track programs and/or participants.

Strategy 1: Support school-based efforts to promote physical activity and good nutrition

> **Supporting Evidence for Strategy 1:** Physical Activity: Enhanced School-Based Physical Education: Enhanced school-based physical education (PE) involves changing the curriculum and course work for K-12 students to increase the amount of time they spend engaged in moderate- or vigorous-intensity physical activity during PE classes. https://www.thecommunityguide.org/findings /physical-activity-enhanced-school-based-physical-education

Activity 1a: Collaborate with DOE to develop and implement strategies to provide professional development to physical education teachers pertaining to engaging students in moderate-to-vigorous physical activity 50% or more of physical education class time.

Report 1a: The 2022 TDE Quality Physical Education Survey was not able to collect information on professional development for **ESM 8.1.1** (percent of physical education teachers receiving professional development related to 50% of PE class time spent in moderate to vigorous physical activity) as originally expected. Therefore, no baseline or actual data currently exist for this measure despite concerted TDOE efforts in this area. A question on the subject will be added to the 2023 TDE District Survey alongside existing items on other types of professional development. The team will consider modifying this ESM to reflect the change in the data source. Values for the measure will be updated as data become available.

During the reporting period the TDH School Health and Wellness Program Director provided a professional development workshop at the TDOE Physical Activity for Educators Conference in June 2022. The workshop consisted of the Physical Activity Learning Sessions (PALS) curriculum and resources for approximately 200 physical education and health teachers and public health educators. PALS combines content learning with facility-level self-assessments, policy development opportunities, resources and materials, aimed at supporting practice change in early childhood education programs. TDOE facilitated the Coordinated School Health (CSH) Institute for approximately 150 CSH Coordinators and support staff focusing on physical activity, nutrition, and youth mental health.

Activity 1b: Collaborate with DOE to provide professional learning opportunities that connect mental health and physical health for PHEs and Health Councils, and youth (ie trauma-informed care, Youth Mental Health 1st Aid training, Movement as Medicine).

Report 1b: This is the first year of data collection and monitoring for **ESM 8.1.2** (percentage of TN counties in which trainings related to mental health and physical health have occurred). The team and partners only launched these programs within the past year. The actual value of 5.3% was about half of the target of 10.0%, which was based on an estimation of training activity but no actual baseline data. The priority team has adjusted target values for 2023-2025 accordingly. The TN Department of Education has begun to focus much attention on this issue through their Movement as Medicine and related programs, which they administered in Cannon, Hawkins, Sumner, Carroll, and Wilson counties during Year 2.

The TDH School Health and Wellness Program Director offered 67 virtual Focused Fitness trainings reaching over 600 local public health educators. The program is designed for activity leaders and teachers to deliver fitness, nutrition, and health concepts in a fun and motivating environment. Focused Fitness includes resources and materials for the After School Program, Physical Activity Program, Early Learner Fitness, Classroom Activity Breaks, and the PEACE Program.
The Program Director also leads the School Health Action Coalition's (SHAC) Health

Education Sub-Committee which focuses on physical, social, and emotional health.

Challenges Related to Implementation of Strategy 1: It has been challenging to track trainings that have been conducted with the number of attendees.

Strategy 2: Promote Gold Sneaker voluntary recognition program for licensed childcare centers

Supporting Evidence: Center-based early childhood education programs (ECE) aim to improve educational outcomes that are associated with long-term health as well as social- and health-related outcomes. Economic evidence indicates there is a positive return on investment in early childhood education. The benefits from students' future earnings gains alone exceed program costs. If targeted to low-income or racial and ethnic minority communities, ECE programs are likely to reduce educational achievement gaps, improve the health of these student populations, and promote health equity. https://www.thecommunityguide.org/findings/promoting-health-equity-through-education-programs-and-policies-center-based-early-childhood

ESM 8.1.3 Percentage of certified Gold Sneaker childcare facilities among all DHS licensed facilities
The Year 2 ESM was a modified version of the Year 1 measure related to the number of Gold Sneaker (GS) certified childcare facilities. The percentage of all childcare centers that are GS certified is a more accurate measure of program impact and reach. Year 2 data established a baseline value of 27.6% of the 2328 DHS licensed facilities being certified Gold Sneaker childcare facilities. The priority team established 2023-2025 targets accordingly. The overall number of GS certified facilities did not change in Year 2 from the 643 reported in Year 1. The lack of expansion was due to unfilled GS staff positions, a restructuring of the program, and changes in the DHS TrainTN System as reported under Activity 2a and 2b below.

Activity 2a: Host 1-2 technical assistance training for health promotion staff statewide in using the TrainTN system for Gold Sneaker certification training for licensed daycares.

Report 2a: This activity did not occur during this reporting period. Due to unfilled Gold Sneaker positions and restructuring of the program there were no trainings provided for health promotion staff. Additionally, the TN Department of Human Service (DHS) restructured the organization so the TrainTN System was not promoted or utilized for statewide trainings.

Activity 2b: Provide a minimum of 1-2 trainings that address implementation practices of Gold Sneaker policies for public health educators, daycare staff, TN Department of Human Services staff, and Child Care Resource & Referral Center staff, and other partners statewide.

Report 2b: This activity did not occur during this reporting period. Due to unfilled Gold Sneaker positions and restructuring of the program there were no trainings provided for internal or external partners.

Challenges Related to Implementation of Strategy 2: The overall challenges included unfilled Gold Sneaker positions, program restructure, and childcare center closures.

Strategy 3: Partner with healthcare providers to promote physical activity counseling during well-child visits

Supporting Evidence: Physical Activity: Family-Based Interventions. Family-based interventions combine activities to build family support with health education to increase physical activity among children. https://www.thecommunityguide.org/findings/physical-activity-family-based-interventions

TDH will focus on increasing provider referrals from TDH clinics in the West region, as electronic health records show referrals from the West region are low as compared to other TDH regions, and app usage in the West is less when compared to other regions of the state. This approach will also address health equity, as the West region of the state has a higher percentage of African Americans, as compared to other regions (not including Metro Health Departments).

Activity 3a: Provide training for 5 health provider champions on how to incorporate the use of the Healthy Parks Healthy Person park prescription portal to increase family-based physical activity.

Report 3a: In 2022, medical providers at TDH local health departments wrote 289 prescriptions for the HPHP program **(ESM 8.1.5)**. Prescriptions were provided by APRNs, RNs, LPNs, and MDs to patients ranging from approximately one (1) to sixty-four (64) years of age. This number far surpassed the 195 written in 2021 but fell short of the target of 400.

As HPHP prescriptions have only been in existence for 2 years, the priority team is still gaining the necessary experience to estimate program uptake more accurately. Lingering effects of the COVID pandemic may also have limited patient contact The team has adjusted 2023-2025 targets accordingly for this very popular program.

The success of this activity can be attributed to promoting the health benefits of outdoor recreation and physical activity at the local level, increasing participation of providers in the MCHBG partner meetings, and finding and partnering with champions at the LHDs to promote and encourage providing prescriptions.

Activity 3b: Promote the use of the Healthy Parks Healthy Person park prescription program and app by PHNs, WIC staff, and other health providers in 10 additional local health departments with an emphasis in West Tennessee.

Report 3b: **ESM 8.1.4.** (percent of LHD primary care clinics writing HPHP prescriptions annually) is a new ESM for Year 2, which provides a more accurate indicator of program reach among LHDs statewide. In the past year, 57.1% (i.e., 32 out of 56) of all LHD primary care clinics produced HPHP prescriptions. This value far surpassed the target of 25%. It is a testament to the effectiveness of promotional efforts that over half of the health departments participated in this relatively young program. The priority team revised the 2023-2025 targets accordingly.

During the reporting period, HPHP increased promotion of the Healthy Parks Healthy Person reward program to increase outdoor physical activities. The HPHP Program Director presented about the prescription program and app at the Health Promotion Quarterly Call. Participants included health promotion staff and public health educators from local, regional, state, and metro health departments. The HPHP App had over 10,700 app users. The new app provided participants their activity history, user

notifications, reward refunds, and a healthy provider portal. In 2021 over 1,630 Rewards were sent to participants an increase from 479 in 2020. The new app was promoted through the TDH website, promotion to internal and external partners, presentations to local Public Health Educators, and development of two PBS television spots.

Challenges Related to Implementation of Strategy 3: The overall challenge was finding ways to promote HPHP to PHNs, WIC staff, and other health providers in LHDs.

Strategy 4: Promote policy, systems, and environmental change (PSE) strategies to increase physical activity and promote access to healthy food and beverages

Supporting Evidence: Physical Activity: Creating or Improving Places for Physical Activity. In these types of interventions, worksites, coalitions, agencies, and communities work together to change local environments to create opportunities for physical activity. Changes can include creating or improving walking trails, building exercise facilities, or providing access to existing facilities. https://www.thecommunityguide.org/findings/physical-activity-creating-or-improving-places-physical-activity

Activity 4a: Support and provide technical assistance to at least 5 local communities who set a goal to increase physical activity through the construction of walking and nature trails.

Report 4a: **ESM 8.1.6:** (percentage of TN counties with completed built environment projects) is new for Year 2, which provides a more accurate indicator of program reach across counties statewide. Since the beginning of the current MCH cycle in 2020, 95.8% (i.e., 91 out of 95) of all TN counties have seen at least one completed built environment project sponsored by either the TDH Office of Primary Prevention (OPP) or Project Diabetes. This value far surpassed the target of 30%. During the last two years, OPP and Project Diabetes sponsored 95 and 28 completed projects, respectively. This achievement underscores the effectiveness of both programs. The priority team revised the 2023-2025 targets accordingly.

In addition to the built environment projects supported by the OPP and Project Diabetes, the TDH Regional Healthy Development Coordinators (HDCs) conducted 4 regional workshops addressing built environment, safe walking spaces, and community walkability. There was a total of 56 participants including but not limited to community leaders, local government, transportation, and law enforcement. The training used the Health by Design's workshops model. Additionally, to expand reach and engage additional community members the HDCs made this a "train the trainer" model for interested community leaders.

There were also active living workshops conducted at the TN Bike Walk Summit as well as the TN Department of Transportation.

Activity 4b: Collaborate with non-profits in east Tennessee to increase access to fresh fruit and vegetables for SNAP recipients through the Double Up Food Bucks program.

Report 4b: **ESM 8.1.7** (percent of eligible venues offering the Double Up Food Bucks Program) is new ESM for Year 2, which provides a more accurate indicator of program reach across

eligible venues in priority counties. In the past year, 76.2% (i.e., 16 out of 21) of farmers markets and farmers stores in the designated area participated in the Double Up Food Bucks (DUFB) program sponsored by Nourish Knoxville. This value far surpassed the target of 45%, which was based on a best estimate in the absence of actual program data. The priority team revised the 2023-2025 targets accordingly.

Nourish Knoxville's promotional efforts have been very effective in reaching their priority audience. For the reporting period, Nourish Knoxville conducted marketing and outreach for the Double Up Food Bucks (DUFB) program through diverse channels of communication. A new flyer was developed in English and Spanish for the first time. The flyer was distributed to local social services such as Second Harvest for regional distribution, Interfaith Health Clinic, and Centro Hispano. A press release was released to announce that all Knoxville farmers' markets now accept SNAP and offer DUFB to SNAP users. The story was picked up by the local NBC affiliate WBIR. In addition, WBIR, WATE, and WVLT all conducted live spots at New Harvest Farmers' Market and the Program Coordinator spoke on all offered programs including DUFB. Plans are already underway to expand the program to venues in additional counties.

Challenges Related to Implementation of Strategy 4: No challenges were reported during this time.

Update on Other Child Health Programs Supported by MCH/Title V:

Childhood Lead Poisoning Prevention: Under a contract with the UT Extension, the LeadTRK Database Management System maintains, updates and revises blood lead test results received for the Tennessee Department of Health to monitor and track children with elevated blood lead levels. During the period of this report (October 1, 2021 – September 30, 2022), there were 81,226 screenings of children aged 0 to 192 months of age and 379 children with confirmed, elevated blood lead levels. Training, support, maintenance and updates on LeadTRK usage was also provided. LeadTRK assistance was provided 411 times during the 2021-2022 fiscal year. A contract with Shelby County is provided for case management, outreach, education, and referrals to community services to families of children with elevated blood lead levels. A contract with Hamilton County is also provided for outreach, education regarding the importance of blood lead poisoning prevention and case management services.

Poison Control Center: During the reporting period, the Tennessee Poison Center (TPC) provided program materials, as requested, and distributed over 151,071 pieces of literature statewide, including brochures, fact sheets and stickers. The "Poison Help" brochure was available through download in 13 languages: Spanish, Russian, Korean, Vietnamese, Chinese, Arabic, Polish, Thai, Haitian, Creole, Portuguese, French and Hmong. The TPC staff gave presentations and lectures virtually to 3,417 first responders, pharmacy students TPC staff, community members and residents, and healthcare professionals. Additionally, the TPC "Question of the Week" newsletter reached 12,591 staff. TPC received 50,841 calls to the Tennessee Poison Center Hotline by individuals that have been exposed to poison agents. TPC staff provided appropriate medical follow-up to 100% individuals calling the Tennessee Poison Hotline who have been exposed to poison agents.

Priority: Increase Prevention and Mitigation of Adverse Childhood Experiences (ACEs)

MCH/Title V Funding: The Prevention and Mitigation of ACEs priority team is administratively led by the Early Childhood Initiatives section within the Division of Family Health and Wellness of TDH. The Early Childhood Initiatives section includes Evidence-Based Home Visiting, ACEs Reduction, and Early Childhood Comprehensive systems. ACEs prevention efforts are funded by state and other federal funds. While MCH/Title V does not directly fund the activities highlighted in the annual report, it does fully fund the Deputy Director of Child Health who provides

leadership to this section.

Interpretation of Performance Data on selected NPMs, SPMs, and SOMs:

SPM 8: Percent of children with two or more ACEs.
The data for FY2021/2022 from NSCH showed that 21.5% of Tennessee's children experienced 2 or mores ACEs.

During the FY 2019/2020 20.6% of TN children were reported as having 2 or more ACEs. Thus, there was a slight increase by 0.9% points in the number of children that experienced 2 or more ACEs. The stress of the COVID-19 pandemic, including a loss of resources, school and childcare closures, and loss of connection to supports may have contributed to the slight increase in children with two or more ACEs.

SPM 9: Percent of substantiated child maltreatment cases among families served by home visiting programs
Of the 385 child maltreatment cases reported to DCS by home visiting programs, 3.2% (49) were substantiated. There was an increase in the number of cases that were investigated during this reporting period. This could partly be a result of staff turnover at the state agency (DCS) that deals with child maltreatment case investigation(s) and a backlog of cases resulting from the impact of the COVID19 pandemic

SPM 10: Percent of caregivers who experience intimate partner violence and do not receive professional support services among families served by home visiting.
During FY2022, any caregiver participant in the TN EBHV program, who experienced intimate partner violence were referred to, and received professional support services. Thanks to the tireless efforts from the TN EBHV local implementing agencies' staff.

SOM 3: Percent of adults reporting chronic obstructive pulmonary disease (COPD)
The percentage of adult Tennesseans with COPD rose between FFY2021 (9.5%) and FFY2022 (10.4%). This increase, however, is not statistically significant.

This stagnation is likely because of a relatively slow decline in Tennessee's adult smoking rate due to a myriad of factors including inadequate tobacco control policies, increases in stress during the COVID-19 pandemic, and aggressive marketing tactics by the tobacco industry.

Accomplishments and Challenges (based on FY2022 Action Plan):

Strategy 1: Increase knowledge and practice of ACE and Trauma Informed Care (TIC).

Supporting Evidence for Strategy 1: The variety of sectors can make a difference in preventing ACEs by impacting the various contexts and underlying risks that contribute to violence and adversity and by supporting safe, stable, nurturing relationships and environments for all children while taking a trauma informed approach to prevent ACEs.

Centers for Disease Control and Prevention (2019). Preventing Adverse Childhood Experiences: Leveraging the Best Available Evidence. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/preventingACES.pdf

Activity 1a: Develop and implement online TIC training for TDH staff, including those in the CHANT and EBHV programs. Through this training TDH staff and CHANT and EBHV programs will be able to integrate trauma informed practices into their work with families, mitigating the impact of ACEs.

Report 1a: Trauma Informed Care (TIC) and ACEs trainings were created in video format and are now available to existing and new state employees. During FFY2022, 18 TDH staff were enrolled in the online ACEs training; 9 of those enrolled completed the training.

TDH continues to partner with the Tennessee Commission on Children and Youth (TCCY). This partnership included support of Building Strong Brains, an initiative to provide ACEs training across the state to sectors beyond early childhood. This work continues as Resilient Tennessee, the next step after ACEs education on how to increase protective factors, positive childhood experiences (PCEs), and build resilience.

Activity 1b: Provide ACE and TIC refresher training for child fatality teams as part of their ongoing training. This training will provide information and insight to teams on the impact of ACEs and trauma and assist in understanding the impact on social determinants of health.

Report 1b: The annual child fatality review training was held on May 31, 2022. The training included a session titled “Life Stressors and COVID-19”. This presentation highlighted changes to the life stressors and COVID-19 section of the child death database. These variables and the importance of collecting this information was discussed with the team. The National Center also gave guidance to the teams on “best practices” for determining the presence of life stressors. This training was held virtually with representation from all the child fatality review teams.

Challenges Issues Related to Implementation of Strategy 1:
Challenges for implementation of this strategy include impacts of the COVID-19 Pandemic and staffing shortages - both on the State level and local implementing agency level.

Strategy 2: Ensure a strong start for children by promoting a healthy parent-child attachment through implementation of home visiting programs throughout the 95 counties of Tennessee.

Supporting Evidence for Strategy 2: Effective home visiting models have demonstrated many benefits for children and parents. Early childhood home visitation can prevent ACEs by providing information, caregiver support, and training about child health, development, and care to families in their homes to build a safe, stable, nurturing and supportive home environment. Children participating in a home visiting program have better cognitive and language development, better academic achievement, fewer behavioral problems, lower rates of substance use, and fewer arrests, convictions, and parole violations by age 19. Home visiting is associated with better pregnancy outcomes, improved parenting practices, reductions in the use of welfare and other government assistance, greater employment, lower rates of substance use, and reduced exposure to intimate partner violence.
Centers for Disease Control and Prevention (2019). Preventing Adverse Childhood Experiences: Leveraging the Best Available Evidence. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/preventingACES.pdf

Activity 2a: Teach positive parenting skills through home visitation in partnership with local EBHV implementing agencies. This will include encouraging social-emotional learning and parent-child relationship whose instability has been exacerbated by the COVID-19 global pandemic.

Report 2a: TDH continues to provide EBHV services in all 95 counties in Tennessee. EBHV is a proven intervention to mitigate ACEs. Services were continued throughout the pandemic. EBHV programs continue to use a virtual home visiting format when necessary; otherwise have resumed in-person home visits.

Activity 2b: Provide health education through EBHV home visiting programs in counties throughout Tennessee. Communicating the importance of children having a medical home to parents promotes high quality and culturally effective integrated care.

Report 2b: TDH continues to provide EBHV services in all 95 counties in Tennessee. Home visitors discuss medical home, immunization schedules, and complete ASQ (Ages and Stages Questionnaires) with enrolled families.

Activity 2c: Provide supportive care and additional services to families and children through EBHV home visitation. By connecting families with concrete services and knowledge of parenting and child development improve protective factors which mitigate or prevent ACEs.

Report 2c: The percent of families with an improved protective factors score (**ESM 8.1.9.)** remained unchanged, at 50% from last year (FY21). The plateau might be explained by differences in the different aspects of the protective factor measures; a higher percentage of families show improved resilience at 70.38% while a small percent show improvement in nurturing and attachment (at 21%).

TDH continues to partner with the Tennessee Commission on Children and Youth (TCCY) to expand knowledge across the state on building resilience in families through the *Resilient Tennessee* initiative, a new iteration of the *Building Strong Brains* ACEs education work. Further, the TDH ACEs Goal Team is working to identify strategies to increase Positive Childhood Experiences (PCEs). Also, EBHV programs continue to work with families through service delivery to increase protective factors.

Challenges Issues Related to Implementation of Strategy 2: Challenges during Year 2 include the aftereffects of the COVID-19 pandemic. Home visiting programs continued to provide services virtually during the pandemic. EBHV local implementing agencies (LIAs) have resumed in-home visits rather than virtual home visits when safe to do so and when both family and home visitor were comfortable. A related challenge is that families who enrolled in the program during the pandemic had not experienced in-home visits. Further challenges may include limited resources available during the pandemic.

Strategy 3: Intervene to lessen immediate and long-term harms by linking families to health and social services.

Supporting Evidence for Strategy 3: Traumatic events in childhood can be emotionally painful or distressing and can have effects that persist for years. Factors such as the nature, frequency and seriousness of the traumatic event, prior history of trauma, and available family and community supports can shape a

child's response to trauma. Creating and sustaining safe, stable, nurturing relationships and environments for all children and families can prevent ACEs and help all children reach their full health and life potential. Centers for Disease Control and Prevention (2019). Preventing Adverse Childhood Experiences: Leveraging the Best Available Evidence. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/preventingACES.pdf

Activity 3a: Screen and assess families for enrollment in CHANT to identify health and social needs that have long term impact on families and children. By identifying the needs of families immediate, priority services can be provided to families.

Report 3a: CHANT continues to receive referrals and conduct the Screening and Assessment through telephonic intervention within 2 weeks of birth using data from the health department's birth files. This screening usually occurs within the TDH call center. Local health departments continue to receive referrals "in-house" from internal and external partners. Care Coordinators then contact these families directly to complete the screening and assessment which identifies the needs of the family. Care Coordinators provide referrals and link families to resources and services within their communities. During this time frame 12,145 families participated in the Screening and Assessment.

Activity 3b: Provide referrals to families for identified health care and social service needs. Identifying which of the sixteen pathways of care families have identified as needs increase the protective factors within a family by providing concrete services at the time identified.

Report 3b: During this time frame CHANT has assisted 8189 families (over 10,000 individuals) on pathway progression. Families continue to identify their needs through the screening and assessment. Once these needs have been identified the Care Coordinator works with the family to develop a plan of care and works to complete the action steps of that pathway. A critical review of all pathways was conducted. Based on that review Priority Pathways (Dental home, Developmental Screening, Health Insurance, Immunization, Medical home, Prenatal/Postnatal and Social Services) were developed. These pathways allow the Care Coordinator to focus on the most critical needs of the family. Emergent needs are also able to be identified at any time during a family's involvement with CHANT and can create a new pathway of care- this allows for service delivery to be fluid and based on the family's needs. Red flag health and safety concerns are prioritized by the Call Center and sent to the county Team Lead for immediate follow up. CHANT staff worked to provide concrete services when issues were identified as can be evidenced by the number of individuals CHANT was able to serve even with restrictions on community resource delivery.

Activity 3c: Assist families in navigating the healthcare and social services system through the CHANT care-coordination model. Aiding in navigating any of the sixteen pathways, including obtaining a medical home or an EPSDT, is solution focused as barriers and other obstacles are addressed. Through this family resiliency is increased as a strategy to eliminate and mitigate ACEs the family might have experienced.

Report 3c: The data shows an increase in the percent of families who partially or fully completed pathways from 42.6% in FY2021 to 45.2% in FY2022, which is above the goal of 42.0%

for FY2022.

This increase can be attributed to CHANT staff have received training on accessing the social service systems and how to assist families in obtaining an EPSDT, immunizations, and/or obtaining a primary care physician. LHD are no longer providing EPSDT services which increased the need for CHANT staff to assist families who identify they need a PCP/Medical home to find those resources within their community. Families who are contacted by the TDH Call Center who are not interested in CHANT services are assisted with obtaining a PCP/medical home by Call Center staff telephonically; to close the gap and provide more families with needed medical care. Restrictions from the pandemic remained active during this time period but starting to show a decline, as such community resources were more available which may also contribute to the reason the program was able to see an increase in pathways partially or fully completed.

Challenges Issues Related to Implementation of Strategy 3: During and following the height of the pandemic, resources were often more difficult to obtain due to decline in overall resource availability, decreased community partners office hours, and the ability to see patients in person etc. Restrictions from the pandemic impacted service delivery across all levels of care during this time frame. As those restrictions are lifted. Resources and services continue to increase for families. Community resources often had to alter their service delivery which affected referral and resource linkage. CHANT staff were able to work around these restrictions and able to serve 8189 families during this time period. CHANT was able to provide/assist with finding a medical home/PCP for 727 individuals during this time frame, increasing preventive medical care and therefore increasing family resiliency.

Priority: Decrease Overweight and Obesity Among Children

Objective for NPM 8.1: Increase the percentage of children ages 6-11 years who are physically active at least 60 minutes per day from 31.5% on October 1, 2020 to 32.0% on September 30, 2025.

Objective for SPM 6: Increase the percentage of public schools with at least 50% physical education class time spent in moderate to vigorous physical activity from 90.2% on October 1, 2021 to 93.2% on September 30, 2025.

Objective for SPM 7: Increase the rate of Double Up Food Bucks purchases per SNAP recipient in the targeted counties from 0.01803 on October 1, 2021 to 0.02395 on September 30, 2025.

Description: Data sources are scarce that provide health behavior and health status information for our priority domain of children ages 0 to 11. There is no one source that captures overweight or obesity data for the entire age group, as the Youth Risk Behavior Survey does for high school students. Therefore, the MCH child obesity team relies on the following data sources: 1) National Survey of Children's Health for children aged 6-11 on meeting daily physical activity standards (NPM 8.1) and for overall health status (NOM 19); 2) the TN Department of Education's (TDOE) Health Weight Status (BMI) Annual Report for overweight or obesity in K-12 public school students (SOM 1) and the Quality PE Survey for physical activity in PE classes (SPM 6); the TN WIC dataset for overweight or obesity among program participants aged 2-4 (SOM 2); and Nourish Knoxville and other Double Up Food Bucks program participants for data on SNAP recipients (SPM 7). Each of these datasets has its own advantages as well as limitations.

Available data pertaining to disparities by age, race/ethnicity, gender, and place show a significant disparity among Black non-Hispanics compared to White non-Hispanics (78.2% vs 91.7%, respectively) for the proportion reporting an overall health status of very good or excellent. Among K-12 students, males are more likely to be overweight or obese than females in 4th grade (42.7% vs. 40.5%) or 6th grade (45.7% vs. 44.2%). In addition, rural students are more likely than metro students to be overweight or obese for all grades K-12 (40.5% vs. 38.0%) and for K-6 (38.8% vs. 36.9%), grade 4 (42.8% vs.39.7%), and grade 6 (46.0% vs.42.9%), respectively. Rural male students are also more likely to be overweight or obese than rural female students for K-12 (41.0% vs. 40.1%), K-6 (39.3% vs. 38.2%), grade 4 (44.1% vs. 41.5%), and grade 6 (47.2% vs. 44.8%), respectively.

Among TN WIC recipients during CY 2021, 3-year-olds appear to be more overweight or obese (34.6%) than either 2-year-olds (30.5%) or 4-year-olds (30.7%). Overall, pre-school males in WIC seem to be more likely to be overweight or obese than females (32.7% vs. 31.1%). The same is true for Whites (32.6%) as compared to Blacks (30.4%) and all other racial groups (28.1%), respectively. However, Hispanics do appear to be more overweight or obese than non-Hispanics (34.6% vs. 31.5%), especially for White Hispanics (34.8%) and Other Hispanics (32.6%). Finally, WIC recipients in non-metro (rural) areas seem more likely to be overweight or obese than metro areas (32.5% vs. 31.0%).

Disparity Elimination Focus: Based on the available data sources and the general analysis presented above, the Child Health Obesity Team has selected geographic disparities (e.g., urban/metro vs. rural) among the early childhood population as the primary health equity focus. Data from the WIC program as well as the 2019-2020 TDH/TDOE BMI Report indicate that these disparities not only exist in the priority population but persist as children enter public schools in kindergarten and beyond. In addition, unlike school-based and other programs that serve elementary, middle, and high school aged children, it is difficult to find broad, community-based health and fitness related programming for younger children besides WIC, which serves a specific and limited population.

Recognizing the importance of early childhood education (ECE) as a way to promote healthy development represents another reason to adopt early childhood as the priority strategy. ECE programs are community-level interventions that aim to improve learning, behavior, social development, and health of children, most commonly focusing on children ages 3 to 4 years. ECE interventions can improve child development and act as a protective factor against the future onset of adult obesity, disease, and disability. ECE programs often strive to increase enrollment among children who are educationally underserved and experience health disparities (e.g., Head Start). Therefore, ECE programs may help increase health equity and decrease health disparities.

To address childhood obesity, the TDH Division of Family Health and Wellness (FHW) Chronic Disease Prevention and Health Promotion (CDPHP) Section, developed a GIS map identifying Tennessee food deserts and areas of food insecurity, licensed childcare centers, Child and Adult Care Food Program (CACFP) providers, non-CACFP participating childcare providers, and concentrated areas of poverty. The map will highlight gaps in services and identify hotspots in areas that lack access and availability to nutritious food. In addition, CDPHP supports Physical Activity Learning Sessions (PALS) training for ECE staff, childcare professionals, and health and physical activity educators. PALS combines content learning with facility-level self-assessments, policy development opportunities, and resources and materials, aimed at supporting practice change in ECE programs.

The following strategies and activities are planned for *October 1, 2023 to September 30, 2024*:

Strategy 1: Support school-based efforts to promote physical activity and good nutrition

Supporting Evidence for Strategy 1: Physical Activity: Enhanced School-Based Physical Education (ESBPE) and Out of School Time (OST) Academic Programs: ESBPE involves changing the curriculum and course work for K-12 students to increase the amount of time they spend engaged in moderate- or vigorous-intensity physical activity during physical education classes. OST academic achievement is linked with long-term health, and because out-of-school-time academic programs are commonly implemented in racial and ethnic minority or low-income communities, these programs are likely to improve health equity.

Source: The Community Guide https://www.thecommunityguide.org/findings/physical-activity-enhanced-school-based-physical-education
https://www.thecommunityguide.org/biblio/out-school-time-academic-programs-are-recommended-improve-academic-achievement-and-health.html

Activity 1a: Collaborate with TDOE to develop and implement strategies to provide professional development to physical education teachers pertaining to engaging students in moderate-to-vigorous physical activity 50% or more of physical education class time.

Activity 1b: Collaborate with TDOE to provide statewide trainings for educators in school and community-based after school programs, in identified priority counties, to increase enrollment in the TN Healthy After-school Pledge Out of School Time (OST) program to support student health and academic achievement.

Strategy 2: Promote nutrition and physical activity professional development opportunities for Early Childhood Education (ECE) and licensed childcare centers

Supporting Evidence for Strategy 2: Center-based early childhood education programs (ECE) aim to

improve educational outcomes that are associated with long-term health as well as social- and health-related outcomes. Economic evidence indicates there is a positive return on investment in early childhood education. The benefits from students' future earnings gains alone exceed program costs. If targeted to low-income, racial and ethnic minority, and rural communities, ECE programs are likely to reduce educational achievement gaps, improve the health of these student populations, and promote health equity.

Source: The Community Guide: https://www.thecommunityguide.org/news/community-preventive-services-task-force-recommends-early-childhood-education-programs.html

Activity 2a: Through targeted promotion, increase the number of ECE staff, local health educators, physical education teachers, and childcare providers trained in PALS in priority areas.

Activity 2b: Through targeted promotion, increase the number of free evidence-based professional development TrainTN and TN Professional Archive of Learning (TNPAL) modules and/or trainings completed by ECE staff and childcare professionals in priority areas.

Activity 2c: Utilize GIS mapping to identify priority counties with areas of food insecurity and food deserts as well as ECEs that are not currently participating in the CACFP in those locations.

Activity 2d: Work with DHS and CACFP sponsoring organizations to identify at least one (1) community-based organization or facility in each priority county as champions to raise awareness of early childhood obesity, health disparities related to nutrition, and gaps in existing resources. The ultimate goal would be to increase participation in the CACFP. Community organizations could include ECEs that are current CACFP participants.

Utilize the identified community-based organizations to 1) disseminate CACFP promotional materials through one-on-one contact or via hand off to other community-based agencies to at least thirty (30) early childcare facilities across the priority counties; and 2) arrange for at least ten (10) of these facilities to begin the process of becoming a CACFP participant.

Strategy 3: Partner with healthcare providers to promote physical activity counseling during well-child visits

Supporting Evidence for Strategy 3: Physical Activity: Family-Based Interventions. Family-based interventions combine activities to build family support with health education to increase physical activity among children.

Source: The Community Guide https://www.thecommunityguide.org/findings/physical-activity-family-based-interventions

Activity 3a: Increase the number of LHD primary care clinics that provide the Healthy Parks Healthy Person (HPHP) park prescription to increase family-based outdoor physical activity.

Activity 3b: Partner with professional medical associations, including TN Medical Association

(TMA), TN Primary Care Association (TPCA), TN Section of American College of Obstetricians and Gynecologists (ACOG), and Tennessee Academy of Family Physicians (TAFP) to promote the use of the HPHP park prescription program and free mobile app to increase outdoor physical activity.

Strategy 4: Promote policy, systems, and environmental change (PSE) strategies to increase physical activity and promote access to healthy food and beverages

Supporting Evidence for Strategy 4: Physical Activity: Creating or Improving Places for Physical Activity. In these types of interventions, worksites, coalitions, agencies, and communities work together to change local environments to create opportunities for physical activity. Changes can include creating or improving walking trails, building exercise facilities, or providing access to existing facilities.

Source: The Community Guide https://www.thecommunityguide.org/biblio/recommendations-increase-physical-activity-communities.html

Activity 4a: Partner with a minimum of 4 Regional Healthy Development Coordinators (HDCs) to increase the number of communities, especially in priority geographic areas, participating in Active Living Workshop (ALW) trainings to implement community design changes that improve walkability and green spaces.

Activity 4b: Collaborate with a minimum of 4 non-profits in priority communities to increase access to fresh fruit and vegetables for SNAP recipients through the Double Up Food Bucks (DUFB) program.

Partnerships: Department of Human Services, Tennessee Council on Children and Youth (TCCY), TDOE, Coordinated School Health (CSH), CACFP, Tennessee Department of Environment and Conservation (TDEC), HPHP, Child Care Resource and Referral (CCR&R), and partners employing PSE strategies (funded through Project Diabetes, a state funded grant initiative)

Contextual Factors: 1) economic/fiscal outlook; 2) political and social influences; 3) legislation and policies (facilitators or barriers); 4) product marketing supporting poor nutrition or sedentary lifestyles; 5) SES, racial/ethnic, geographic disparities; 6) overall trends toward sedentary behavior (e.g., screen time) and less healthy diets (e.g., fast and/or processed food).

- **Assumptions:** 1) Funding will be secured throughout the course of the project; 2) Children who learn and practice good physical activity and nutrition habits will maintain these habits for life; 3) Professionals will be motivated to attend topic specific trainings and/or workshops (e.g., TrainTN, TNPAL, PALS, ALW, etc.) and implement lessons learned; 4) Evidenced-based program implementation as well as polices and regulations promoting nutrition/physical activity will lead to healthy behaviors and a reduction in obesity; and 5) Partnerships or coalitions (e.g., HDCs, CSH, TDOE, etc.) can effectively address challenges and/or barriers or expand reach at the local/community level.

Priority: Increase Prevention and Mitigation of Adverse Childhood Experiences (ACEs)

Objective for SPM 8: By September 30, 2025, the percent of children with two or more ACEs will decrease from

23.0% to 21.0%.

Objective for SPM 9: By September 30, 2025, decrease the percent of investigated child maltreatment cases among families served by home visiting programs from 3.3% to 3.0%.

Objective for SPM 10: By September 30, 2025, decrease the percent of caregivers who experience intimate partner violence and do not receive professional support services among families served by home visiting programs from 8.0% to 3.0%.

Description: Out of 1,500 births per week in Tennessee, approximately 100 will report Spanish as their primary language spoken at home; and approximately 10 will report Arabic as their primary language spoken at home. Among our current EBHV participants, 14% (280 households) speak a language other than English as their primary language at home.

Under the auspices of TDH are 15 evidence-based home visiting (EBHV) local implementing agencies (LIAs). The LIAs employ 197 home visitors to provide direct EBHV services to families, 24 (14%) of which are bilingual. The languages represented among the EBHV workforce are Spanish, Arabic, Turkish and Portuguese.

According to a survey of EBHV LIAs in Tennessee, it is difficult to find and retain bilingual home visitors due to the high demand for bilingual persons in healthcare and other sectors. LIAs reported that the Language Line is used when there is no bilingual home visitor, but it is costly and therefore financially unsustainable. Additional limitations include various dialects not spoken by either bilingual home visitors or Language Line staff. Some LIAs reported having referred families to other programs with bilingual capabilities; and some also reported having received referrals for non-English speaking families they could not serve. One program shared, “So far this year we have received 6 referrals on Spanish-speaking only families that we were unable to serve. We used our translation services to engage them, but the relationships did not progress to enrollment”.

Disparity Elimination Focus: Some areas of the state have a greater need for bilingual home visitors/interpreter services than is currently available. While most bilingual home visitors speak English and Spanish, the team recognizes there are many other non-English languages spoken in the state who may be unable to access EBHV services due to an existing language barrier. The ACEs team will focus on the language disparity though Strategy 4 below.

The following strategies and activities are planned for *October 1, 2023, to September 30, 2024*:

Strategy 1: Increase knowledge of ACEs, PCEs (Positive Childhood Experiences), and practice of Trauma Informed Care (TIC).

Supporting Evidence for Strategy 1: The variety of sectors can make a difference in preventing ACEs by impacting the various contexts and underlying risks that contribute to violence and adversity and by supporting safe, stable, nurturing relationships and environments for all children while taking a trauma informed approach to prevent ACEs.

Centers for Disease Control and Prevention (2019). Preventing Adverse Childhood Experiences: Leveraging the Best Available Evidence. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/preventingACES.pdf

Activity 1a: Continue to make available online ACEs and TIC trainings for TDH staff, including those in the CHANT and EBHV programs. Through this training TDH staff and CHANT and EBHV programs will be able to integrate trauma informed practices into their work with families, mitigating the impact of ACEs.

Activity 1b: Provide ACEs and TIC refresher trainings for child fatality review teams as part of their ongoing training. This training will provide information and insight to teams on the impact of ACEs and trauma and assist in understanding the impact on social determinants of health.

Strategy 2: Ensure a strong start for children by promoting a healthy parent-child attachment through implementation of home visiting programs throughout the 95 counties of Tennessee.

Supporting Evidence for Strategy 2: Effective home visiting models have demonstrated many benefits for children and parents. Early childhood home visitation can prevent ACEs by providing information, caregiver support, and training about child health, development, and care to families in their homes to build a safe, stable, nurturing and supportive home environment. Children participating in a home visiting program have better cognitive and language development, better academic achievement, fewer behavioral problems, lower rates of substance use, and fewer arrests, convictions, and parole violations by age 19. Home visiting is associated with better pregnancy outcomes, improved parenting practices, reductions in the use of welfare and other government assistance, greater employment, lower rates of substance use, and reduced exposure to intimate partner violence.

Centers for Disease Control and Prevention (2019). Preventing Adverse Childhood Experiences: Leveraging the Best Available Evidence. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/preventingACES.pdf

Activity 2a: Teach positive parenting skills through home visitation in partnership with local EBHV implementing agencies. This will include encouraging social-emotional learning and parent-child relationship.

Activity 2b: Provide health education through EBHV home visiting programs in counties throughout Tennessee. Communicating the importance of children having a medical home to parents promotes high quality and culturally effective integrated care.

Activity 2c: Provide supportive care and additional services to families and children through EBHV home visitation. By connecting families with concrete services and knowledge of parenting and child development improve protective factors which mitigate or prevent ACEs.

Strategy 3: Intervene to lessen immediate and long-term harms by linking families to health and social services.

Supporting Evidence for Strategy 3: Traumatic events in childhood can be emotionally painful or distressing and can have effects that persist for years. Factors such as the nature, frequency and seriousness of the traumatic event, prior history of trauma, and available family and community supports can shape a child's response to trauma. Creating and sustaining safe, stable, nurturing relationships and environments for

all children and families can prevent ACEs and help all children reach their full health and life potential. Centers for Disease Control and Prevention (2019). Preventing Adverse Childhood Experiences: Leveraging the Best Available Evidence. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/preventingACES.pdf

Activity 3a: Screen and assess families for enrollment in CHANT to identify health and social needs that have long term impact on families and children. By identifying the needs of families' immediate needs, priority services can be provided to families.

Activity 3b: Provide referrals to families for identified health care and social service needs. Identifying which of the sixteen pathways of care families have identified as needs increase the protective factors within a family by providing concrete services at the time identified.

Activity 3c: Assist families in navigating the healthcare and social services system through the CHANT care-coordination model. Aiding in navigating any of the sixteen pathways, including obtaining a medical home or an EPSDT, is solution focused as barriers and other obstacles are addressed. Through this, family resiliency is increased as a strategy to eliminate and mitigate ACEs the family might have experienced.

Strategy 4: Increase access of non-English speaking families to infant and early child health and development education and services.

Supporting Evidence for Strategy 4: While many non-English languages are spoken in the state, most bilingual home visitors speak English and Spanish. Home visitors who are not bilingual currently use the Language Line for interpreter services. EBHV LIAs report this is costly and not sustainable due to the costs. Also, curricula used is not available in the languages needed and the cost to translate is cost prohibitive. Additional limitations include various dialects not spoken by either bilingual home visitors or Language Line staff. According to a survey of EBHV LIAs in Tennessee, it is difficult to find and retain bilingual home visitors as these positions are competitive and more expensive. Some programs reported having referred families to other programs with bilingual capabilities. Further, some reported having received referrals for non-English speaking families that they could not serve.

Activity 4a: Analyze birth file data to determine the language needs across the state. Utilize existing EBHV service data from LIAs and meetings with community partners to determine where language disparities exist based on region.

Activity 4b: Utilize language disparity data to inform funding amounts for interpreter/language services for EBHV LIAs, and work towards establishing a contract with the TDH interpreter/language services vendor to increase availability of interpreter services in order to expand accessibility of EBHV services to more non-English speaking families.

Planned Partnerships: TDH maintains and continues formal partnerships with the Tennessee Council on Children and Youth (TCCY)/Building Strong Brains (BSB) Committee; Home Visiting Leadership Alliance (HVLA); Young Child Wellness Council (YCWC); and Regional and Metro Health Departments. Further, the TDH Office of Strategic Initiatives (OSI) has begun disseminating information on the positive impact of PCEs.

Contextual Factors:

- TDH will demonstrate leadership in promoting ACE mitigation factors.

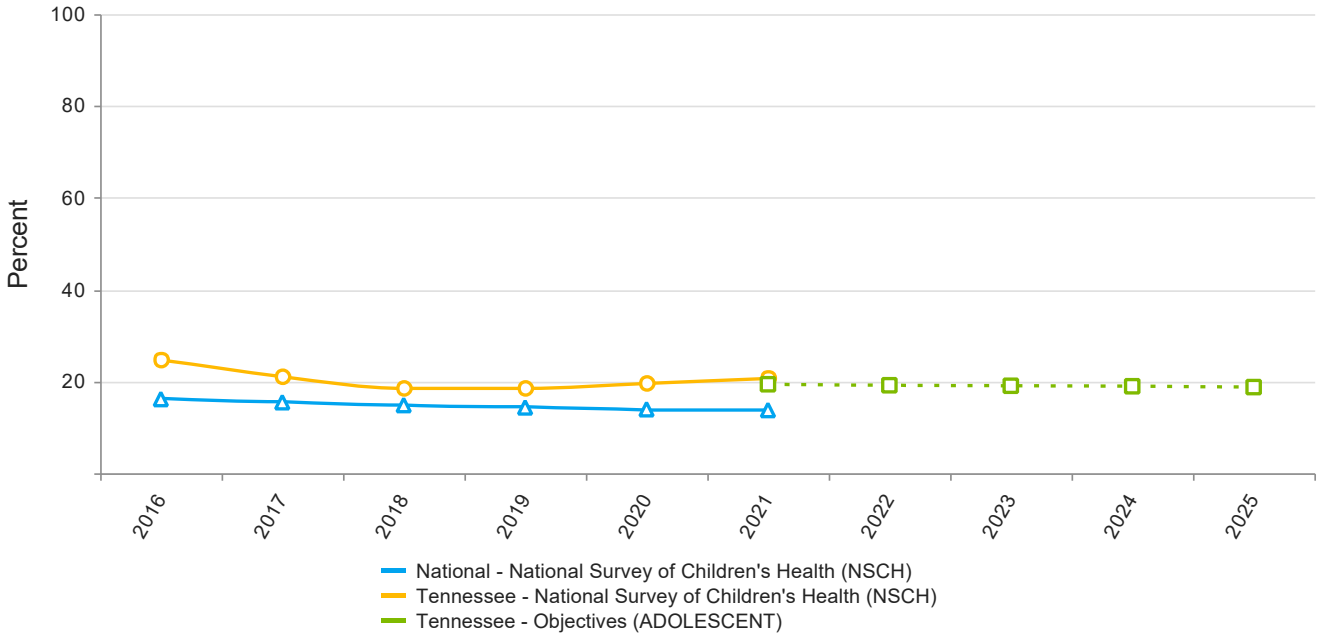
Assumptions:

- Partners will be informed about ACES and implement trauma informed care practices in their work.
- Families will demonstrate positive interactions with their children.
- Funding will be secure throughout the course of the project.
- Staff with the necessary skills and abilities can be recruited and hired.

Adolescent Health

National Performance Measures

NPM 14.2 - Percent of children, ages 0 through 17, who live in households where someone smokes
Indicators and Annual Objectives



NPM 14.2 - Adolescent Health

Federally Available Data					
Data Source: National Survey of Children's Health (NSCH)					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective	29	23.8		19.4	19.2
Annual Indicator	21.1	18.6	18.6	19.5	20.8
Numerator	311,958	276,334	271,871	286,194	303,920
Denominator	1,478,634	1,485,841	1,464,986	1,464,685	1,458,803
Data Source	NSCH	NSCH	NSCH	NSCH	NSCH
Data Source Year	2016_2017	2017_2018	2018_2019	2019_2020	2020_2021

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	19.1	19.0	18.8

Evidence-Based or –Informed Strategy Measures

ESM 14.2.1 - Number of tobacco-free sports teams

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective				
Annual Indicator		77	88	145
Numerator				
Denominator				
Data Source		Tobacco-free Sports Teams Database	Tobacco-free Sports Teams Database	Tobacco-free Sports Teams Database
Data Source Year		CY 2020	CY 2021	CY 2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	83.0	85.0	88.0

ESM 14.2.2 - Number of social media posts promoting text-based cessation services

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective				
Annual Indicator		0	9	33
Numerator				
Denominator				
Data Source		TDH Office of Communications	TDH Office of Communications	TDH Office of Communications
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	12.0	24.0	24.0

ESM 14.2.3 - Number of anti-tobacco social media posts

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective				
Annual Indicator		8	27	281
Numerator				
Denominator				
Data Source		TDH Office of Communications	TDH Office of Communications	TDH Office of Communications
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	12.0	24.0	24.0

ESM 14.2.4 - Number of youth who attend the state anti-tobacco conference trainings

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			75	300
Annual Indicator		0	0	238
Numerator				
Denominator				
Data Source		TNSTRONG Registration	TNSTRONG Registration	TNSTRONG Registration
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	300.0	350.0	400.0

ESM 14.2.5 - Number of ambassadors recruited

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			26	26
Annual Indicator		23	18	20
Numerator				
Denominator				
Data Source		TNSTRONG Ambassador Registration	TNSTRONG Ambassador Registration	TNSTRONG Ambassador Registration
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	26.0	26.0	26.0

ESM 14.2.6 - Percent of eligible women who enroll in Baby and Me Tobacco Free

Measure Status:	Active

State Provided Data	
	2022
Annual Objective	
Annual Indicator	13.9
Numerator	
Denominator	
Data Source	TDH
Data Source Year	2022
Provisional or Final ?	Final

Annual Objectives		
	2024	2025
Annual Objective	14.7	15.0

State Performance Measures

SPM 11 - Percent of high school students currently using cigarettes

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			6.4	5.8
Annual Indicator		7.1	0	4.9
Numerator				
Denominator				
Data Source		2019	N/A	2021
Data Source Year		YRBS	N/A	YRBS
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	5.3	4.8	4.3

SPM 12 - Percent of high school students currently using e-cigarettes

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			18	17.9
Annual Indicator		22.1	0	19
Numerator				
Denominator				
Data Source		YRBS	N/A	YRBS
Data Source Year		2019	N/A	2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	17.8	17.8	17.7

SPM 13 - Number of adolescents enrolled in cessation program

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			0	20
Annual Indicator		7	22	16
Numerator				
Denominator				
Data Source		QuitLine and NOT Program (ALA))	QuitLine and NOT Program (ALA))	QuitLine only
Data Source Year		CY 2020	CY 2021	CY 2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	50.0	100.0	125.0

State Outcome Measures

SOM 5 - Percent of adults reporting Chronic obstructive pulmonary disease (COPD)

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			9.3	9.2
Annual Indicator		9.7	9.5	10.4
Numerator				
Denominator				
Data Source		BRFSS	BRFSS	BRFSS
Data Source Year		2019	2020	2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	9.6	9.6	9.5

SOM 6 - Percent of adults reporting cardiovascular disease

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			5.3	5.3
Annual Indicator		4.9	5.1	5.2
Numerator				
Denominator				
Data Source		BRFSS	BRFSS	BRFSS
Data Source Year		2019	2020	2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	5.3	5.2	5.2

SOM 7 - Age-adjusted mortality rate from tobacco-attributable cancers among Tennesseans aged 35+

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			176.4	171.4
Annual Indicator		190.8	188	188
Numerator				
Denominator				
Data Source		CDC WONDER	CDC WONDER	CDC WONDER
Data Source Year		CY 2019	CY 2020	CY 2020
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	166.4	161.3	156.3

State Action Plan Table

State Action Plan Table (Tennessee) - Adolescent Health - Entry 1	
Priority Need	
Decrease tobacco and e-cigarette use among adolescents	
NPM	
NPM 14.2 - Percent of children, ages 0 through 17, who live in households where someone smokes	
Objectives	
Decrease the percent of children, ages 0 through 17, who live in households where someone smokes from 19.5% in 2019 to 18.8% in 2025.	
Strategies	
Promote anti-tobacco youth led initiatives	
ESMs	Status
ESM 14.2.1 - Number of tobacco-free sports teams	Active
ESM 14.2.2 - Number of social media posts promoting text-based cessation services	Active
ESM 14.2.3 - Number of anti-tobacco social media posts	Active
ESM 14.2.4 - Number of youth who attend the state anti-tobacco conference trainings	Active
ESM 14.2.5 - Number of ambassadors recruited	Active
ESM 14.2.6 - Percent of eligible women who enroll in Baby and Me Tobacco Free	Active

NOMs

NOM 2 - Rate of severe maternal morbidity per 10,000 delivery hospitalizations

NOM 3 - Maternal mortality rate per 100,000 live births

NOM 4 - Percent of low birth weight deliveries (<2,500 grams)

NOM 5 - Percent of preterm births (<37 weeks)

NOM 6 - Percent of early term births (37, 38 weeks)

NOM 8 - Perinatal mortality rate per 1,000 live births plus fetal deaths

NOM 9.1 - Infant mortality rate per 1,000 live births

NOM 9.2 - Neonatal mortality rate per 1,000 live births

NOM 9.3 - Post neonatal mortality rate per 1,000 live births

NOM 9.4 - Preterm-related mortality rate per 100,000 live births

NOM 9.5 - Sudden Unexpected Infant Death (SUID) rate per 100,000 live births

NOM 19 - Percent of children, ages 0 through 17, in excellent or very good health

State Action Plan Table (Tennessee) - Adolescent Health - Entry 2

Priority Need

Decrease tobacco and e-cigarette use among adolescents

SPM

SPM 11 - Percent of high school students currently using cigarettes

Objectives

Decrease the percentage of high school students currently using cigarettes, from 7.1% in 2019 to 4.3% in 2025.

Strategies

Promote anti-tobacco youth led initiatives

State Action Plan Table (Tennessee) - Adolescent Health - Entry 3

Priority Need

Decrease tobacco and e-cigarette use among adolescents

SPM

SPM 12 - Percent of high school students currently using e-cigarettes

Objectives

Decrease the percentage of high school students currently using e-cigarettes from 22.1% in 2019 to 17.7% in 2025.

Strategies

Build partnerships with coalitions across the state

State Action Plan Table (Tennessee) - Adolescent Health - Entry 4

Priority Need

Decrease tobacco and e-cigarette use among adolescents

SPM

SPM 13 - Number of adolescents enrolled in cessation program

Objectives

Increase the number of adolescents enrolled in cessation programs, from 0 in 2019 to 125 in 2025.

Strategies

Promote youth tobacco cessation services

State Action Plan Table (Tennessee) - Adolescent Health - Entry 5

Priority Need

Decrease tobacco and e-cigarette use among adolescents

SOM

SOM 5 - Percent of adults reporting Chronic obstructive pulmonary disease (COPD)

Objectives

Decrease percent of adults reporting Chronic Obstructive Pulmonary Disease (COPD) from 9.3% in 2019 to 8.8% in 2025.

Strategies

Promote anti-tobacco youth led initiatives

State Action Plan Table (Tennessee) - Adolescent Health - Entry 6

Priority Need

Decrease tobacco and e-cigarette use among adolescents

SOM

SOM 6 - Percent of adults reporting cardiovascular disease

Objectives

Decrease percent of adults reporting cardiovascular disease from 5.3% in 2019 to 5.2% in 2025.

Strategies

Promote youth tobacco cessation services

State Action Plan Table (Tennessee) - Adolescent Health - Entry 7

Priority Need

Decrease tobacco and e-cigarette use among adolescents

SOM

SOM 7 - Age-adjusted mortality rate from tobacco-attributable cancers among Tennesseans aged 35+

Objectives

Decrease the age-adjusted mortality rate from tobacco-attributable cancers among Tennesseans ages 35+ from 176.4 in 2019 to 141.3 in 2025.

Strategies

Build partnerships with coalitions across the state

Priority: Decrease Tobacco and E-cigarette Use Among Adolescents

MCH/Title V Funding: The Tobacco and E-cig Priority Team is administratively led by the Chronic Disease Prevention and Health Promotion section within the Division of Family Health and Wellness of TDH. The Chronic Disease Prevention and Health Promotion section includes Chronic Disease and School Health, Tobacco Prevention and Control, Diabetes Prevention, Preventive Health Block Grant, Poison Control, and Gold Sneaker. The tobacco prevention and control efforts are funded by state and other federal funds. While MCH/Title V does not directly fund the activities highlighted in the annual report, it does fund the Deputy Medical Director who provides leadership to this section.

Interpretation of Performance Data on selected NPMs, SPMs, and SOMs:

SPM 11: Percent of high school students currently using cigarettes

In 2021, 4.9% of high school students in Tennessee reported currently using cigarettes, down from 7.1% in 2019. These results mark a new low for current cigarette use among Tennessee youth and a continued significant downward trend over the past several decades due to national and state anti-tobacco media campaigns, state and national evidence-based policies such as price increases, and shifting social norms around combustible tobacco use.

SPM 12: Percent of high school students currently using e-cigarettes

In 2021, 19.0% of high school students in Tennessee reported currently using e-cigarettes, a not-statistically-significant decrease from 2019 (22.1%). These results indicate a stagnation in e-cigarette usage among Tennessee youth since questions on e-cigarette use were first introduced to Tennessee's YRBS (2015). The continued high rate of e-cigarette use among Tennessee youth is likely due to a myriad of reasons including a lack of evidence-based state policies to reduce youth use of e-cigarette products, aggressive marketing tactics by the tobacco industry targeting youth, and a lack of widespread cessation support services available to youth in the state.

SPM 13: Number of adolescents enrolled in cessation program

The number of adolescents enrolled in Tennessee's QuitLine program decreased slightly from 22 in CY 2021 to 16 in CY 2022. The number of adolescents enrolled in the NOT program is not available for CY 2022. The small and relatively unchanged number of adolescents who enrolled in Tennessee's Tobacco QuitLine program may indicate the program has not been sufficiently promoted to youth who are addicted to nicotine, or that the program may not appeal to adolescents' preferred modalities for receiving cessation support (i.e. phone counseling instead of texting).

SOM 5: Percent of adults reporting Chronic obstructive pulmonary disease (COPD)

The percentage of adult Tennesseans with COPD rose between FFY2021 (9.5%) and FFY2022 (10.4%). This increase, however, is not statistically significant.

This stagnation is likely because of a relatively slow decline in Tennessee's adult smoking rate due to a myriad of factors including inadequate tobacco control policies, increases in stress during the COVID-19 pandemic, and aggressive marketing tactics by the tobacco industry.

SOM 6: Percent of adults reporting cardiovascular disease

The percentage of adults reporting cardiovascular disease increased slightly between FFY2021 (5.1%) and FFY2022 (5.2%). This increase, however, is not statistically significant.

This is likely a result of the relatively slow decline in Tennessee's adult smoking rate due to a myriad of factors including inadequate tobacco control policies, increases in stress during the COVID-19 pandemic, and aggressive marketing tactics by the tobacco industry.

SOM 7: Age-adjusted mortality rate from tobacco-attributable cancers among Tennesseans aged 35+
Data for FFY2022 (CDC WONDER CY2021) is not yet available. In CY 2020, the age-adjusted mortality rate from tobacco-attributable cancers among Tennesseans aged 35+ was 188.0, which was relatively unchanged from CY 2019 (190.8). Previous stagnation in tobacco-attributable cancer mortality rates is likely due to continually high rates of tobacco use among Tennessee adults (19.7% in 2021).

NPM 14.2: Percent of children, ages 0 through 17, who live in households where someone smokes
The 2021-2022 combined survey years of the National Survey of Children's Health found that 20.8% of children aged 0-17 live in households where someone smokes. This represents a not-statistically-significant increase from 19.5% in the 2019-2020 survey results. The rate of children who live in households where someone smokes has not changed due to the high and unchanging rate of adults in Tennessee who smoke (19.7% in 2021).

Accomplishments and Challenges (based on FY2022 Action Plan):

Strategy 1: Promote anti-tobacco youth-led initiatives

Supporting Evidence for Strategy 1: The tobacco epidemic will not end without preventing initiation among young people, it is critical that programs engage youth in tobacco control efforts. Youth can be powerful allies to help communicate the impact of tobacco use on young people, implement effective tobacco control strategies, and shift social norms around tobacco use in their communities. (CDC Best Practice User Guide: Youth Engagement in Tobacco Prevention and Control, 2019)

Activity 1a: Promote tobacco-free sports, and increase the number of teams taking the pledge to be tobacco-free athletes

Report 1a: **ESM 14.2.1 (Number of tobacco-free sports teams)** target for FY2022. How has the data changed (e.g. increase, decrease, status quo) from FY2021 to FY 2022?

The cumulative number of tobacco-free sports teams increased from 88 in CY 2021 to 145 in CY 2022. This is due in part to continued, effective promotion of the incentive-based program by field and program staff, and by expanding the scope of teams that are allowed to sign the pledge. In 2022, the Tobacco Program revised the tobacco-free sports initiative to the nicotine-free teams initiative, thereby allowing non-sports school-based teams to sign the pledge.

Activity 1b: Host annual TNSTRONG Youth Summit to engage and educate adolescents and adolescent leaders on the dangers of using tobacco products, and tobacco control interventions

Report 1b: **ESM 14.2.4**, the number of youth who attended the state anti-tobacco (TNSTRONG) conference, increased between FFY2021 (n=0) and FFY2022 (n=238).

The increase from FFY2021 to FFY2022 was due to the inability to host the TNSTRONG youth conference in FFY2021 due to Covid-19 restrictions. The TNSTRONG Youth

conference was held in Chattanooga, TN in June 2022.

Activity 1c: Promote anti-tobacco messaging via social media

Report 1c: The number of anti-tobacco social media posts **(ESM 14.2.3)** increased dramatically between FFY2021 (n=27) and FFY2022 (n=281).

The number of anti-tobacco social media posts increased dramatically from FFY2021 to FFY2022 because the Tobacco Program hired a Health Communications Specialist in October of 2021. The Health Communications Specialist prioritized engagement of youth on social media platforms including Twitter, Facebook and Instagram.

Challenges Issues Related to Implementation of Strategy 1: Overall challenges that have delayed or restricted implementation of youth programming, specifically programs that engage youth in person, included staff shortages and COVID-19 restrictions.

Strategy 2: Promote youth tobacco cessation services

Supporting Evidence for Strategy 2: Close to 95 percent of smokers try their first cigarette before the age of 21. Nicotine is highly addictive and can harm brain development in youth. People who start using tobacco at an early age are more likely to develop an addiction than those who start at a later age, and kids who use vapor products are more likely to go on to smoke cigarettes. (American Lung Association. 2020.Helping Teens Quit: Teen Tobacco Cessation and Education Resources. https://www.lung.org/quit-smoking/helping-teens-quit)

Activity 2a: Engage partner organizations serving at risk adolescents to screen for tobacco use and refer to federally funded services when available

Report 2a: Program staff connected with Department of Children's Services (DCS) to discuss screening and referring at-risk youth to federally funded services. The response from DCS staff was that this was not a high priority for the Department at this time.

Activity 2b: Promote youth cessation programs via social media

Report 2b: The number of social media posts promoting text-based cessation services **(ESM 14.2.2)** increased between FFY2021 (n=9) and FFY2022 (n=33).

The number of anti-tobacco social media posts increased from FFY2021 to FFY2022 because the Tobacco Program hired a Health Communications Specialist in October of 2021. The Health Communications Specialist prioritized engagement of youth on social media platforms including Twitter, Facebook and Instagram.

Challenges Issues Related to Implementation of Strategy 2: Partner capacity to address the screening and referral of at-risk youth to federally funded services was extremely limited and not a priority during this time.

Strategy 3: Build partnerships with coalitions across the state

Supporting Evidence for Strategy 3: Coalitions are a type of partnership that have successfully promoted policy change despite an often unfavorable cultural and legislative climate for their work. Partnerships and coalitions work to raise awareness of the importance of environments free of commercial tobacco, educate about the impact of tobacco prices, create health communications campaigns, and promote cessation. (CDC Best Practice User Guide: Partnerships in Tobacco Prevention and Control, 2021.)

Activity 3a: Increase partnerships with anti-drug and tobacco coalitions statewide

Report 3a: The number of meetings with partner organizations, increased significantly between FFY2021 (n=1) and FFY2022 (n=20).

Meetings with anti-drug coalitions and the statewide tobacco coalition (Musicians for Smokefree TN) increased significantly between FFY2021 and FFY2022. This is the result of leadership change for the statewide tobacco coalition and the opportunity to connect with the anti-drug coalitions in a virtual setting.

Challenges Issues Related to Implementation of Strategy 3: No challenges to report for this strategy.

Update on Other Adolescent Health Programs Supported by MCH/Title V:

Battle of the Belt: Battle of the Belt TN is a friendly seat belt competition for Tennessee high schools designed to reduce motor vehicle injuries and fatalities by increasing seat belt use. Schools conduct educational programs; unannounced seat belt observations; and submit scrapbooks for scoring and documentation of programs. A total of nine school districts registered to compete in the Battle of the Belt TN Program during the 2021-2022 school year. Eighteen (18) seatbelt observations were made during the program and the overall observed seatbelt use increased 8% for the winning school, Science Hill High School in Johnson City, TN.

Checkpoints: The goal of the Checkpoints Parent and Teen Driving Program is to reduce teen crashes and violations received by first-time teen drivers by establishing a parent-teen driving agreement to manage known new teen driving risks. During the 2021-2022 school year, a total of 10 schools and organizations conducted the Checkpoints program in Williamson County, serving a total of 3,195 individuals. The groups conducted the evidence-based Checkpoints™ program, completing over 1,500 parent-teen driving agreements to address teen driving risks. Williamson County provided the program virtually to parents and teens with success. TDH also partnered with the Michigan Injury Prevention Center to develop an online version of the Tennessee Checkpoints Program at https://youngdriverparenting.org/home-2/welcome-to-checkpoints-tennessee/.

Priority: Decrease Tobacco and E-cigarette Use Among Adolescents

Objective for NPM 14.2: Decrease the percentage of children, ages 0-17 who live in households where someone smokes from 19.5% in October 2019 to 18.8% in Septmeber2025.

Objective for SPM 11: Decrease the percentage of high school students currently using cigarettes from 7.0% in October 2019 to 4.3% in September 2025.

Objective for SPM 12: Decrease the percentage of high school students currently using e-cigarettes from 18.1% in October 2019 to 17.7% in September 2025.

Objective for SPM 13: Increase the number of adolescents enrolled in cessation programs from 0 in October 2019 to 125 in September 2025.

Description: Adolescents in Tennessee experience disparities in tobacco and e-cigarette use across two priority areas including race and place. While disparity data specific to Tennessee youth are not readily available for place, general inferences from the broader adult population (i.e. BRFSS) support this hypothesis. Tennessee adults who reside in rural areas of the state or are Non-Hispanic White or Hispanic report higher tobacco use overall. With regard to e-cigarette use specifically, Non-Hispanic Black youth are less likely to report e-cigarette use than their Non-Hispanic White or Hispanic counterparts.

Disparity Elimination Focus: The team will focus on tobacco and e-cigarette use disparities that exist for individuals in rural regions. For adolescents, this group may be more easily reached through existing initiatives and align closely with the Tobacco Use Prevention and Control Program's current work plan. These disparities will be addressed through Strategies 1 and 2.

The following strategies and activities are planned for *October 1, 2023, to September 30, 2024*:

Strategy 1: Engage youth to increase tobacco prevention and anti-tobacco engagement strategies to shift social norms around tobacco use in communities.

Supporting Evidence for Strategy 1: The tobacco epidemic will not end without preventing initiation among young people; it is critical that programs engage youth in tobacco control efforts. Youth can be powerful allies to help communicate the impact of tobacco use on young people, implement effective tobacco control strategies, and shift social norms around tobacco use in their communities. (CDC Best Practice User Guide: Youth Engagement in Tobacco Prevention and Control, 2019)

Activity 1a: Promote nicotine-free teams and increase the number of teams taking the pledge to be nicotine-free.

Activity 1b: Host annual TNSTRONG Youth Summit to engage and educate adolescents and adolescent leaders on the dangers of using tobacco products, and tobacco control interventions.

Activity 1c: Promote anti-tobacco messaging via social media.

Activity 1d: Provide TA to K-12 school districts without comprehensive policies including model policy templates, resources on cessation programming, and alternative disciplinary procedures.

Strategy 2: Engage partner organizations and utilize social media to increase the reach and impact of tobacco cessation programs among youth.

Supporting Evidence for Strategy 2: Close to 95 percent of smokers try their first cigarette before the age of 21. Nicotine is highly addictive and can harm brain development in youth. People who start using tobacco at an early age are more likely to develop an addiction than those who start at a later age, and kids who use vapor products are more likely to go on to smoke cigarettes. (American Lung Association. 2020.Helping Teens Quit: Teen Tobacco Cessation and Education Resources. https://www.lung.org/quit-smoking/helping-teens-quit)

Activity 2a: Promote youth cessation programs via social media.

Activity 2b: Partner with TN AAP to educate adolescent health care providers and public health professionals on youth cessation, especially regarding prescribing NRT to adolescents.

Planned Partnerships: The Tobacco Control Program will partner with K-12 school districts, anti-drug coalitions, county health councils, TDH Health Disparities Task Force, and TNAAP for community education, promotion of tobacco-free policies, and promotion and implementation of youth cessation programs.

Contextual Factors: Adolescent tobacco and e-cigarette use is heavily influenced by contextual factors including tobacco industry marketing and policy interference, partner organization participation, state legislation, political and social norms and influences, tobacco-use disparities, staff capacity, and program funding.

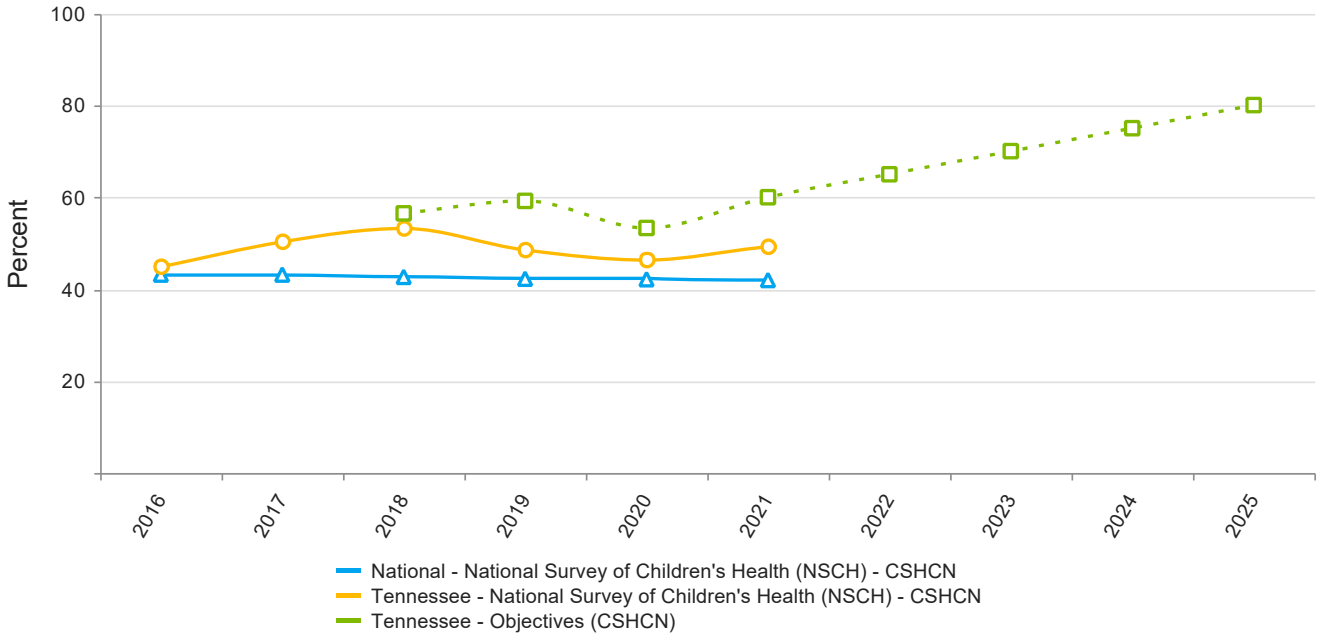
Assumptions: The success of the Tobacco Control Program's efforts rely on a number of key assumptions including: funding will be secure throughout the course of the project; youth trained in peer-to-peer intervention and tobacco control strategies will utilize these skills to effect change in their respective communities; partner organizations engaged and trained on tobacco control strategies will implement associated activities in their respective workplans; youth who are in environments or institutions with strong tobacco-free policies are less likely to experiment with and use tobacco products, including e-cigarettes; and cessation programs including text-to-quit services will be effective among youth who use tobacco products, including e-cigarettes.

Children with Special Health Care Needs

National Performance Measures

NPM 11 - Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

Indicators and Annual Objectives



NPM 11 - Children with Special Health Care Needs

Federally Available Data					
Data Source: National Survey of Children's Health (NSCH) - CSHCN					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective	56.5	59.2	53.3	60	65
Annual Indicator	50.4	53.3	48.5	46.5	49.3
Numerator	143,840	164,583	157,666	155,739	157,779
Denominator	285,167	308,848	325,137	334,628	320,158
Data Source	NSCH-CSHCN	NSCH-CSHCN	NSCH-CSHCN	NSCH-CSHCN	NSCH-CSHCN
Data Source Year	2016_2017	2017_2018	2018_2019	2019_2020	2020_2021

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	70.0	75.0	80.0

Evidence-Based or –Informed Strategy Measures

ESM 11.1 - Number of CYSHCN who receive CHANT/CSS care coordination

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			2,500	3,000
Annual Indicator			4,885	4,930
Numerator				
Denominator				
Data Source			PTBMIS	PTBMIS
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	3,500.0	4,000.0	4,500.0

ESM 11.2 - Percent of providers adopting medical home approach

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			40
Annual Indicator			0
Numerator			
Denominator			
Data Source			CYSHCN
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	55.0	65.0	75.0

ESM 11.3 - Percent of providers reporting increased knowledge on systems of care

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			20
Annual Indicator			0
Numerator			
Denominator			
Data Source			CYSHCN
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	30.0	40.0	50.0

ESM 11.4 - Number of families provided education and resources on importance of medical home access and utilization

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective				
Annual Indicator		1,383	1,424	1,749
Numerator				
Denominator				
Data Source		CHANT	CHANT	CHANT
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	800.0	900.0	1,000.0

ESM 11.5 - Number of families receiving referrals to their child's primary care provider

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			375	400
Annual Indicator		222	216	272
Numerator				
Denominator				
Data Source		CHANT	CHANT	CHANT
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	425.0	450.0	475.0

ESM 11.6 - Percent of providers who report an increase in their knowledge of available resources

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			25
Annual Indicator			0
Numerator			
Denominator			
Data Source			CYSHCN
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	50.0	75.0	100.0

ESM 11.7 - Percent of families who report an increase in access and utilization of resources

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			35
Annual Indicator			0
Numerator			
Denominator			
Data Source			CYSHCN
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	40.0	50.0	60.0

ESM 11.8 - Percent of CHANT families who schedule an annual visit with their child's primary care provider

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			25	35
Annual Indicator			3.2	16
Numerator				
Denominator				
Data Source			CHANT	CH
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

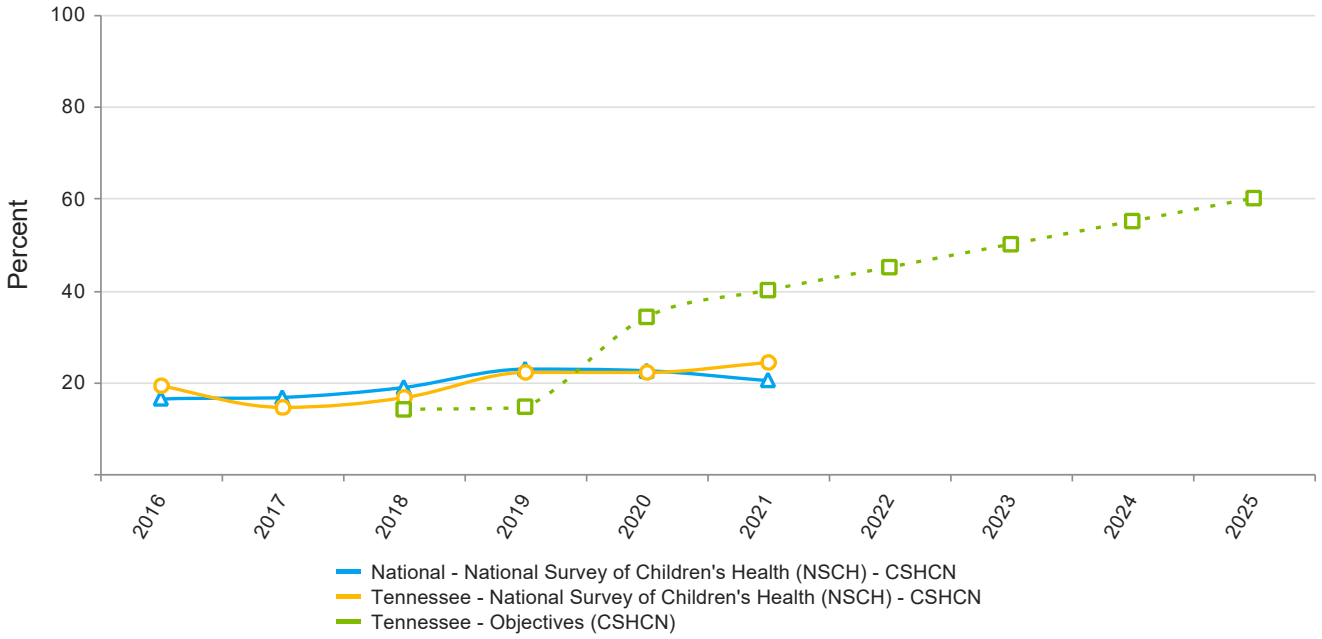
Annual Objectives			
	2023	2024	2025
Annual Objective	45.0	55.0	65.0

ESM 11.9 - Percent of CYSHCN receiving CHANT care coordination who receive medical home education

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			75
Annual Indicator		5.4	16.2
Numerator			
Denominator			
Data Source		CHANT	CHANT
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	85.0	95.0	100.0

NPM 12 - Percent of adolescents with and without special health care needs, ages 12 through 17, who received services to prepare for the transition to adult health care
Indicators and Annual Objectives



NPM 12 - Children with Special Health Care Needs

Federally Available Data					
Data Source: National Survey of Children's Health (NSCH) - CSHCN					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective	14.1	14.7	34.2	40	45
Annual Indicator	14.4	16.6	22.2	22.1	24.2
Numerator	17,666	26,590	30,583	30,634	37,238
Denominator	122,975	159,749	137,839	138,824	153,684
Data Source	NSCH-CSHCN	NSCH-CSHCN	NSCH-CSHCN	NSCH-CSHCN	NSCH-CSHCN
Data Source Year	2016_2017	2017_2018	2018_2019	2019_2020	2020_2021

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	50.0	55.0	60.0

Evidence-Based or –Informed Strategy Measures

ESM 12.1 - Number of transition resource kits disseminated

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			150	300
Annual Indicator		0	100	366
Numerator				
Denominator				
Data Source		CYSHCN	CYSHCN	CYSHCN
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	600.0	1,200.0	2,400.0

ESM 12.2 - Number of youth with special health care needs trained as mentors

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			25	35
Annual Indicator		0	5	6
Numerator				
Denominator				
Data Source		CYSHCN	CYSHCN	CYSHCN
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	45.0	55.0	65.0

ESM 12.3 - Number of parents and youth with special health care needs who receive leadership and self-advocacy training

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			50	75
Annual Indicator		71	150	475
Numerator				
Denominator				
Data Source		CYSHCN	CYSHCN	CYSHCN
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	100.0	125.0	150.0

State Performance Measures

SPM 14 - Number of CYSHCN receiving care in a medical home

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			800	850
Annual Indicator		2,194	2,196	2,100
Numerator				
Denominator				
Data Source		PTBMIS	PTBMIS	PTBMIS
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	900.0	950.0	1,000.0

SPM 15 - Percent of providers with increased knowledge on medical home and care coordination

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			25	35
Annual Indicator			0	0
Numerator				
Denominator				
Data Source			N/A	CYSHCN
Data Source Year			N/A	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	50.0	65.0	75.0

SPM 16 - Percent of providers reporting improved system of care for CYSCHN

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			35
Annual Indicator			0
Numerator			
Denominator			
Data Source			CYSHCN
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	50.0	65.0	75.0

SPM 17 - Percent of families who complete an annual visit with their primary care provider

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			10
Annual Indicator		7.5	7.4
Numerator			
Denominator			
Data Source		CHANT	CHANT
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	12.5	15.0	17.5

SPM 18 - Percent of youth reporting with increased knowledge on transition resources and services

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			100
Annual Indicator		100	100
Numerator			
Denominator			
Data Source		CYSHCN	YAC
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	100.0	100.0	100.0

SPM 19 - Percent of YSHCN served by CHANT who complete an annual transition plan

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			75
Annual Indicator		72	72
Numerator			
Denominator			
Data Source		PTBMIS	PTBMIS (CSS)
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	80.0	85.0	90.0

SPM 20 - Percent of youth leaders participating in advisory councils providing resources to other youth

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			30
Annual Indicator		26.3	35.3
Numerator			
Denominator			
Data Source		CYSHCN	CYSHCN
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	30.0	30.0	30.0

State Action Plan Table

State Action Plan Table (Tennessee) - Children with Special Health Care Needs - Entry 1	
Priority Need	
Increase medical homes among children with special healthcare needs	
NPM	
NPM 11 - Percent of children with and without special health care needs, ages 0 through 17, who have a medical home	
Objectives	
Increase the percent of children with special health care needs 0-17 who have a medical home from 53.3% on October 1, 2020 to 80% on September 30, 2025.	
Strategies	
Create a shared vision for integrating and improving CYSHCN system of care	
ESMs	Status
ESM 11.1 - Number of CYSHCN who receive CHANT/CSS care coordination	Active
ESM 11.2 - Percent of providers adopting medical home approach	Active
ESM 11.3 - Percent of providers reporting increased knowledge on systems of care	Active
ESM 11.4 - Number of families provided education and resources on importance of medical home access and utilization	Active
ESM 11.5 - Number of families receiving referrals to their child’s primary care provider	Active
ESM 11.6 - Percent of providers who report an increase in their knowledge of available resources	Active
ESM 11.7 - Percent of families who report an increase in access and utilization of resources	Active
ESM 11.8 - Percent of CHANT families who schedule an annual visit with their child's primary care provider	Active
ESM 11.9 - Percent of CYSHCN receiving CHANT care coordination who receive medical home education	Active

NOMs

NOM 17.2 - Percent of children with special health care needs (CSHCN), ages 0 through 17, who receive care in a well-functioning system

NOM 18 - Percent of children, ages 3 through 17, with a mental/behavioral condition who receive treatment or counseling

NOM 19 - Percent of children, ages 0 through 17, in excellent or very good health

NOM 25 - Percent of children, ages 0 through 17, who were unable to obtain needed health care in the past year

State Action Plan Table (Tennessee) - Children with Special Health Care Needs - Entry 2

Priority Need

Improve transition from pediatric to adult care among children with special health care needs

NPM

NPM 12 - Percent of adolescents with and without special health care needs, ages 12 through 17, who received services to prepare for the transition to adult health care

Objectives

Increase the percent of adolescents with special health care needs 12-17 who received services necessary to make transitions to adult health care from 34.2% on October 1, 2020 to 60% on September 30, 2025.

Strategies

Inform, educate and link YSHCN, families and providers to available transition resources and services, and how to access those services

ESMs	Status
ESM 12.1 - Number of transition resource kits disseminated	Active
ESM 12.2 - Number of youth with special health care needs trained as mentors	Active
ESM 12.3 - Number of parents and youth with special health care needs who receive leadership and self-advocacy training	Active

NOMs

NOM 17.2 - Percent of children with special health care needs (CSHCN), ages 0 through 17, who receive care in a well-functioning system

State Action Plan Table (Tennessee) - Children with Special Health Care Needs - Entry 3

Priority Need

Increase medical homes among children with special healthcare needs

SPM

SPM 14 - Number of CYSHCN receiving care in a medical home

Objectives

Increase the number of CYSHCN receiving care in a medical home from 800 on October 1, 2020 to 1050 on September 30, 2025.

Strategies

Create a shared vision for integrating and improving CYSHCN system of care

State Action Plan Table (Tennessee) - Children with Special Health Care Needs - Entry 4

Priority Need

Increase medical homes among children with special healthcare needs

SPM

SPM 15 - Percent of providers with increased knowledge on medical home and care coordination

Objectives

Increase the percent of providers with increased knowledge on medical home and care coordination from 25% on October 1, 2020 to 85% on September 30, 2025.

Strategies

Inform and educate families and providers to promote systems change

State Action Plan Table (Tennessee) - Children with Special Health Care Needs - Entry 5

Priority Need

Increase medical homes among children with special healthcare needs

SPM

SPM 16 - Percent of providers reporting improved system of care for CYSCHN

Objectives

Increase the percent of providers reporting improved system of care for CYSHCN from 35% on October 1, 2020 to 85% on September 30, 2025.

Strategies

Identify and disseminate resources on medical home best practices in Tennessee to inform and educate families and providers on care-coordination benefits

State Action Plan Table (Tennessee) - Children with Special Health Care Needs - Entry 6

Priority Need

Increase medical homes among children with special healthcare needs

SPM

SPM 17 - Percent of families who complete an annual visit with their primary care provider

Objectives

Increase the percent of families who complete an annual visit with their primary care provider from 50% on October 1, 2020 to 100% on September 30, 2025.

Strategies

Inform and provide coordination for CHANT families on medical home and care coordination benefits

State Action Plan Table (Tennessee) - Children with Special Health Care Needs - Entry 7

Priority Need

Improve transition from pediatric to adult care among children with special health care needs

SPM

SPM 18 - Percent of youth reporting with increased knowledge on transition resources and services

Objectives

Decrease the percent of youth reporting with increased knowledge on transition resources and services from 55% on October 1, 2020 to 100% on September 30, 2025.

Strategies

Promote successful transition through educational opportunities and self-advocacy training

State Action Plan Table (Tennessee) - Children with Special Health Care Needs - Entry 8

Priority Need

Improve transition from pediatric to adult care among children with special health care needs

SPM

SPM 19 - Percent of YSHCN served by CHANT who complete an annual transition plan

Objectives

Decrease the precent of YSHCN served by CHANT and YAC who complete an annual transition plan from 75% on October 1, 2020 to 100% on September 30, 2025.

Strategies

Inform, educate and link YSHCN, families and providers to available transition resources and services, and how to access those services

State Action Plan Table (Tennessee) - Children with Special Health Care Needs - Entry 9

Priority Need

Improve transition from pediatric to adult care among children with special health care needs

SPM

SPM 20 - Percent of youth leaders participating in advisory councils providing resources to other youth

Objectives

Decrease the precent of youth leaders participating in advisory councils providing resources to other youth from 40% on October 1, 2020 to 80% on September 30, 2025.

Strategies

Promote successful transition through educational opportunities and self-advocacy training

Priority: Increase CYSHCN Medical Home Access and Utilization

MCH/Title V Funding: The Medical Home priority team is administratively led by the Children and Youth with Special Healthcare Needs (CYSHCN) section within the Division of Family Health and Wellness of TDH. The Children and Youth with Special Healthcare Needs section includes CHANT, CYSCN, Children's Special Services (CSS), CYSHCN Emergency Preparedness, and Birth Defects. The medical home access and utilization efforts are funded by state and MCH/Title V. Additionally, MCH/Title V is used to fully fund CYSHCN staff, including the Section Chief as well as the CSS program director, integrated systems of services program director, and a nursing consultant; and it partially funds an administrative assistant, epidemiologist, the birth defects program director, and birth defects nursing consultant.

Interpretation of Performance Data on selected NPMs, SPMs, and SOMs:

SPM 14: Number of CYSHCN receiving care in a medical home

During FY 2022, 2,110 CYSHCN received care in a medical home, which was similar to the previous year. This can be attributed to the continuous referral and assistance with identifying the child's primary care providers along with assistance with scheduling appointments and follow-up to ensure the appointments were kept.

SPM 15: Percent of providers with increased knowledge on medical home and care coordination

There is no data to report for year 2. The training and survey will be conducted, during Year 3.

SPM 16: Percent of providers reporting improved system of care for CYSCHN

There is no data to report for year 2. The training and survey will be conducted, during Year 3.

SPM 17: Percent of families who complete an annual visit with their primary care provider

From FY2021 to FY2022, the percent of families who completed an annual visit with their primary care provider decreased from 7.52% to 7.44%. While the decrease was insignificant from year to year, families continue to complete annual visits with their primary care providers at a rate significantly lower than the 10% performance target established.

Possible contributions to slight decrease includes unchanging number of available providers, similar barriers to access, transportation and travel distance to provider offices, reluctance of many families to return to in-person visits and the lack of broadband in many areas of the state prevents families from being able to participate in telehealth visits.

NPM 11: Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

The latest data is for FY 2020-2021. According to the National Survey of Child Health 2020-2021 combined data, 51.2% of children without special health care needs reported receiving care in a medical home and 49.3% of children with special health care needs reported receiving care in a medical home – combined 50.2% of all children 0-17 reported receiving treatment in a medical home. While this is lower than the stated objective of 60% for FY 2021, Tennessee is higher than the national average of 44.8% of both children with and without special health care needs. TN children under 18 years of age have a medical home according to the NSCH survey 2019-2020 combined data, the most recent available. This was higher than the national average of 44.8%.

The data indicated a slight decrease from 2019-2020 (1.3%). The difference was not statistically significant. The CYSHCN team continues to promote medical home access and utilizes the CHANT Medical Home Pathway to ensure families that report not having an annual exam or knowing who their primary care provider is, are assisted in determining their assigned primary care provider and scheduling an appointment. Follow-up is conducted to ensure that families attend their appointment or if barriers or challenges are identified, additional aids and/or resources are provided.

Accomplishments and Challenges (based on FY2022 Action Plan):

Strategy 1: Create a shared vision for integrating and improving CYSHCN system of care.

Supporting Evidence for Strategy 1: "Creating an effective system of care for children and youth with special health care needs (CYSHCN) is one of the most challenging and pressing roles for state health leaders. In the United States, 9.4 million children, or almost 13 percent, have special health care needs. A major challenge for families of CYSHCN is accessing an often-fragmented system of care." Models-of-Care-for-CYSHCN.pdf (amchp.org). The National Child Health Survey reports in the 2018-2019 combined survey only 48.5% Tennessee children with special health care needs report receiving care that meets the medical home criteria of coordinated, ongoing, comprehensive care within a medical home.

Activity 1a: Sponsor learning collaborative to help improve service coordination and CYSHCN linkage for minority and other disparate populations to providers and community-based services.

Report 1a: The CYSHCN Team continues to work with several partners to facilitate a learning collaborative. During FY 22, several medical home training opportunities were provided to internal and external partners. The Children's Special Services program director presented to the Early Hearing Detection and Intervention Conference (EHDI). Parents and providers were in attendance and participated in open discussion around the importance of medical homes for all children and especially those with hearing diagnosis. The CYSHCN Team will continue collaborating with Family Voices, TennCare, TNAAP and other provider organizations to establish the collaborative and ensure that training is available for providers and family members.

Activity 1b: Promote access to equitable and more efficient health care for disparate populations by partnering with TennCare, TNAAP, TPCA, TAFP, Office of Minority Health and Disparity Elimination and Family Voices to host a Statewide Medical Home Conference.

Report 1b: The CYSHCN team is planning the Statewide Medical Home Conference for Year 3. The team has identified representatives from TennCare, the three Managed Care Organizations, TNAAP, Family Voices and other providers to plan the conference.

Activity 1c: Identify and provide technical assistance including information on medical home disparities to non-Medicaid providers seeking to implement a medical home approach to care.

Report 1c: The CYSHCN team continues to make progress on this activity. In addition to the non-Medicaid providers identifies and provided resources in the previous years, the team participated in the annual Cumberland Pediatric Foundation Conference in April 2022.

Providers and office staff in attendance were provided over 50 copies of the *Partnering with your Doctor: The Medical Home Approach.* The booklets were provided in both English and Spanish as well as a takeaway postcard with QR codes to access the online PDF of the booklet. Approximately 250 attendees scanned the QR code. The *Partnering with Your Doctor: The Medical Home Approach* can be located online at: https://www.tn.gov/content/dam/tn/health/documents/mch/Partnering-with-your-Doctor-booklet-English.pdf

Over 400 copies of the booklet were provided to health care providers that are authorized vendors for the Children's Special Services (CSS) program.

The program continues to address medical home disparities experienced by the families served by CHANT, along with medically underserved areas of the state and will continue working with other state and local agencies to provide additional information to non-Medicaid providers on existing disparities and tools to implement the medical home approach.

Challenges Issues Related to Implementation of Strategy 1: Progress continues to be gained towards the accomplishment of Strategy 1. While the team was unsuccessful in conducting the learning collaborative during Year 2, efforts to build partners and garner support of the collaborative were successful. The team was also successful in identifying providers and families to provide medical home resources. Challenges to accomplishing this strategy were related to staff capacity to plan and execute the learning collaborative. There was also some reluctance of many to participate in face-to-face events.

Strategy 2: Inform and educate families and providers to promote systems change.

Supporting Evidence for Strategy 2: All children should receive comprehensive coordinated care in a medical home environment that is a collaboration between the family and the provider and provides medical care and support, care coordination and resources. This strategy will increase knowledge of families and providers and promote systems change. The National Child Health Survey reports in the 2018-2019 combined survey only 48.5% Tennessee children with special health care needs report receiving care that meets the medical home criteria of coordinated, ongoing, comprehensive care within a medical home.

Activity 2a: Target minority and disparate families and providers by geographic location and promote medical home implementation through education, training and resources.

Report 2a: The CYSHCN team has identified minority and disparate populations served by the CHANT team and has provided educational resources to promote medical home utilization. All CHANT families who indicate they do not have a primary care provider trigger the medical home pathway. This pathway provides resources and referrals and will assist families in identifying their assigned primary care provider if Medicaid eligible. Families accessing the medical home pathway are also receive assistance to schedule their annual appointment. Families are followed on this pathway until the appointments are scheduled and kept. During SFY 2022, 6442 Families triggered the Medical Home Pathway. During SFY 2022, 6442 Families triggered the Medical Home Pathway.

Data for ESM 11.6 is not available at this time; therefore, a determination cannot be made to report change in providers knowledge of medical home implementation. Contributing to the lack of data is the fact that a survey tool as not been deployed to access this activity.

Activity 2b: Identify and provide resources and referrals to minority and disparate families and geographically targeted providers on dental home, behavioral/mental health care coordination, respite care and family engagement practices.

Report 2b: The CYSHCN team has identified minority and disparate populations served by the CHANT team and has provided educational resources to promote dental home, behavioral/mental health, care coordination, respite care and family engagement practices. All CHANT families who indicate they do not have a dental provider or are experiencing behavioral/mental health concerns will trigger those identified pathways. Education and resources are provided. During SFY 2022, 1,972 families triggered the behavioral health pathway, 8,340 families triggered the dental home pathway.

All families who proceed with the triggered pathways are provided care coordination, and respite care resources. If needed, they are also assistance with scheduling appointments. Families are followed on the pathways until the appointments are scheduled and kept.

Data for ESM 11.7 is not available at this time; therefore, a determination cannot be made to report change in families' access and utilization of medical homes. Contributing to the lack of data is the fact that a survey tool as not been deployed to access this activity.

Challenges Issues Related to Implementation of Strategy 2: Challenges related to this strategy can be attributed to lack of staff. The CYSHCN team did not have an assigned epidemiologist or other staff to deploy a tool for assessing providers implementation of medical homes and families' knowledge, access and utilization of medical homes. The program was unable to access data to ascertain if progress was being made. With the assignment of a new CHANT epidemiologist, the program is now able to access data and will be better equipped to determine success and/or barriers to meeting the established objectives.

Strategy 3: Identify and disseminate resources on medical home best practices in Tennessee to inform and educate families and providers on care-coordination benefits.

Supporting Evidence for Strategy 3: Care coordination can be critical for linking families and CYSHCN to needed medical, developmental, behavioral, educational, and social services, and for providing community-based resources and emotional support. works. The National Care Coordination Standards for CYSHCN indicates "Care coordination for CYSHCN is based on the premise of health equity, that all children and families should have an equal opportunity to attain their full health potential, and no barriers should exist to prevent children and their families from achieving this potential and that care coordination should address the full range of social, behavioral, environmental, and health care needs of CYSHCN." (https://www.nashp.org/national-care-coordination-standards-for-children-and-youth-with-special-health-care-needs/#toggle-id-2) The National Child Health Survey reported in the 2018-2019 combined survey results that 23.6% of CYSHCN in Tennessee did not receive needed care coordination.

Activity 3a: Create and disseminate medical home tool-kit to families and providers including information on health equity and disparities.

Report 3a: The CYSHCN team has identified and created medical home resources targeting equity and disparities to be included in the tool kit. The tool kit will be completed and disseminated during Year 3.

During FY2022, 2,870 individuals eligible for CYSHCN received CHANT/CSS care coordination. Of this number, none indicated already having a medical home, 555 were on the Medical Home pathway Around 16.22%(90) of the individuals on the Medical Home pathway received education. This is an increase of 5.36% over FY2021.

The improvement in ESM11.9 can be attributed to guidance from the Children's Special Services director to ensure that all CYSHCN participants who indicated they did not have a medical home are followed on the medical home pathway and referrals are made to primary care providers. Families are followed until the schedule and keep their well-child appointment with their primary care provider.

Activity 3b: Create and disseminate care coordination tool-kit including information on diverse populations and geographic locations to health care providers and CHANT care coordinators.

Report 3b: With the assistance from division Interns and Fellows, the CYSHCN team identified disparities in the access and utilization of medical homes. This data allowed the Interns and Fellows to conduct key informant interviews and identify areas for improvement and strategies to reduce the identified disparities. The outcome will also aid the team provide in development of additional education, training and resources for the tool kit.

Activity 3c: Promote health equity in the medical home and provide care coordination and medical home referrals to families receiving services through the Children's Special Services Program.

Report 3c: A total of 4,930 unique CYSHCN received CHANT/CSS care coordination in FY2022, a slight increase from FY2021.

Contributing factors include conducting screening and assessments on all families referred to the CHANT program to determine if children and youth in the family have special health care needs. If a child or children are identified, the CYSHCN pathway is triggered, and care coordinators are assigned to work with families providing necessary referrals and working with families to ensure they have access to the resources and services needed to navigate systems. The CSS director is also targeting certain regional and metro health departments utilizing the data provided in the disparities report to develop strategies to assist in recruiting and retaining families with special health care needs.

Activity 3d: Provide education and resources to Children's Special Services authorized vendors.

Report 3d: The CSS program has provided over 400 *Partnering with your Doctor: The Medical*

Home Approach booklets during FY22 over 230 were provided to CSS authorized vendors. The booklet contains information that will assist those providers in understanding the importance of access and utilization of the medical home, it also provides information and resources necessary to becoming a medical home and key messages for families on the importance of regular check-ups and maintaining optimal health.

Challenges Issues Related to Implementation of Strategy 3: Challenges related to Strategy 3 include constantly changing resources, availability of resources and how they are disseminated. The team identified resources and in some instances before approval was granted for dissemination, they were outdated or no longer in existence. While it is not feasible to print resources because of the rapid changes, many families do not have access to electronic media creating barriers for who receives the needed information. Challenges around this strategy are also related to the diverse populations served and the differences in one area of the state versus another. The resources that are available in urban areas vary widely from those that are available in rural areas creating inequities for families.

Strategy 4: Inform and provide coordination for CHANT families on medical home and care coordination benefits.

Supporting Evidence for Strategy 4: Access to a pediatric medical home is associated with increased quality of care, improved health outcomes, and decreased unmet medical needs for children and youth, including children and youth with special health care needs. Research shows that access to and utilization of a pediatric medical home is associated with the following: Increased provision of preventive services for children, including - Increased likelihood of having anticipatory guidance provided; Increased likelihood of being seen by a primary care clinician within the last year; Increased rates of childhood immunizations; Increased rates of well-child visits; Increased likelihood to have had height, weight, and blood pressure checked; Decreased amount of outpatient sick visits; Decreased rate of inappropriate use of antibiotics; and Improved health outcomes and health status (https://medicalhomeinfo.aap.org/overview/Pages/Evidence.aspx) The National Child Health Survey reports in the 2018-2019 combined survey only 48.5% Tennessee children with special health care needs report receiving care that meets the medical home criteria of coordinated, ongoing, comprehensive care within a medical home.

Activity 4a: Provide education and resources on importance of care in the medical home.

Report 4a: The CYSHCN team continues to make progress on this activity as the CHANT care coordination initiative provided education and resources on the importance of medical home access and utilization to over 1700 families. The team also partnered with Family Voices of Tennessee to provide education and training and over 600 families received education and training.

The number of CHANT families provided education and resources increased from 1,424 in FY2021 to 1,749 in FY2022, and the number of families who received training and education through the CYSHCN initiative with Family Voices increased from 400 in FY 2021 to 600 in FY 2022. The combined number for FY 2022 is which is over 2300 which is more than three times the target of 700 for FY2022.

The increase in this activity can be attributed to the emphasis on the CHANT care

coordinators continued interaction with families and ensuring that information and resources are provided regarding the importance of care in a medical home. The collaboration with Family Voices also includes an increase in the number of families participating in medical home training opportunities.

Activity 4b: Increase family referrals to primary care providers.

Report 4b: In FY2022, 272 families received referrals to their child's primary care provider. The data indicates a slight increase from 216 in FY2021, though lower than the target of 400 for FY2022.

The improvement can be attributed to several factors, i.e., families being screened to determine if they have insurance or payor sources for medical services, also to determine if they have access to medical homes and completion of the action steps of the Medical Home pathway. This includes the provision of education on the importance of securing a medical home and primary care provider and being followed by care coordinators to ensure that appointments are scheduled and kept with the primary care provider. Families are also assisted with completing applications for available insurance and identifying a primary care provider.

Activity 4c: Encourage families to schedule appointments with their primary care provider.

Report 4c: CHANT/CSS continues to provide education and resources to referred families who need to schedule a primary care visit. The importance of this visit is shared with families and care coordinators assist with scheduling appointments. Once an appointment is made, the care coordinators follow up within five days of the scheduled appointment to ensure that the visit was kept and to determine if additional appointments are required and assist with making sure those are scheduled.

Activity 4d: Promote annual health care visit in the medical home

Report 4d: Though lower than the 35% target for the fiscal year, the percentage of CHANT families who scheduled an annual visit with their child's primary care provider increased from 3.20% in FY2021 to 15.95% in FY2022.

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CHANT/CSS continues to support medical home access and utilization and provides resources and education as well as assistance in locating a primary care provider and scheduling appointments. The added step of following up to ensure that appointments are kept is seen as a vital step to working with families and supporting them as they navigate the medical home pathway. Families also receive resources about the importance of regular check-ups, maintaining optimal health and identification and referrals to primary care providers.

Challenges Issues Related to Implementation of Strategy 4: Challenges related to Strategy 4 include systemic barriers to accessing medical homes especially in the rural areas. Recent years saw a decline in the number of local health departments that offer primary care services which attributes to the barriers of insuring families are able to identify primary care providers and schedule and keep appointments.

During the Pandemic, many rural medical providers were forced to close their doors, making it difficult for many families especially rural families with inadequate personal transportation, the lack of public transportation and/or other resources necessary to access services as they are often unable to travel to urban centers where providers are located. Many families living on the edge of poverty are ineligible for free services and some providers do not offer a sliding scale. Families living in rural areas are also unable to take advantage of providers who offer telehealth due to broadband issues and lack or inadequate wi-fi.

Update on Other CYSHCN Programs Supported by MCH/Title V:

Children's Special Services (CSS): Children's Special Services (CSS) continues to provide reimbursement for medical services and care coordination for children with special health care needs. Training and processional development opportunities are conducted annually to ensure that staff are aware of the importance of medical home access and utilization. The CSS program director and team continue to develop strategies to incentivize local and regional teams to increase medical home participation among children with and without special health care needs. Resources are identified and made available statewide for families and providers.

Community Health Access Navigation Across Tennessee (CHANT): MCH Title V funds support the CHANT program by ensuring that eligible families with children and youth with special health care needs receive care coordination, assistance with reimbursement for necessary medical treatment and services and transition planning. All families and children receiving services through the CHANT program also benefit from the Children's Special Services Program investments in medical home initiatives, and the partnership and collaborations with other child-serving agencies and TennCare (Medicaid). MCH Title V funding supports the annual professional development conference providing training and educational supports to the CHANT program staff.

Priority: Improve Transition From Pediatric to Adult Care Among Children With Special Health Care Needs

MCH/Title V Funding: The transition planning priority team is administratively led by the Child and Youth with Special Healthcare Needs (CYSHCN) section within the Division of Family Health and Wellness of TDH. The Children and Youth with Special Healthcare Needs section includes CHANT, CYSCN, children's special services (CSS), emergency preparedness, and birth defects. The youth transition planning efforts are funded by the state and MCH/Title V. Additionally, MCH/Title V is used to fully fund CYSHCN staff, including the Section Chief as well as the CSS program director, integrated systems of services program director, and a nursing consultant; and it partially funds an administrative assistant, epidemiologist, the birth defects program director, and birth defects nursing consultant.

Interpretation of Performance Data on selected NPMs, SPMs, and SOMs:

SPM 18: Percent of youth reporting with increased knowledge on transition resources and services

During FY 2022, One hundred (100%) percent of those surveyed reported increased knowledge on transition resources and services.

SPM 18 is based on the youth participating in the annual Youth Advisory Council conference. All conference participants completed an individual transition plan which contributed to 100% reporting increased knowledge on transition resources and services.

SPM 19: Precent of YSHCN served by CHANT and YAC who complete an annual transition plan

During FY2022, 627 youth with special health care needs served by CHANT (CSS) 14 years and older had a current transition plan, accounting for 72% of all CSS patients 14 and older. One hundred (100%) percent of YAC members completed an annual transition plan. This measure had no change from last year.

The percentage of YSHCN served by CHANT and YAC members who completed an annual transition plan did not change. This can be attributed to the fact that the number of youth aged 14 and older served by CHANT (CSS) remained stable and all YAC members completed the annual transition plan as participants in the YAC.

SPM 20: Precent of youth leaders participating in advisory councils providing resources to other youth

During FY 2022 35.3% Youth Advisory Council members provided resources to other youth. This was an increase over the previous fiscal year.

The increase can be attributed to actively recruiting additional members to serve as mentors and providing opportunities for them to mentor within the Council and with other youth serving agencies.

NPM 12: Percent of adolescents with and without special health care needs, ages 12 through 17, who receive services to prepare for the transition to adult health care

During FY 2022, the National Child Health Survey reported that 24.10% of adolescents with and without special health care needs ages 12 through 17 received services to prepare for transition to adult health care. This was an increase over FY 2021.

The increase is based on the NCHS but can be attributed to Tennessee's concerted effort to promote transition planning across the State to providers, families, youth and other child-serving agencies.

Accomplishments and Challenges (based on FY2022 Action Plan):

Strategy 1: Inform, educate and link YSHCN, families and providers to available transition resources and services, and how to access those services.

Supporting Evidence for Strategy: All youth with special health care needs should receive services necessary to make transitions to adult health care work and independence. As youth age, transition from parent supervised patient controlled care to independent patient-centered care is vital for growth and development. The National Child Health 2018-2019 combined survey indicates that 77.8% children and youth with special health care needs aged 12-17 in Tennessee did not receive the services necessary for transition to adult health care https://www.childhealthdata.org/browse/survey/results?q=7777&r=44&g=807

Activity 1a: Provide available resources by age and geographic location for YSHCN and families – inclusive, but not limited to, medical home, dental home, behavioral/mental health services and transition.

Report 1a: During FY 2022, Integrated Systems of Services staff collaborated with Vanderbilt Kennedy Center to distribute a statewide transition survey over 3000 youth were reached. Over 2300 responses were received. The results of the survey were used to assist the team in determining which services were beneficial to families and youth and

developing additional resources. Integrated Systems of Services staff further collaborated with Transition Tennessee to provide virtual resources for families and youth based on age and geographic locations. Staff also worked with Family Voices to ensure the revised "Got Transition" tool was available to all youth served by YAC and participating in the Youth Advisory Council.

Activity 1b: Develop and disseminate a state-wide YSHCN transition resource kit including resources for disparate and minority populations.

Report 1b: Progress was made during FY 2022 towards development and dissemination of a state-wide YSHCN transition resource kit. Collaboration with other youth serving agencies created opportunities for more than 350 transition resource guides to be disseminated to youth, families and providers which was significant increase over FY 2021.

This increase can be attributed to a return to in-person activities for staff and youth serving agencies and the collaborative efforts with those agencies to provide resources to youth, families and providers.

Activity 1c: Provide training for families, youth, partners and providers on all aspects of transition.

Report 1c: Integrated Systems of Services hosted a multi-agency, multi-state youth transition conference in June of 2022. Youth, families, providers, and community stakeholders were trained by other youth and families on all aspects of transition. This included transition from pediatric to adult healthcare providers, transition from high school into college, and transition from college into workforce development. Members of the Youth Advisory Council recently went through a "learning to vote" training and were registered to vote during the training (if they were age appropriate). This was a major request from youth as they learn how to transition into adulthood.

Challenges Issues Related to Implementation of Strategy 1:

Families and providers are provided resources on health care transition, however challenges or roadblocks experienced related to the implementation of Strategy 1 include the systemic barriers around insurance and youth being able to apply for and receive Medicaid. Challenges also include staffing changes in the Youth Coordinator position and the YAC members withdrawing and not participating due to a lack of trust of the new staff. Because of complex medical conditions and and complications of COVID-19 exposure many YAC members remain hesitant to meet in person.

Strategy 2: Promote successful transition through educational opportunities and self-advocacy training.

Supporting Evidence for Strategy: Youth and parents who receive leadership training are able to provide mentoring and peer-to-peer support to other parents and youth with special health care needs. Trained parents and YSHCN are better equipped to become self-advocates and participate in the decision-making process and policy development. The National Child Health 2018-2019 combined survey indicates that 77.8% children and youth with special health care needs aged 12-17 in Tennessee did not receive the services necessary for transition to adult health care. https://www.childhealthdata.org/browse/survey/results?q=7777&r=44&g=807

Activity 2a: Recruit and retain YAC council members ensuring diverse representation including race, ethnicity, age and gender.

Report 2a: Several members of the YAC entered college during this reporting period and rolled off the Council. The Integrated System of Services staff were able to recruit additional members from participants at the Youth Advisory Council conference. Youth were recruited to present and facilitate during the conference from other states and from other cities with-in the State. Those youth them requested to become members of the Council. The Council Chair also changed due to the previous chair's college enrollment. The new chair recruited acquaintances from his school and other social circles. The YAC members instituted weekly meetings across several social media platforms and often met multiple times during the week. The frequency of the meetings provided opportunities to recruit and additional members from across the State. This process also increased retention and some members that enrolled in college were able to continue meeting and mentoring the new members.

Activity 2b: Train YAC members from diverse populations to mentor other YSHCN in the community.

Report 2b: The total number of YAC members trained to mentor other YSHCN in the community during FY 2022 was 6. This was in increase over the past fiscal year.

This increase can be attributed to Integrated Systems of Services collaboration with Family Voices of TN and TN Disability Pathfinder to provide effective leadership training to youth and families. Family Voices provides a parent-to- parent and peer-to-peer program for parents and youth with special healthcare needs. Staff also collaborate with Autism Tennessee to provide pee-to-peer support and leadership training to youth and families. The Oasis Center of Nashville requested a member of YAC present to the youth receiving services at the Center providing mentoring opportunities for YAC members.

Activity 2c: Provide learning opportunities (leadership training – ex. Peer-to-Peer support program, talking to legislators, taking control of your healthcare) for youth.

Report 2c: During FY 2022, 60 youth, 415 parents were trained on leadership and self-advocacy. This was a significant increase over FY 2021.

The continued collaborative efforts with Family Voices, Tennessee Disability Coalition, Disability Pathfinders, Mental Health and Substance Abuse Services, CHANT and other agencies serving transition aged youth provided increased opportunities for training and peer-to-peer learning. The training included topics on self-advocacy, discussing your diagnoses with your provider, inclusive decision making, speaking with legislators, and successful transition from pediatric to adult health care. Youth and families were also provided resources on the parent-to-parent and peer-to-peer programs during each training session.

Challenges Issues Related to Implementation of Strategy 2: Many of the activities for this strategy were met or exceeded, however, continuity of services was impeded due to the rapid turnover in the youth coordinator role. Many youth participants also reported challenges related to locating providers that were comfortable with treating them

depending on their gender identity. There was also concern regarding mental health providers for youth with dual diagnoses.

Update on Other CYSHCN-related Partnerships Supported by MCH/Title V:

Department of Tennessee Council on Developmental Disabilities: The CYSHCN Section continues to support and partner with the Tennessee Council on Developmental Disabilities through a multi-agency contract that supports the Vanderbilt Kennedy Center Disability Pathfinders Program. Pathfinders instituted a new resource and referral process during FY 2022. The resource is a comprehensive database of disability services and community resources. Pathfinders continuously identifies and examines resource and referral disparities among disadvantaged and vulnerable populations. and continues to make referrals to the CHANT program. This collaboration provides for a full-time staff person who assists families seeking resources to identify resources and make referrals and operates a statewide helpline to provide information and referral assistance to individuals and organizations, including non-English speaking residents and other underserved populations in Tennessee.

Tennessee Disability Coalition: The CYSHCN Section continues to support and partner with the Tennessee Disability Coalition (Family Voices) by providing funding for activities related to children and youth with special health care needs. Family Voices is responsible for hiring a Youth Coordinator to assist with oversight of the Youth Advisory Council. Family Voices also provides supervision of the parent-to-parent and peer-to-peer programs and matches families and youth through these programs. Family Voices and CYSHCN also partner with the LEND program to recruit students to work with YAC and provide additional training and mentoring opportunities. LEND volunteers assist with the organization of at least four in-person council meetings per year while promoting and conducting outreach to diverse families of CYSHCN to increase the number of youth members. Family Voices is also partnering with CYSHCN to increase tele-health opportunities for families.

Priority: Increase CYSHCN Medical Home Access and Utilization

NPM 11: Increase the percent of children with special health care needs, 0-17, who have a medical home from 53.3% on October 1, 2020, to 80.0% of September 30, 2025.

Objective for SPM 14: Increase the number of CYSHCN receiving care in a medical home from 800 on October 1, 2020, to 1050 on September 30, 2025.

Objective for SPM 15: Increase the percent of providers with increased knowledge on medical home and care coordination from 25% on October 1, 2020, to 85% on September 30, 2025.

Objective for SPM 16: Increase the percent of providers reporting improved system of care for CYSHCN from 35% on October 1, 2020, to 85% on September 30, 2025.

Objective for SPM 17: Increase the percent of families who complete an annual visit with their primary care provider from 50% on October 1, 2020, to 100% on September 30, 2025.

Disparity Description:
In the 2020-2021 National Survey of Children's Health, the presence of a medical home was measured by a composite measure based on five components constructed from a total of 16 survey items. These components are:
- Personal doctor or nurse
- Usual source for sick care
- Family-centered care
- Problems getting needed referrals
- Effective Care Coordination when needed

To qualify as having a Medical Home, children must meet the criteria for adequate care on the first three components: personal doctor or nurse, usual source for care, and family-centered care. Additionally, any children who needed referrals or care coordination must also meet criteria for those components in order to qualify as having a medical home.

The 2020-2021 combined NSCH data show that in Tennessee, 49.3% of children with special health care needs ages 0-17 reported receiving care that meets the medical home criteria. When broken down by age group, 51.0% of 0-5 years of age, 41.9% of 6-11 years of age, and 48.8% 12-17 years of age reported receiving care that meets the medical home criteria.

In Tennessee, place, race and age disparities exist among CSS participants for having a medical home. CSS data for children 13-20 years of age from June 2020 – July 2021 indicate that 67% of CSS participants in rural counties have a medical home, compared to 82% in metro counties. These data also show that non-Hispanic white CSS participants have a lower rate of medical home compared to non-Hispanic black CSS participants (71% and 84% respectively). Additionally, CSS participants who are 17-20 years of age have a lower rate of medical home (68%) than those who are 13-16 years of age (77%).

Disparity Elimination Priority Area: The team will focus on improving the overall number of CSHCN participants in rural and metro areas who report receiving care that meets the medical home criteria. Outreach will be prioritized among individuals residing in areas with poor population health outcomes (i.e., low EPSDT/WCC completion rates)

and CSHCN ages 6-17.

While improving the overall medical home rate for CSHCN families is important, the team also recognizes the need to devote efforts to impact the placed-based disparity that exists amongst CSS participants, ages 13-20, who reside in rural areas. To that end, the team hopes to garner valuable information through piloting a telehealth project in Southeast TN.

The team will improve medical home enrollment through Strategies 1, 2 and 4 below.

The following strategies and activities are planned for *October 1, 2023 to September 30, 2024*

Strategy 1: Create a shared vision for integrating and improving CYSHCN system of care.

Supporting Evidence for Strategy 1: "Creating an effective system of care for children and youth with special health care needs (CYSHCN) is one of the most challenging and pressing roles for state health leaders. In the United States, 9.4 million children, or almost 13 percent, have special health care needs. A major challenge for families of CYSHCN is accessing an often-fragmented system of care." Models-of-Care-for-CYSHCN.pdf (amchp.org). The National Survey of Children's Health reports in the 2020-2021 combined survey only 49.3% of Tennessee children with special health care needs report receiving care that meets the medical home criteria of coordinated, ongoing, comprehensive care within a medical home.

Activity 1a: Meet with the TennCare PCMH Coordinator and Chief Quality Officer to discuss the concerns of primary care provider in caring for CYSHCN - namely care coordination and primary care reimbursement. Determine how TennCare is currently handling these areas and if updates can be made within the PCMH program/broader scope of TennCare.

Activity 1b: Sponsor a learning collaborative to help improve service coordination and CYSHCN linkage for minority and other disparate populations to providers and community-based services.

Activity 1c: Promote access to equitable and more efficient health care for disparate populations by partnering with TennCare, TNAAP, TPCA, TAFP, Office of Minority Health and Disparity Elimination and Family Voices to host a Statewide Medical Home Conference.

Activity 1d: Identify and provide information on medical home disparities to non-Medicaid providers seeking to implement a medical home approach to care.

Activity 1e: CYSHCN, in conjunction with Family Voices, will investigate the current needs for broadband access in the most vulnerable regions of Tennessee, as identified by CSS data.

Strategy 2: Inform and educate families and providers to promote systems change.

Supporting Evidence for Strategy 2: All children should receive comprehensive coordinated care in a medical home environment that is a collaboration between the family and the provider and provides medical care and support, care coordination, and resources. This strategy will increase the knowledge of families and

providers and promote systems change. The National Survey of Children's Health reports in the 2020-2021 combined survey only 49.3% Tennessee children with special health care needs report receiving care that meets the medical home criteria of coordinated, ongoing, comprehensive care within a medical home.

Activity 2a: Target underserved, minority, and disparate families and providers by geographic location and promote medical home implementation through education, training and resources.

Activity 2b: Identify and provide resources and referrals to underserved, minority, and disparate families and geographically targeted providers on dental home, behavioral/mental health care coordination, respite care and family engagement practices.

Activity 2c: Provide coordinated care to CHANT-enrolled CYSHCN families that result in identifying a medical home and assistance with scheduling appointments for annual EPSDT/WCC visits.

Activity 2d: Partner with local Managed Care Organizations (MCOs) to provide education/outreach to CHANT-enrolled CYSHCN families residing in rural and metro areas with the lowest EPSDT/WCC completion rates on the importance of having a medical home and the resources available within their communities.

Strategy 3: Identify and disseminate resources on medical home best practices in Tennessee to inform and educate families and providers on care-coordination benefits.

Supporting Evidence for Strategy 3: Care coordination can be critical for linking families and CYSHCN to needed medical, developmental, behavioral, educational, and social services, and for providing community-based resources and emotional support. works. The National Care Coordination Standards for CYSHCN indicates "Care coordination for CYSHCN is based on the premise of health equity, that all children and families should have an equal opportunity to attain their full health potential, and no barriers should exist to prevent children and their families from achieving this potential and that care coordination should address the full range of social, behavioral, environmental, and health care needs of CYSHCN." (https://www.nashp.org/national-care-coordination-standards-for-children-and-youth-with-special-health-care-needs/#toggle-id-2) The National Survey of Children's Health reported in the 2020-2021 combined survey results that 23.5% of CYSHCN in Tennessee did not receive needed care coordination.

Activity 3a: Create and disseminate medical home toolkit to families and providers including information on health equity and disparities.

Activity 3b: Create and disseminate care coordination toolkit including information on diverse populations and geographic locations to health care providers and CHANT care coordinators.

Activity 3c: Promote health equity in the medical home and provide care coordination and medical home referrals to families receiving services through the Children's Special Services Program.

Activity 3d: Provide education and resources to Children's Special Services authorized vendors.

Strategy 4: Inform CHANT families on the benefits of a medical home and care coordination.

Supporting Evidence for Strategy 4: Access to a pediatric medical home is associated with increased quality of care, improved health outcomes, and decreased unmet medical needs for children and youth, including children and youth with special health care needs. Research shows that access to and utilization of a pediatric medical home is associated with the following:
Increased provision of preventive services for children, including - Increased likelihood of having anticipatory guidance provided; Increased likelihood of being seen by a primary care clinician within the last year; Increased rates of childhood immunizations; Increased rates of well-child visits; Increased likelihood to have had height, weight, and blood pressure checked; Decreased amount of outpatient sick visits; Decreased rate of inappropriate use of antibiotics; and Improved health outcomes and health status (https://medicalhomeinfo.aap.org/overview/Pages/Evidence.aspx) The National Survey of Children's Health reports in the 2020-2021 combined survey only 49.3% of Tennessee children with special health care needs report receiving care that meets the medical home criteria of coordinated, ongoing, and comprehensive care within a medical home.

Activity 4a: Provide education and resources on importance of care in the medical home.

Activity 4b: Increase family referrals to primary care providers by promoting the use of the CHANT electronic referral form to families, MCOs and providers that will allow families, particularly families in locations with poor health outcomes, to gain access to coordinated care services resulting in an identified medical home.

Activity 4c: Increase the number of families who schedule appointments with their primary care provider.

Planned Partnerships: The CYSHCN Team currently partners and plans to continue partnering with TNAAP, TN Chapter of Family Physicians, Federally Qualified Health Care Centers, local health departments, Family Voices, the State of TN child serving agencies, i.e., Department of Intellectual and Developmental Disabilities, TN Council on Developmental Disability, Tennessee Commission on Children and Youth, Tennessee Council on Mental Health, the Department of Mental Health and Substance Abuse Services, and the local hospital family advisory groups.

Contextual Factors: During the past several years, Tennessee has experienced a drastic decline in the number of rural hospitals. With the closing of the hospitals, this also caused many providers to relocate their practices, which created barriers to access and care for families and especially families with special health care needs as many areas lack pediatric providers. Rural transportation is also a major issue (to urban areas). Some families do not have access to insurance and are not eligible for Medicaid. Other barriers include adult providers not accepting Medicaid non-expansion of Medicaid, internet and broadband access; and COVID-19 restrictions.

Assumptions: The status of health care will improve for CYSHCN; Increase capacity of youth to achieve their maximum quality-of-life potential; increase the number of CYSHCN who receive coordinated services in a Medical Home; Increase family and youth knowledge regarding resources in their community and access to said resources; Increase provider and community knowledge on medical home, transition, and resources; Create new resources in an electronic version with regular updates scheduled.

Priority: Improve Transition From Pediatric to Adult Care Among Children With Special Health Care

Needs

NPM 12: Increase the percent of adolescents with special health care needs, ages 12-17, who received services necessary to make transition to adult health care from 34.2% on October 1, 2020 to 60.0% on September 30,2025.

Objective for SPM 18: Increase the percent of youth reporting with increased knowledge on transition resources and services from 55% on October 1, 2020, to 100% on September 30, 2025.

Objective for SPM 19: Increase the percent of YSHCN served by CHANT and YAC who complete an annual transition plan from 75% on October 1, 2020, to 100% on September 30, 2025.

Objective for SPM 20: Increase the percent of youth leaders participating in advisory councils providing resources to other youth from 40% on October 1, 2020, to 80% on September 30, 2025.

Description: Place, race and age disparities exist amongst CSS participants transitioning from pediatric to adult care. Data analyzed on transition plans completed from June 2020 – July 2021 indicate that CSS participants residing in urban areas in Tennessee have a transition plan completion rate of 40%, compared to 52% for CSS participants residing in rural areas. Among all CSS participants in Tennessee, fewer non-Hispanic blacks have completed a transition plan than non-Hispanic whites (30% vs. 51%). Fifty percent of CSS participants aged 17-18 years have completed a transition plan compared to 42% participants aged 19-20 years. A racial disparity is observed amongst transition plan completion rates for CSS participants aged 17-20 years who reside in the two most populous (urban) counties in Tennessee – Davidson and Shelby. In Davidson (77% vs. 50%) and Shelby (51% vs. 30%) counties, non-Hispanic whites are more likely to have completed a transition plan than non-Hispanic blacks.

Disparity Elimination Focus: The program will focus on the overall transition plan completion disparities that exist among CSS participants residing in urban (Shelby and Davidson counties) areas, and for non-Hispanic black CSS participants residing in Shelby and Davidson counties. Efforts to improve place and race-based disparities in Davidson and Shelby counties have the potential to make a significant impact because they are the most populous counties in the state and the only two counties with a large enough population pool. Place and race-based disparities will be addressed through Strategy 1 below.

The following strategies and activities are planned for *October 1, 2023 to September 30, 2024*:

Strategy 1: Inform, educate and link YSHCN, families and providers to available transition resources and services, and how to access those services.

Supporting Evidence for Strategy: All youth with special health care needs should receive services necessary to make transitions to adult health care work and independence. As youth age, transition from parent supervised patient controlled care to independent patient-centered care is vital for growth and development. The National Child Health 2018-2019 combined survey indicates that 77.8% children and youth with special health care needs aged 12-17 in Tennessee did not receive the services necessary for transition to adult health care https://www.childhealthdata.org/browse/survey/results?q=7777&r=44&g=807

Activity 1a: Provide available resources by age and appropriate geographic location for YSHCN and families – inclusive, but not limited to, medical home, dental home, behavioral/mental health services and transition. Medical and Dental Home pathway, participants (barrier: measuring this due to qualitative vs quantitative data).

Activity 1b: Develop and disseminate a state-wide YSHCNs transition resource kit including resources for disparate and minority populations.

Activity 1c: Develop culturally and geographically appropriate training for family and youth on all aspects of medical transition.

Activity 1d: Develop training on all aspects of medical transition for partners and providers across Tennessee. Training will be developed utilizing a health equity lens.

Activity 1e: Review the CSS charts of non-Hispanic black participants residing in urban and rural locations who have complete and incomplete transition plans to identify indications of barriers or facilitators.

Strategy 2: Promote successful transition through educational opportunities and self-advocacy training.

Supporting Evidence for Strategy: Youth and parents who receive leadership training are able to provide mentoring and peer-to-peer support to other parents and youth with special health care needs. Trained parents and YSHCN are better equipped to become self-advocates and participate in the decision-making process and policy development. The National Child Health 2018-2019 combined survey indicates that 77.8% children and youth with special health care needs aged 12-17 in Tennessee did not receive the services necessary for transition to adult health care. https://www.childhealthdata.org/browse/survey/results?q=7777&r=44&g=807

Activity 2a: Recruit and retain YAC council members ensuring diverse representation including race, ethnicity, age and gender. Increase membership by 20% though strategic, targeted recruitment.

Activity 2b: Train YAC members to mentor other YSHCN in leadership and self-advocacy skills.

Activity 2c: Provide learning opportunities (leadership training – ex. Peer-to-Peer support program, talking to legislators, taking control of your healthcare) for youth and families across Tennessee.

Planned Partnerships: CYSHCN will continue our collaborative efforts and partnering with Family Voices, Tennessee American Academy of Pediatrics, Tennessee Primary Care Association, Tennessee Academy of Family Physicians, State Transition Work Group, Vocational Rehabilitation, Transition TN, the Youth Advisory Committee

Contextual Factors: Issues that may interfere with efficient transition to adult health care include the perspectives of stakeholders, age limits on pediatric service, complexity of health conditions, a lack of experienced healthcare professionals in the adult arena, and health care financing for chronic and complex conditions. Adult providers do not accept Medicaid. As youth age, they may lose their Medicaid coverage and are not able to afford private insurance.

Assumptions: The status of health care will improve for YSHCN; Increase capacity of youth to achieve their maximum quality-of-life potential; Increase the number of YSHCN who receive coordinated services in a Medical Home; Increase family and youth knowledge regarding resources in their community and access to said resources; Increase provider and community knowledge on medical home, transition, and resources; Increase YSHCN leadership opportunities and continuity of care throughout adulthood.

Cross-Cutting/Systems Building

State Performance Measures

SPM 21 - Percent of women who reported 14+ days of poor mental health in the past month

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			18.2
Annual Indicator			21.3
Numerator			
Denominator			
Data Source			BRFSS
Data Source Year			2021
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	17.8	17.4	17.0

SPM 22 - Percent of children who had difficulties obtaining mental health care among those who received or needed care during the past 12 months, age 3-17 years

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			25
Annual Indicator			58.7
Numerator			
Denominator			
Data Source			NSCH
Data Source Year			2021
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	24.0	23.0	22.0

State Outcome Measures

SOM 8 - Percent of pregnancy-associated deaths in which mental health conditions was a contributing factor

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			25
Annual Indicator			23
Numerator			
Denominator			
Data Source			MMR
Data Source Year			2017-2020
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	18.0	16.0	14.0

State Action Plan Table

State Action Plan Table (Tennessee) - Cross-Cutting/Systems Building - Entry 1
Priority Need
Improve mental health
SPM
SPM 21 - Percent of women who reported 14+ days of poor mental health in the past month
Objectives
Decrease the percent of women who reported 14+ days of poor mental health in the past month from 18.6% on October 1, 2020 to 15% on September 30, 2025.
Strategies
Screen and refer women to mental health treatment and resources

State Action Plan Table (Tennessee) - Cross-Cutting/Systems Building - Entry 2

Priority Need

Improve mental health

SPM

SPM 22 - Percent of children who had difficulties obtaining mental health care among those who received or needed care during the past 12 months, age 3-17 years

Objectives

Decrease the percent of those who experienced difficulties obtaining mental health care among those who received or needed care during the past 12 months, age 3-17 years from 25% on October 1, 2020 to 22% on September 30, 2025.

Strategies

Provide training and resources to support positive mental health

State Action Plan Table (Tennessee) - Cross-Cutting/Systems Building - Entry 3

Priority Need

Improve mental health

SOM

SOM 8 - Percent of pregnancy-associated deaths in which mental health conditions was a contributing factor

Objectives

Decrease the percent of pregnany-associated deaths in which mental health conditions was a contributing factor from 20% on October 1, 2020 to 14% on September 30, 2025.

Strategies

Provide training and resources to support positive mental health

Priority: Improve Mental Health

MCH/Title V Funding: The Mental Health priority team is administratively led by the Associate Medical Director of Pediatrics within the Division of Family Health and Wellness of TDH. The Associate Medical Director provides leadership for the Neonatal Abstinence Syndrome (NAS) Surveillance, Pediatric Mental Health, and School Health programs and provides pediatric consultation to programs across TDH and other state agencies. The mental health improvement efforts are supported by federal funds. While MCH/Title V does not directly fund the activities highlighted in the annual report, it does fully fund some staff who support mental health improvement efforts, including the Deputy Medical Director and Associate Medical Director who provides leadership for this area.

Interpretation of Performance Data on selected NPMs, SPMs, and SOMs:

SPM 21: Percent of women who reported 14+ days of poor mental health in the past month
The percent of women who reported 14 or more days of poor mental health in the past month, based on Behavioral Risk Factor Surveillance System (BRFSS) 2021 data, was 21.3%. This is the first year that this measure has been tracked as part of the mental health priority area, but it is an increase from 2020 (17.8%)

Women's mental health has been greatly affected by the COVID-19 pandemic. Gender disparities in mental health and in socioeconomic factors that affect mental health existed pre-pandemic and have been further exacerbated by COVID. Furthermore, the current mental health resources are insufficient to meet the mental health needs. A Kaiser Family Foundation poll[1] underscored the challenges that many women have faced since women are more likely to be the primary caretakers and lead health care responsibilities for the family. According to the poll, more women that men worried that they or someone in their family would get sick from COVID and worried about losing income. More women also reported feeling the negative mental health effects from worrying about COVID.

SPM 22: Percent of children who had difficulties obtaining mental health care among those who received or needed care during the past 12 months, age 3-17 years
State-level data is unavailable for this measure, and nationwide data for this measure was last available in 2020. An alternative measure from the National Survey of Children's Health (NSCH) is *the percent of children, ages 3 through 17, with a mental/behavioral condition who receive treatment or counseling*. This measure improved, from 46.6% (combined 2019-2020 data) to 49.3% (combined 2020-2021 data). The improvement in access to mental health treatment or counseling could be due to expansion of telemedicine and insurance coverage for telemedicine services since the pandemic, the integration of behavioral health care into pediatric primary care, and expansion of school-based mental health support and services.

SOM 8: Percent of pregnancy-associated deaths in which mental health conditions was a contributing factor
Based on 2017-2020 Maternal Mortality Review (MMR) data, mental health contributed to 23% of pregnancy-associated deaths. This is the first year that this measure has been tracked as part of the mental health priority area, but it is an increase from 2017-2018 MMR data (21%).

There are many factors contributing to the worsening of this measure. Among the 23% of pregnancy-associated deaths in which a mental health condition was a contributing factor, substance use disorder was also a contributing factor. In addition to the impacts of COVID on mental health, researchers have observed increases in substance use and drug overdoses in the US during the pandemic. Perinatal mental health is also impacted by stigma, barriers in access to mental health and substance use disorder treatment, inadequate screening for mental health conditions during the perinatal period, lack of care coordination, and inadequate prenatal care.

Accomplishments and Challenges (based on FY2022 Action Plan):

Strategy 1: Ensure that postpartum women receive a mental health screening and are referred to appropriate resources.

Supporting Evidence for Strategy: The US Preventive Services Task Force (USPSTF), American College of Obstetricians and Gynecologists (ACOG), and other women's health organizations recommend that pregnant and postpartum women be assessed for risk of depression so that they can receive intervention before symptoms arise.

Activity 1a: Conduct mental health screenings among women enrolled in Community Health Access and Navigation in TN (CHANT) and Evidence Based Home Visiting (EBHV).

Report 1a: As part of the CHANT comprehensive screening and assessment, each member of the family unit is screened for mental/behavioral health needs. In addition, all postpartum women are screened for depression using the Edinburgh Postnatal Depression Scale (EPDS). Positive screens trigger the Pregnancy/Postpartum Pathway of Care, and an action step on this pathway is to provide perinatal depression education.

EBHV is a relationship-based program that is culturally competent, strengths-based, and family-centered. The EBHV models are equipped to work with families who may have experienced trauma, intimate partner violence, poor mental health, or substance abuse diagnoses. As part of the EBHV services, home visitors screen for maternal depression using the EPDS.

Activity 1b: Connect women with mental health needs identified through screening to resources

Report 1b: Among EBHV participants, 100% of primary caregivers with positive screens for perinatal depression were referred to mental health services or resources **(ESM 1.9)**. This is the first year that this measure has been tracked as part of the mental health priority area.

Within the CHANT program, 33.4% of postpartum women with positive screens received resources. This is the first year that this measure has been tracked as part of the mental health priority area.

The differences in the percent of women with positive screens who were connected to resources can be explained by differences between the EBHV and CHANT programs and when the EPDS is administered. For the EBHV programs, the EPDS is administered when the caregiver is already enrolled in the program and receiving services. EBHV services are relationship-based and designed to improve long-term outcomes for families. The focus on building a trusted relationship between the home visitor and caregiver could have led to the high percent of women identified with mental health needs who are referred to services.

The CHANT program has the capacity to screen more women for perinatal depression.

For example, in FY2022 344 postpartum women had positive perinatal depression screens in comparison to 60 in the EBHV program. A positive screen automatically triggers the Pregnancy/Postpartum Pathway of Care. However, participants can decline services or pathways of care at any point. Among those who had positive screens and accepted being placed on the Pregnancy/Postpartum Pathway, 115 (33.4%) received postpartum depression education. It's important to note that, because CHANT has a broader reach, more women with positive screens were connected to resources in comparison to the EBHV program.

Challenges Issues Related to Implementation of Strategy 1: The primary challenge related to implementing this strategy in the EBHV program is the smaller number of women who are screened in comparison to the CHANT program. CHANT has a broader reach; however, caregivers have not enrolled in services or established a relationship with a care coordinator at the time that they are screened. Caregivers may decline services between the time that they are identified and provided resources.

Strategy 2: Provide QPR training opportunities to equip individuals with skills to recognize and respond to individuals exhibiting suicidal warning signs and promote the utilization of the TN Park Prescription Program to improve physical and mental health.

Supporting Evidence for Strategy: Evidence suggests that school-based gatekeeper training is effective in improving participants' knowledge, skills, self-efficacy and likelihood to intervene. Question, Persuade, Refer (QPR) Gatekeeper Training is designed to teach participants how to recognize the warning signs of someone who may be contemplating suicide and question them about whether or not they are suicidal; how to offer hope to an individual experiencing a suicidal crisis and persuade them to get help; and how to refer an individual having a suicidal crisis for help in order to save their life**.**

Healthy Parks Healthy Person TN's Park Prescription Program promotes spending time outdoors to improve physical and mental health.

Activity 2a: Support Question, Persuade, Refer (QPR) Gatekeeper Training for teachers and other school personnel

Report 2a: A total of 38 Question, Persuade, Refer (QPR) suicide prevention trainings were delivered to 1,455 individuals via Tennessee Suicide Prevention Network partner staff and trained volunteers. Of the 1,455 who received training, 789 were teachers or school personnel.

The most significant challenge to implementing this strategy was the high amount of turnover in the partner agency, the Tennessee Suicide Prevention Network (TSPN) who experienced significant staff turnover in FY 22. Of the nine total employees, four left the agency. Two of those were senior leaders who worked closely to coordinate TSPN staff and volunteers to train school personnel for QPR. Also, schools continue to be judicious with staff training time since COVID-19. Suicide training requirements can also be fulfilled with individual online teacher training provided by the Jason Foundation. Finally, TSPN utilizes a number of volunteers to promote and deliver QPR training and volunteerism for TSPN activities decreased in some regions of the state. TSPN is almost fully staffed now, and the Suicide Prevention Program intends to work closely with the new leadership team to ensure that QPR training goals for school officials are met in FY 23.

Activity 2b: Promote mental health benefits of park prescription program in health department clinics

Report 2b: The mental and physical health benefits of the park prescription program continue to be promoted in local health department clinics. In FY2022, 57% of local health department clinics shared park prescriptions with patients. This measure exceeded the goal of 25%.

In October 2022, Healthy Parks Healthy Person, an app that rewards visitors to Tennessee parks for participating in outdoor activities, received national recognition. The app, which currently has over 11,000 users, allows participants to earn points that can be redeemed for rewards, such as backpacks. The program also includes a park prescription feature, allowing healthcare providers to prescribe an outdoor activity.

During the reporting period, the new app was promoted through the TDH website, promotion to internal and external partners, presentations to local Public Health Educators, and development of two PBS television spots. The Healthy Parks Healthy Person Program Director presented the prescription program and app during the Health Promotion Quarterly Call. Participants included health promotion staff and public health educators from local, regional, state, and metro health departments.

Challenges Issues Related to Implementation of Strategy 2: The primary challenges with implementing QPR training include limited staff capacity at partner agencies, such as the Tennessee Suicide Prevention Network, and limited opportunities to train teachers and school personnel due to competing priorities and demands.

The main challenge with promoting the park prescription program is identifying ways to reach health department providers who also have competing demands and priorities.

Update on Other Related Programs Supported by MCH/Title V:

Suicide Prevention Program: TDH staff provided informational sessions to stakeholders to promote the Counseling for Access to Lethal Means (CALM) training to state partners and providers. CALM is designed to help patients and families reduce access to lethal means, such as firearms and medication. The program was successful in sharing information about CALM training via presentations to The Tennessee Trauma Care Advisory Council, Tennessee Commission on Children and Youth, and Committee on Pediatric Emergency Care, Maternal Child Health Task Force, Tennessee Department of Health (TDH) Mental Health Group and Tennessee Injury Prevention Coalition. The program also supported injury prevention partners to develop and deliver 30 virtual trainings on best practices for utilizing telehealth to reduce suicide. Fifteen topics were covered during one-hour sessions to non-licensed and licensed behavioral health providers throughout Tennessee. Finally, the program delivered weekly ESSENCE suicide reports to partners throughout the state so they could monitor trends in suicidal behavior and risk factors in their counties and regions. Available data included: Suicide Related ED Alerts for Children Under 18 and Adult Age Groups: 18-24, 25-44, 45-64, and 65+ and Age Groups, Race, Location, and Gender of Patients and Risk Factors for All Ages.

[1] https://www.kff.org/coronavirus-covid-19/issue-brief/coronavirus-a-look-at-gender-differences-in-awareness-and-actions/

Cross-Cutting/Systems Building - Application Year

Priority: Improve Mental Health

Objective for SPM 21: Decrease the percent of women who reported 14+ days of poor mental health in the past month from 17.8% in October 1, 2021 to 17% in September 30, 2025.

Objective for SPM 22: Increase the percent of children, ages 3 through 17, with a mental/behavioral condition who receive treatment or counseling. from 46.6% on October 1, 2022, to 55% on September 30, 2025.

Description: Tennessee is facing a pediatric mental health crisis. According to data from the TN Youth Risk Behavior Survey[1] (YRBS), the percentage of students who reported feeling sad and hopeless increased from 31.1% in 2017 to 37.5% in 2019. Gender disparities exist; among those who reported feeling sad or hopeless, 47.1% were female and 27.9% were male. The percentage of high school students who seriously considered attempting suicide also increased from 16.5% in 2017 to 19.2% in 2019 and was more commonly reported among females. The percentage of high school students who made a plan about how they would attempt suicide also increased during this time, from 13% in 2017 to 15.5% in 2019. Finally, there was an increase in the percentage of high school students who attempted suicide and in the percentage of high school students who had a suicide attempt that resulted in an injury, poisoning or overdose that had to be treated by a doctor or nurse (from 8.3% to 10.6% and 2.9% to 3.9%, respectively). Gender disparities continue to be observed among those who attempted suicide. Racial/ethnic disparities are also present. Among those who made a plan about how they would attempt suicide, 18.9% were Hispanic, 15.6% were non-Hispanic White and 13% were non-Hispanic Black. Among those who attempted suicide, 15.8% were Hispanic, 14% were non-Hispanic Black and 9.1% were non-Hispanic White. In addition, among those who had a suicide attempt that resulted in an injury, poisoning or overdose that had to be treated by a doctor or nurse, 7.5% were non-Hispanic Black, 6.4% were Hispanic and 2.7% were non-Hispanic White.
Suicide continues to be a growing public health problem in Tennessee. Over the past five years, Tennessee's suicide death rate has remained higher than the average national rate[2]. In 2018, Tennessee's suicide rate (17.1 deaths per 100,000 person population) was 16% higher than the national average rate (14.8 deaths per 100,000 person population). Suicide has increased among individuals 10 -24-year-olds over the last five years (from 8.9 deaths per 100,000 to 10.7 deaths per 100,000). Furthermore, youths between the ages of 15 and 24 experienced the highest rates for both nonfatal intentional self-harm injury and suicidal ideation (397 per 100,000 and 852.3 per 100,000, respectively) out of all the age groups, according to 2016-2018 hospital discharge data[3].

TDH conducts weekly surveillance of suicide-related emergency department visits in children aged 18 and under[4]. The visits are monitored using the Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE) software, a data feed that includes emergency department visits for a suicide attempt, intentional self-harm, or thoughts of suicide. When the number of emergency room visits for suicide-related behaviors goes above a certain threshold for a particular region, an alert is generated, which allows for a rapid response at the local level. Interventions include increasing awareness and offering suicide prevention resources, services, and programs within a county seeing increases in near real time. In 2020, there were 6,156 youth suicide-related ED visits and 305 alerts across Tennessee. From January 1, 2021 to June 14, 2021, there were 4,722 suicide-related ED visits and 172 alerts, a significant increase. Of note, 150 of these visits were among children between the ages of 6-9. Gender disparities continue to persist; more than two times the number of suicide-related ED visits were among females. Primary diagnoses and other risk factors noted during these ED visits included: Major Depressive Disorder, hallucinations, poor physical condition/neglect, psychiatric issues, bullying, loss of family or friend, lack of family support, identification with LGBTQ+, distress associated with relocation, and COVID-19 isolation. The specific suicidal behavior noted during these ED visits included: overdose with non-prescription drugs (e.g., pain

relievers and sleeping medication), overdose with prescription drugs (e.g., opioid pain medication such as oxycodone), arm/neck lacerations, jumping into traffic, hanging/suffocation, cutting/mutilation, and self-isolation.

[1] Centers for Disease Control and Prevention. Tennessee Youth Risk Behavior Surveillance System. Available at https://nccd.cdc.gov/Youthonline/App/
[2] Tennessee Department of Health, Office of Vital Records and Statistics, Death Statistical File, 2014-2018.
[3] Tennessee Department of Health, Division of Population Health Assessment, Hospital Discharge Data System.
[4] TN Department of Health, Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE).

Disparity Elimination Focus: The team will focus on the place-based disparity, specifically disparities in Shelby County, Tennessee. According to the 2021 Robert Wood Johnson County Health Rankings, 26% of children in Shelby County live in poverty, which is higher than the Tennessee average (19%)[1]. In Shelby County, 58% of the under 18 population is Black and 35% is White. According to data from the 2019 American Community Survey, among individuals 18 years old and younger, 43% had public insurance or a combination of public and non-public insurance[2]. As in many counties in Tennessee, there is a shortage of mental health providers. The ratio of population to mental health providers is 670:1 (range in Tennessee is 16,830:1 to 270:1). Shelby County's High School YRBS results also highlight an increase in feelings of sadness or hopelessness (from 29.7% in 2017 to 36.2% in 2019). Similarly, the percentage of high school students who seriously considered attempting suicide increased and was slightly higher than the statewide percentage (18.6% in 2017 to 20.7% in 2019). The percentage of high school students who made a plan about how they would attempt suicide also increased during this time period and was higher than the statewide percentage (14.8% in 2017 to 16.6% in 2019). Children in Shelby County, in particular children of color, face barriers in access to behavioral health care due to racial/ethnic inequities. There is an insufficient number of behavioral health clinicians to meet the needs of children in Shelby County, and a behavioral health tele-consultation service is not currently offered in this underserved area. The place-based disparity will be addressed through Strategy 3 below.

[1] Robert Wood Johnson County Health Rankings 2021. Available at https://www.countyhealthrankings.org/app/tennessee/2021/rankings/shelby/county/outcomes/overall/snapshot.
[2] U.S. Census Bureau, 2019 American Community Survey 1-Year Estimates.

The following strategies and activities are planned for *October 1, 2023, to September 30, 2024*:

Strategy 1: Use evidence-based screening tools to screen pregnant and postpartum women for perinatal mood and anxiety disorders and refer to mental health resources, if indicated.

Supporting Evidence for Strategy 1: The US Preventive Services Task Force (USPSTF), American College of Obstetricians and Gynecologists (ACOG), and other women's health organizations recommend that pregnant and postpartum women be assessed for risk of depression so that they can receive intervention before symptoms arise.

Activity 1a: Conduct mental health screenings among women enrolled in Community Health Access and Navigation in TN (CHANT) and Evidence Based Home Visiting (EBHV).

Activity 1b: Connect women with mental health needs identified through screening to resources

Strategy 2: Support Le Bonheur Children's Hospital Emergency Department's (ED) implementation of universal suicide risk screening in the ED

Supporting Evidence for Strategy 2: The 2022 American Academy of Pediatrics/Bright Futures

Recommendations for Preventive Pediatric Care recommends screening for suicide risk for all youth ages 12 and above. For youth ages 8-11, it is recommended to screen when clinically indicated.

Activity 2a: Train ED staff on suicide risk assessment.

Activity 2b: Provide guidance on the development of behavioral health care plans while patients are in the ED awaiting an inpatient bed or transfer to another facility.

Activity 2c: Improve the follow-up of children with mental health concerns after ED discharge.

Strategy 3: Launch the Pediatric Mental Health Care Access Program in West TN

Activity 3a: Establish a regional pediatric mental health team, to include onboarding of new staff, establishing an Advisory Committee with diverse representation, and supporting youth and family engagement through on-going feedback.

Activity 3b: Pilot a phone-based consultation service with PCPs in Shelby County. As part of the pilot, the team plans to focus efforts on the most socio-demographically vulnerable populations.

Activity 3c: Offer training on the early identification and management of children with behavioral health conditions to PCPs in West TN. The training is evidence-based and will cover the principals of providing trauma-informed care that is culturally and linguistically appropriate and family-centered in an effort to address behavioral health inequities.

Planned Partnerships: TN Department of Mental Health and Substance Abuse Services (TNDMHSAS); University of Tennessee Le Bonheur Pediatric Specialists (ULPS); Le Bonheur Children's Hospital Emergency Department; TDH Health Disparities Task Force, Tennessee Commission on Children and Youth (TCCY); Young Child Wellness Council (YCWC); Regional and Metro Health Departments; TN Chapter of the American Academy of Pediatrics (TNAAP); Pediatric Providers, Mental Health Providers, and Hospitals; Families and Youth Self-Advocates; Schools;

Contextual Factors:

- Patient/client barriers in access to programs, primary care, and behavioral healthcare
- Readiness of collaborative partners
- Financial resources

Assumptions:

- Women and families will enroll in EBHV and CHANT
- Healthcare providers, teachers, and counselors will participate
- Stakeholders will be engaged
- Families and youth will be open to support

III.F. Public Input

Public Comment – During Report/Application Development

Tennessee's MCH/Title V Program offers three main mechanisms for the public to provide feedback on the annual application/report. The first is through participating in partner meetings that are held twice each year. These meetings are open to the public, with special effort being made to reach out to those serving the MCH population as well as parents (including parents of CYSHCN, foster parents, and grandparents). During the meetings, participants evaluate the progress made on action plan measures. At the fall meeting, that evaluation is utilized to identify partnership opportunities between the Tennessee MCH/Title V Program and the other stakeholders/organizations that will help to achieve measurable progress. At the spring meeting the information is used to develop the action plan for the coming year. Both meetings have an average of 100 stakeholders in attendance.

The second opportunity to provide feedback is through membership or public participation in advisory committees. The division convenes multiple advisory committees commissioned by Tennessee statute including: Genetics Advisory Committee (focused on newborn screening), Perinatal Advisory Committee (focused on perinatal health and the regionalization system), Children's Special Services Advisory Committee and Birth Defects Registry Advisory Committee (focused on the MCH/Title V CYSHCN program). Committee members are appointed by the Department of Health Commissioner or the Governor and provide topic-specific expertise to the respective committees. Furthermore, these meetings are subject to the State's Open Meetings Law and are open for attendance by members of the general public. The MCH/Title V director and program staff are in regular communication with committee members, members of the public, and members of the General Assembly on topic areas of interest to those committees. In addition to these long-standing committees, the MCH/Title V CYSHCN program established a youth advisory committee in 2017, and sections of the Division operate advisory committees for grants such as the Preventive Health and Health Services Block Grant.

Lastly ongoing feedback is gathered through FHW program staff. Program staff seek input throughout the year from representatives of local and regional health departments, and by extension, their clients and communities. Regional MCH Directors are convened via conference call every other month. On each call, all central office program representatives and regional MCH Directors are offered the opportunity to present updates for their program/region. These highlights focus on information that increases understanding and collaborative efforts between programs, as well as updates that affect all MCH programs. Additionally, Central Office program staff regularly visit each of the Department's 13 regions to individually meet with front- line program staff. The visits are separate from required monitoring visits and are aimed to provide opportunities for Central Office staff to see firsthand the unique needs of Tennessee communities and to understand how state-level staff can best support front-line staff.

Public Comment Process – After Report/Application Submission

Each year the application/report is uploaded to the state website where it is accessible to all. Contact information for the MCH/Title V Director is also included. The public is directed to contact the director with any input, making commenting available at all times.

III.G. Technical Assistance

Tennessee's MCH/Title V Program is not requesting any technical assistance at this time.

IV. Title V-Medicaid IAA/MOU

The Title V-Medicaid IAA/MOU is uploaded as a PDF file to this section - IV. Title V- Medicaid IAA MOU.pdf

V. Supporting Documents

The following supporting documents have been provided to supplement the narrative discussion.

Supporting Document #01 - Supporting Documents.pdf

VI. Organizational Chart

The Organizational Chart is uploaded as a PDF file to this section - Org Charts.pdf

VII. Appendix

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Form 2
MCH Budget/Expenditure Details

State: Tennessee

	FY 24 Application Budgeted	
1. FEDERAL ALLOCATION (Referenced items on the Application Face Sheet [SF-424] apply only to the Application Year)	$ 11,800,000	
A. Preventive and Primary Care for Children	$ 3,868,100	(32.7%)
B. Children with Special Health Care Needs	$ 3,658,000	(31%)
C. Title V Administrative Costs	$ 1,180,000	(10%)
2. Subtotal of Lines 1A-C (This subtotal does not include Pregnant Women and All Others)	$ 8,706,100	
3. STATE MCH FUNDS (Item 18c of SF-424)	$ 11,700,000	
4. LOCAL MCH FUNDS (Item 18d of SF-424)	$ 0	
5. OTHER FUNDS (Item 18e of SF-424)	$ 0	
6. PROGRAM INCOME (Item 18f of SF-424)	$ 2,000,000	
7. TOTAL STATE MATCH (Lines 3 through 6)	$ 13,700,000	
A. Your State's FY 1989 Maintenance of Effort Amount $ 13,125,024		
8. FEDERAL-STATE TITLE V BLOCK GRANT PARTNERSHIP SUBTOTAL (Total lines 1 and 7)	$ 25,500,000	
9. OTHER FEDERAL FUNDS Please refer to the next page to view the list of Other Federal Programs provided by the State on Form 2.		
10. OTHER FEDERAL FUNDS(Subtotal of all funds under item 9)	$ 161,977,795	
11. STATE MCH BUDGET/EXPENDITURE GRAND TOTAL (Partnership Subtotal + Other Federal MCH Funds Subtotal)	$ 187,477,795	

OTHER FEDERAL FUNDS	FY 24 Application Budgeted
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Early Hearing Detection and Intervention (EHDI) State Programs	$ 160,000
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Injury Prevention and Control	$ 400,000
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > National Breast and Cervical Cancer Early Detection Program (NBCCEDP)	$ 3,742,004
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Birth Defects and Developmental Disabilities	$ 349,214
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > National Comprehensive Cancer Control Program (NCCCP)	$ 363,722
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Preventing Maternal Deaths: Supporting Maternal Mortality Review Committees	$ 450,000
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Preventive Health and Health Services Block Grant	$ 2,511,471
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Rape Prevention and Education (RPE) Program	$ 734,550
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > State and Local Healthy Homes and Childhood Lead Poisoning Prevention Programs (CLPPPs)	$ 350,000
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Sudden Death in the Young (SDY) Registry	$ 212,281
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Tobacco Control Programs	$ 1,664,198
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > WISEWOMAN Program	$ 650,000
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Early Hearing Detection and Intervention (EHDI) State Programs	$ 235,000
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV) Formula Grants	$ 9,929,648

OTHER FEDERAL FUNDS	FY 24 Application Budgeted
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV) American Rescue Plan (ARP)	$ 1,100,000
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV) Innovation Grants	$ 1,000,000
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Pediatric Mental Health Care Access Program	$ 445,000
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > State Maternal Health Innovation Program	$ 1,000,000
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > State Systems Development Initiative (SSDI)	$ 100,000
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Traumatic Brain Injury	$ 200,179
US Department of Agriculture (USDA) > Food and Nutrition Services > Commodity Supplemental Food Program (CSFP)	$ 899,745
US Department of Agriculture (USDA) > Food and Nutrition Services > The Loving Support Peer Counseling Program (Breastfeeding)	$ 1,714,101
US Department of Agriculture (USDA) > Food and Nutrition Services > Women, Infants and Children (WIC)	$ 129,861,928
US Department of Agriculture (USDA) > Food and Nutrition Services > WIC Technology for a Better WIC Experience	$ 349,521
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Comprehensive Suicide Prevention	$ 883,000
Department of Health and Human Services (DHHS) > Other > Partnership Programs to Reduce Maternal Deaths Due to Violence	$ 300,000
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Diabetes Prevention and Control	$ 1,200,000
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > National Cardiovascular Health Program	$ 1,172,233

	FY 22 Annual Report Budgeted		FY 22 Annual Report Expended	
1. FEDERAL ALLOCATION (Referenced items on the Application Face Sheet [SF-424] apply only to the Application Year)	$ 11,800,000 (FY 22 Federal Award: $ 12,074,414)		$ 9,240,412	
A. Preventive and Primary Care for Children	$ 3,658,000	(31%)	$ 3,286,819	(35.5%)
B. Children with Special Health Care Needs	$ 5,310,000	(45%)	$ 2,522,004	(27.2%)
C. Title V Administrative Costs	$ 1,062,000	(9%)	$ 738,039	(8%)
2. Subtotal of Lines 1A-C (This subtotal does not include Pregnant Women and All Others)	$ 10,030,000		$ 6,546,862	
3. STATE MCH FUNDS (Item 18c of SF-424)	$ 12,100,000		$ 11,609,659	
4. LOCAL MCH FUNDS (Item 18d of SF-424)	$ 0		$ 0	
5. OTHER FUNDS (Item 18e of SF-424)	$ 0		$ 0	
6. PROGRAM INCOME (Item 18f of SF-424)	$ 1,200,000		$ 1,959,439	
7. TOTAL STATE MATCH (Lines 3 through 6)	$ 13,300,000		$ 13,569,098	
A. Your State's FY 1989 Maintenance of Effort Amount $ 13,125,024				
8. FEDERAL-STATE TITLE V BLOCK GRANT PARTNERSHIP SUBTOTAL (Total lines 1 and 7)	$ 25,100,000		$ 22,809,510	
9. OTHER FEDERAL FUNDS Please refer to the next page to view the list of Other Federal Programs provided by the State on Form 2.				
10. OTHER FEDERAL FUNDS (Subtotal of all funds under item 9)	$ 153,475,117		$ 143,600,957	
11. STATE MCH BUDGET/EXPENDITURE GRAND TOTAL (Partnership Subtotal + Other Federal MCH Funds Subtotal)	$ 178,575,117		$ 166,410,467	

OTHER FEDERAL FUNDS	FY 22 Annual Report Budgeted	FY 22 Annual Report Expended
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > State Systems Development Initiative (SSDI)	$ 100,000	$ 50,561
US Department of Agriculture (USDA) > Food and Nutrition Services > Women, Infants and Children (WIC)	$ 118,452,235	$ 111,440,275
US Department of Agriculture (USDA) > Food and Nutrition Services > Commodity Supplemental Food Program (CSFP)	$ 795,865	$ 792,171
US Department of Agriculture (USDA) > Food and Nutrition Services > The Loving Support Peer Counseling Program (Breastfeeding)	$ 1,493,654	$ 1,623,063
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Injury Prevention and Control	$ 250,000	$ 333,717
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Tobacco Control Programs	$ 1,386,832	$ 1,332,714
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Preventive Health and Health Services Block Grant	$ 2,551,850	$ 2,492,873
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > National Breast and Cervical Cancer Early Detection Program (NBCCEDP)	$ 2,482,515	$ 2,488,129
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Rape Prevention and Education (RPE) Program	$ 726,122	$ 652,532
Department of Health and Human Services (DHHS) > Office of Population Affairs (OPA) > Title X Family Planning	$ 8,125,000	$ 7,108,750
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Universal Newborn Hearing Screening and Intervention	$ 245,000	$ 231,688
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Sudden Death in the Young (SDY) Registry	$ 225,453	$ 212,886
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > State and Local Healthy Homes and Childhood Lead Poisoning Prevention Programs (CLPPPs)	$ 401,646	$ 323,571

OTHER FEDERAL FUNDS	FY 22 Annual Report Budgeted	FY 22 Annual Report Expended
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Traumatic Brain Injury	$ 300,000	$ 200,179
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > National Comprehensive Cancer Control Program (NCCCP)	$ 362,629	$ 279,950
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Preventing Maternal Deaths: Supporting Maternal Mortality Review Committees	$ 450,000	$ 441,086
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Birth Defects and Developmental Disabilities	$ 349,214	$ 247,546
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Early Hearing Detection and Intervention (EHDI) State Programs	$ 160,000	$ 147,265
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV) Formula Grants	$ 9,933,118	$ 8,851,080
Department of Health and Human Services (DHHS) > Administration for Children & Families (ACF) > Sexual Risk Avoidance Education (SRAE)	$ 1,482,069	$ 1,470,337
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Diabetes, Heart Disease & Stroke Prevention & Management Program (1815)	$ 2,273,138	$ 1,879,072
Department of Health and Human Services (DHHS) > Centers for Disease Control and Prevention (CDC) > Comprehensive Suicide Prevention	$ 750,000	$ 822,735
Department of Health and Human Services (DHHS) > Health Resources and Services Administration (HRSA) > Maternal and Child Health Federal Consolidated Programs	$ 178,777	$ 178,777

Form Notes for Form 2:

None

Field Level Notes for Form 2:

1.	**Field Name:**	**1.FEDERAL ALLOCATION**
	Fiscal Year:	**2022**
	Column Name:	**Annual Report Expended**
	Field Note: The federal allocation is unknown when the budget is originally submitted with the application. Therefore, the budget is created based on an estimate. In FY2022 the estimate was higher than the actual allocation. Due to this many budget categories had to be adjusted, including this line item.	
2.	**Field Name:**	**Federal Allocation, A. Preventive and Primary Care for Children:**
	Fiscal Year:	**2022**
	Column Name:	**Annual Report Expended**
	Field Note: The federal allocation is unknown when the budget is originally submitted with the application. Therefore, the budget is created based on an estimate. In FY2022 the estimate was higher than the actual allocation. Due to this many budget categories had to be adjusted, including this line item.	
3.	**Field Name:**	**Federal Allocation, B. Children with Special Health Care Needs:**
	Fiscal Year:	**2022**
	Column Name:	**Annual Report Expended**
	Field Note: Not all federal funds for this budget period have been expended at this time. At least 30% of the federal funds will be expended on CSHCN by the end of the fiscal year which is September 30, 2023.	
4.	**Field Name:**	**Federal Allocation, C. Title V Administrative Costs:**
	Fiscal Year:	**2022**
	Column Name:	**Annual Report Expended**
	Field Note: The federal allocation is unknown when the budget is originally submitted with the application. Therefore, the budget is created based on an estimate. In FY2022 the estimate was higher than the actual allocation. Due to this many budget categories had to be adjusted, including this line item.	
5.	**Field Name:**	**6. PROGRAM INCOME**
	Fiscal Year:	**2022**
	Column Name:	**Annual Report Expended**
	Field Note: The federal allocation is unknown when the budget is originally submitted with the application. Therefore, the budget is created based on an estimate. In FY2022 the estimate was higher than the actual allocation. Due to this many budget categories had to be adjusted, including this line item.	

Data Alerts:

- The value in Line 1B, Children with Special Health Care Needs, Annual Report Expended is less than 30% of the Federal Allocation, Annual Report Expended. A field-level note indicating the reason for the discrepancy was provided.

Form 3a
Budget and Expenditure Details by Types of Individuals Served

State: Tennessee

I. TYPES OF INDIVIDUALS SERVED

IA. Federal MCH Block Grant	FY 24 Application Budgeted	FY 22 Annual Report Expended
1. Pregnant Women	$ 47,200	$ 36,600
2. Infants < 1 year	$ 777,600	$ 611,306
3. Children 1 through 21 Years	$ 3,868,100	$ 3,286,819
4. CSHCN	$ 3,658,000	$ 2,522,004
5. All Others	$ 2,269,100	$ 2,045,644
Federal Total of Individuals Served	$ 10,620,000	$ 8,502,373

IB. Non-Federal MCH Block Grant	FY 24 Application Budgeted	FY 22 Annual Report Expended
1. Pregnant Women	$ 198,900	$ 186,476
2. Infants < 1 year	$ 947,700	$ 902,051
3. Children 1 through 21 Years	$ 2,866,500	$ 2,837,589
4. CSHCN	$ 3,170,700	$ 3,154,342
5. All Others	$ 4,516,200	$ 4,535,036
Non-Federal Total of Individuals Served	$ 11,700,000	$ 11,615,494
Federal State MCH Block Grant Partnership Total	$ 22,320,000	$ 20,117,867

Form Notes for Form 3a:

None

Field Level Notes for Form 3a:

None

Data Alerts: None

Form 3b
Budget and Expenditure Details by Types of Services

State: Tennessee

II. TYPES OF SERVICES

IIA. Federal MCH Block Grant	FY 24 Application Budgeted	FY 22 Annual Report Expended
1. Direct Services	$ 944,000	$ 758,466
A. Preventive and Primary Care Services for all Pregnant Women, Mothers, and Infants up to Age One	$ 302,080	$ 207,641
B. Preventive and Primary Care Services for Children	$ 37,760	$ 26,824
C. Services for CSHCN	$ 604,160	$ 524,001
2. Enabling Services	$ 8,024,000	$ 6,072,570
3. Public Health Services and Systems	$ 2,832,000	$ 2,409,376
4. Select the types of Federally-supported "Direct Services", as reported in II.A.1. Provide the total amount of Federal MCH Block Grant funds expended for each type of reported service		
Pharmacy		$ 164,864
Physician/Office Services		$ 173,422
Hospital Charges (Includes Inpatient and Outpatient Services)		$ 267,312
Dental Care (Does Not Include Orthodontic Services)		$ 8,025
Durable Medical Equipment and Supplies		$ 62,003
Laboratory Services		$ 34,402
Other		
CSS Food		$ 48,438
Direct Services Line 4 Expended Total		$ 758,466
Federal Total	$ 11,800,000	$ 9,240,412

IIB. Non-Federal MCH Block Grant	FY 24 Application Budgeted	FY 22 Annual Report Expended
1. Direct Services	$ 702,000	$ 654,035
A. Preventive and Primary Care Services for all Pregnant Women, Mothers, and Infants up to Age One	$ 35,100	$ 31,963
B. Preventive and Primary Care Services for Children	$ 7,020	$ 104
C. Services for CSHCN	$ 659,880	$ 621,968
2. Enabling Services	$ 7,750,000	$ 7,733,674
3. Public Health Services and Systems	$ 3,248,000	$ 3,221,950
4. Select the types of Non-Federally-supported "Direct Services", as reported in II.B.1. Provide the total amount of Non-Federal MCH Block Grant funds expended for each type of reported service		
Pharmacy		$ 44,925
Physician/Office Services		$ 89,343
Hospital Charges (Includes Inpatient and Outpatient Services)		$ 213,457
Dental Care (Does Not Include Orthodontic Services)		$ 317
Durable Medical Equipment and Supplies		$ 19,748
Laboratory Services		$ 35,959
Other		
CSS Food		$ 250,286
Direct Services Line 4 Expended Total		$ 654,035
Non-Federal Total	$ 11,700,000	$ 11,609,659

Form Notes for Form 3b:

None

Field Level Notes for Form 3b:

None

Form 4
Number and Percentage of Newborns and Others Screened Cases Confirmed and Treated

State: Tennessee

Total Births by Occurrence: 88,262 **Data Source Year: 2022**

1. Core RUSP Conditions

Program Name	(A) Aggregate Total Number Receiving at Least One Valid Screen	(B) Aggregate Total Number of Out-of-Range Results	(C) Aggregate Total Number Confirmed Cases	(D) Aggregate Total Number Referred for Treatment
Core RUSP Conditions	88,031 (99.7%)	1,566	205	205 (100.0%)

Program Name(s)				
3-Hydroxy-3-Methyglutaric Aciduria	3-Hydroxy-3-Methyglutaric Aciduria	3-Methylcrotonyl-Coa Carboxylase Deficiency	Argininosuccinic Aciduria	Biotinidase Deficiency
Carnitine Uptake Defect/Carnitine Transport Defect	Citrullinemia, Type I	Classic Galactosemia	Classic Phenylketonuria	Congenital Adrenal Hyperplasia
Critical Congenital Heart Disease	Cystic Fibrosis	Glutaric Acidemia Type I	Glycogen Storage Disease Type II (Pompe)	Hearing Loss
Holocarboxylase Synthase Deficiency	Homocystinuria	Isovaleric Acidemia	Long-Chain L-3 Hydroxyacyl-Coa Dehydrogenase Deficiency	Maple Syrup Urine Disease
Medium-Chain Acyl-Coa Dehydrogenase Deficiency	Methylmalonic Acidemia (Cobalamin Disorders)	Methylmalonic Acidemia (Methylmalonyl-Coa Mutase)	Mucopolysaccharidosis Type I (MPS I)	Primary Congenital Hypothyroidism
Propionic Acidemia	S, ßeta-Thalassemia	S,C Disease	S,S Disease (Sickle Cell Anemia)	Severe Combined Immunodeficiences
Spinal Muscular Atrophy Due To Homozygous Deletion Of Exon 7 In SMN1	ß-Ketothiolase Deficiency	Trifunctional Protein Deficiency	Tyrosinemia, Type I	Very Long-Chain Acyl-Coa Dehydrogenase Deficiency
X-Linked Adrenoleukodystrophy				

2. Other Newborn Screening Tests

Program Name	(A) Total Number Receiving at Least One Screen	(B) Total Number Presumptive Positive Screens	(C) Total Number Confirmed Cases	(D) Total Number Referred for Treatment
2-Methyl-3-hydroxybutyric aciduria	88,031 (99.7%)	25	0	0 (0%)
2-Methylbutyrylglycinuria	88,031 (99.7%)	4	0	0 (0%)
3-Methylglutaconic aciduria	88,031 (99.7%)	25	0	0 (0%)

Program Name	(A) Total Number Receiving at Least One Screen	(B) Total Number Presumptive Positive Screens	(C) Total Number Confirmed Cases	(D) Total Number Referred for Treatment
Argininemia	88,031 (99.7%)	0	0	0 (0%)
Biopterin defect in cofactor biosynthesis	88,031 (99.7%)	11	4	4 (100.0%)
Biopterin defect in cofactor regeneration	88,031 (99.7%)	11	4	4 (100.0%)
Carnitine acylcarnitine translocase deficiency	88,031 (99.7%)	8	0	0 (0%)
Methylmalonic acidemia with homocystinuria	88,031 (99.7%)	0	0	0 (0%)
Citrullinemia, type II	88,031 (99.7%)	0	0	0 (0%)
Carnitine palmitoyltransferase type I deficiency	88,031 (99.7%)	4	0	0 (0%)
Carnitine palmitoyltransferase type II deficiency	88,031 (99.7%)	8	2	2 (100.0%)
2,4 Dienoyl-CoA reductase deficiency	88,031 (99.7%)	0	0	0 (0%)
Glutaric acidemia type II	88,031 (99.7%)	32	0	0 (0%)
Galactoepimerase deficiency	88,031 (99.7%)	52	1	1 (100.0%)
Galactokinase deficiency	88,031 (99.7%)	52	0	0 (0%)
Benign hyperphenylalaninemia	88,031 (99.7%)	11	4	4 (100.0%)
Isobutyrylglycinuria	88,031 (99.7%)	32	1	1 (100.0%)
Medium/short-chain L-3-hydroxyacl-CoA dehydrogenase deficiency	88,031 (99.7%)	21	0	0 (0%)
Malonic acidemia	88,031 (99.7%)	21	0	0 (0%)

Program Name	(A) Total Number Receiving at Least One Screen	(B) Total Number Presumptive Positive Screens	(C) Total Number Confirmed Cases	(D) Total Number Referred for Treatment
Hypermethioninemia	88,031 (99.7%)	1	0	0 (0%)
Short-chain acyl-CoA dehydrogenase deficiency	88,031 (99.7%)	32	1	1 (100.0%)
Tyrosinemia, type II	88,031 (99.7%)	21	1	1 (100.0%)
Tyrosinemia, type III	88,031 (99.7%)	21	0	0 (0%)
Various other hemoglobinopathies	88,031 (99.7%)	6	6	6 (100.0%)
T-Cell related lymphocyte deficiencies	88,031 (99.7%)	133	16	16 (100.0%)

3. Screening Programs for Older Children & Women

None

4. Long-Term Follow-Up

Tennessee's Newborn Screening Follow-Up Program has a case management section which provides short-term follow up to monitor all cases with abnormal tests through to confirmatory testing and treatment initiation. The State contracts with tertiary specialty centers to assure follow-up and confimatory testing for all infants with abnormal screens. The centers are required, by contract, to report the results (whether disease was confirmed) back to the State, and for cases in which disease was confirmed, the center reports the date on which treatment was started. Currently, the State does not monitor confirmed diagnosed infants beyond notification of diagnosis and treatment initiation by the contracted tertiary specialty center. However, the State provides infrastructure funding at each center to support long-term treatment, genetic testing for vulnerable individuals, and education/outreach.

Form Notes for Form 4:

None

Field Level Notes for Form 4:

None

Data Alerts: None

Form 5
Count of Individuals Served by Title V & Total Percentage of Populations Served by Title V

State: Tennessee

Annual Report Year 2022

Form 5a – Count of Individuals Served by Title V
(Direct & Enabling Services Only)

		Primary Source of Coverage				
Types Of Individuals Served	(A) Title V Total Served	(B) Title XIX %	(C) Title XXI %	(D) Private / Other %	(E) None %	(F) Unknown %
1. Pregnant Women	50,846	46.0	0.0	51.0	3.0	0.0
2. Infants < 1 Year of Age	75,004	46.0	0.0	51.0	3.0	0.0
3. Children 1 through 21 Years of Age	327,804	37.0	0.0	56.0	7.0	0.0
3a. Children with Special Health Care Needs 0 through 21 years of age^	84,467	44.0	0.0	50.0	6.0	0.0
4. Others	301,621	13.0	0.0	75.0	12.0	0.0
Total	755,275					

Form 5b – Total Percentage of Populations Served by Title V
(Direct, Enabling, and Public Health Services and Systems)

Populations Served by Title V	Reference Data	Used Reference Data?	Denominator	Total % Served	Form 5b Count (Calculated)	Form 5a Count
1. Pregnant Women	81,717	Yes	81,717	100.0	81,717	50,846
2. Infants < 1 Year of Age	87,212	No	88,262	99.7	87,997	75,004
3. Children 1 through 21 Years of Age	1,807,731	Yes	1,807,731	62.7	1,133,447	327,804
3a. Children with Special Health Care Needs 0 through 21 years of age^	399,493	Yes	399,493	86.0	343,564	84,467
4. Others	5,090,816	Yes	5,090,816	100.0	5,090,816	301,621

^Represents a subset of all infants and children.

Form Notes for Form 5:

In response to the feedback received from federal reviews of this grant in the past, the Tennessee MCH/Title V Program has adjusted the counting method used for this form to more accurately reflect the populations served.

To calculate the Title V Total Served a list of programs supporting each population was created and ordered by largest to smallest population served. To deduplicate and account for a person being supported by more than one program the calculations below were applied to the ordered program list.

50% of Tennessee resident births are to women receiving Medicaid at delivery
40% of Tennessee resident births are to women receiving WIC during pregnancy
60% of Tennessee resident births covered by Medicaid are to women who received WIC during pregnancy
23% of the state's population is covered by Medicaid
50% of Tennessee resident births are covered by Medicaid
53% of Tennessee children are covered by Medicaid
21.1% of Tennessee children (ages 0-17) have at least one special healthcare need

Field Level Notes for Form 5a:

1.	**Field Name:**	**Pregnant Women Total Served**
	Fiscal Year:	**2022**
	Field Note: This count includes pregnant women receiving WIC (33,845), women's health services in local health departments (8,866), presumptive eligibility enrollment (4,625), CHANT (1,296), CHS Services: Primary Care (873), Baby and Me Tobacco Free (710), EBHV enrolled during pregnant (605), and Tobacco Quitline (26).	
2.	**Field Name:**	**Infants Less Than One YearTotal Served**
	Fiscal Year:	**2022**
	Field Note: This count includes infants receiving WIC (33,334), Local Health Department: Primary Care (30,767), CHANT (5,631), Poison Control (2,476), Genetics (1,802), and EBHV (994).	
3.	**Field Name:**	**Children 1 through 21 Years of Age**
	Fiscal Year:	**2022**
	Field Note: This count includes children's health services in local health departments (251,757), WIC (34,292), Poison Control (12,804), EPR Backpack Outreach (8,880), CHANT (7,392), Sexual Risk Avoidance (4,163), Family Planning (4,030), EBHV (2,140), Presumptive Eligibility enrollment (1,559), Child Safety Fund (384) Tobacco Prevention (243), Breast and Cervical Cancer (94), Traumatic Brain Injury (36), and Tobacco Quitline (30).	
4.	**Field Name:**	**Children with Special Health Care Needs 0 through 21 Years of Age**
	Fiscal Year:	**2022**
	Field Note: This count includes children's health services in local health departments (69,494), Children Special Services (4,941), EPR Backpack Outreach (2,120), and Youth Summit (32), .	
5.	**Field Name:**	**Others**
	Fiscal Year:	**2022**
	Field Note: This count includes health services in local health departments (176,783), Family Planning (26,609), WIC (25,944), Poison Control (16,227), Traumatic Brain Injury (16,069), Breast and Cervical Cancer (11,139), Genetics (9,972), Farmer's Market (7,767), CHANT (6,674), Tobacco Quitline (2,271), EBHV (1,666), and Presumptive Eligibility enrollment (501).	

Field Level Notes for Form 5b:

1.	**Field Name:**	**Pregnant Women Total % Served**
	Fiscal Year:	**2022**

	Field Note: The percentage reported here is 100% because the Title V program and our partners address all pregnancies and deliveries through the state's perinatal regionalization program guidelines. In addition to the programs and service numbers included in Form 5a and listed in the notes on that form, other related efforts include diabetes administration (4,332), perinatal regionalization (2,055), birth defects (32) and the Maternal Mortality Review Committee (6).	
2.	**Field Name:**	**Infants Less Than One Year Total % Served**
	Fiscal Year:	**2022**
	Field Note: Ninety-nine percent of newborns received a newborn screening prior to hospital discharge (excluding those who died prior to discharge and refusals). In addition to the programs and service numbers included in Form 5a and listed in the notes to that form, other related efforts for this age group include: early hearing and detection (86,393), infant mortality reduction (81,709), perinatal regionalization (4,570), child fatality review (424), sudden death in the young (150), and traumatic brain injury (135).	
3.	**Field Name:**	**Infants Less Than One Year Denominator**
	Fiscal Year:	**2022**
	Field Note: Total occurrence/in-state births in CY 2022.	
4.	**Field Name:**	**Children 1 through 21 Years of Age Total % Served**
	Fiscal Year:	**2022**
	Field Note: In addition to the multiple programs and service numbers included in Form 5a and listed in the notes to that form, other related public health services and systems for this age group include: suicide prevention (1,061,015), tobacco control, childhood lead (77,229), injury surveillance, health promotion, diabetes prevention, adolescent pregnancy prevention, traumatic brain injury registry (1,666), comprehensive cancer control (1,123), family planning, child fatality review and prevention, the sudden death in the young registry, and the comprehensive cancer. The suicide prevention count included in the percentage represents unduplicated children ages 10-21 only. In an effort to account for estimated duplication, programs listed above without a count in parentheses are not included in the calculation used to come up with the Total % Served for this population due to the assumption that they could be counted in the other programs. However, the percentage may still be an overestimation. The reader will notice a significant shift from what was reported last year, compared to this year. The estimate for this population includes ESSENCE data utilized by the suicide prevention program.	
5.	**Field Name:**	**Children with Special Health Care Needs 0 through 21 Years of Age Total % Served**
	Fiscal Year:	**2022**

	Field Note: In addition to the programs and service numbers included in Form 5a and listed in the notes to that form, other related efforts for this age group include: infant mortality reduction (17,322), newborn hearing follow-up, newborn screening follow up, birth defects, and childhood lead. At this time de-duplication between programs is not possible; however, in an effort to account for estimated duplication, programs listed without a count in parentheses are not included in the calculation used to come up with the Total % Served for this population. The percentage many still be an overestimation.	
6.	**Field Name:**	**Others Total % Served**
	Fiscal Year:	**2022**
	Field Note: The Suicide Prevention Program expanded syndromic surveillance to include individuals greater than or equal to 22 years in later CY 2022. Expanded estimate includes ages 22 - 65+	

Data Alerts:

1.	Reported percentage for Others on Form 5b is greater than or equal to 50%. The Others denominator includes both women and men ages 22 and over. Please double check and justify with a field note.

Form 6
Deliveries and Infants Served by Title V and Entitled to Benefits Under Title XIX

State: Tennessee

Annual Report Year 2022

I. Unduplicated Count by Race/Ethnicity

	(A) Total	(B) Non-Hispanic White	(C) Non-Hispanic Black or African American	(D) Hispanic	(E) Non-Hispanic American Indian or Native Alaskan	(F) Non-Hispanic Asian	(G) Non-Hispanic Native Hawaiian or Other Pacific Islander	(H) Non-Hispanic Multiple Race	(I) Other & Unknown
1. Total Deliveries in State	87,212	58,230	16,694	9,739	87	1,812	223	0	427
Title V Served	85,747	57,243	16,354	9,631	86	1,801	217	0	415
Eligible for Title XIX	38,572	20,914	10,297	6,589	45	443	85	0	199
2. Total Infants in State	87,212	58,230	16,694	9,739	181	1,995	138	0	235
Title V Served	86,010	57,417	16,437	9,639	180	1,984	136	0	217
Eligible for Title XIX	39,158	21,218	10,507	6,654	45	445	88	0	201

Form Notes for Form 6:

CY 2021 final data from vital records was used to complete all rows in Form 6 except Total Infant in State.

Field Level Notes for Form 6:

1.	**Field Name:**	**2. Total Infants in State**
	Fiscal Year:	**2022**
	Column Name:	**Total**
	Field Note: CY2021, final birth data	
2.	**Field Name:**	**2. Title V Served**
	Fiscal Year:	**2022**
	Column Name:	**Total**
	Field Note: CY2021, newborns screened	

Form 7
State MCH Toll-Free Telephone Line and Other Appropriate Methods Data

State: Tennessee

A. State MCH Toll-Free Telephone Lines	2024 Application Year	2022 Annual Report Year
1. State MCH Toll-Free "Hotline" Telephone Number	(615) 741-7353	(615) 741-7353
2. State MCH Toll-Free "Hotline" Name	Family Health and Wellness	Family Health and Wellness
3. Name of Contact Person for State MCH "Hotline"	Tobi Amosun	Tobi Amosun
4. Contact Person's Telephone Number	(615) 253-4131	(615) 253-4131
5. Number of Calls Received on the State MCH "Hotline"		9,211

B. Other Appropriate Methods	2024 Application Year	2022 Annual Report Year
1. Other Toll-Free "Hotline" Names	Tennessee Breastfeeding Hotline	Tennessee Breastfeeding Hotline
2. Number of Calls on Other Toll-Free "Hotlines"		4,538
3. State Title V Program Website Address	www.KidCentralTN.com	www.KidCentralTN.com
4. Number of Hits to the State Title V Program Website		157,948
5. State Title V Social Media Websites	www.facebook.com/TNDeptofHealth	www.facebook.com/TNDeptofHealth
6. Number of Hits to the State Title V Program Social Media Websites		1,318,056

Form Notes for Form 7:

Line #5, Number of Calls Received on the State MCH "Hotline", only represents an estimate as exact count is from September 2022 - November 2022. Unified Communications keeps 6 months of call data at a time. By the time I made this request, most of the data available from the reporting period had expired. Tennessee will be able to provide an exact figure beginning next year as a request has been set up to receive a monthly call log.

Form 8
State MCH and CSHCN Directors Contact Information

State: Tennessee

1. Title V Maternal and Child Health (MCH) Director	
Name	Tobi Adeyeye Amosun, MD, FAAP
Title	Deputy Commissioner for Population Health
Address 1	710 James Robertson Pkwy
Address 2	
City/State/Zip	Nashville / TN / 37243
Telephone	(615) 253-4131
Extension	
Email	Tobi.Amosun@tn.gov

2. Title V Children with Special Health Care Needs (CSHCN) Director	
Name	Jacqueline Johnson, MPA
Title	Section Chief, Children and Youth with Special Health Care Needs
Address 1	710 James Robertson Pkwy
Address 2	
City/State/Zip	Nashville / TN / 37243
Telephone	(615) 741-0361
Extension	
Email	Jacqueline.Johnson@tn.gov

3. State Family Leader (Optional)	
Name	Mary Kate Brown
Title	Family Leader
Address 1	1807 Pecan Ridge Drive
Address 2	
City/State/Zip	Murfreesboro / TN / 37218
Telephone	(615) 513-3609
Extension	
Email	MaryKate@centerfordisabilityintegration.com

4. State Youth Leader (Optional)	
Name	Jasmyn Cheatham
Title	State Youth Leader
Address 1	3716 Bakertown Rd.
Address 2	
City/State/Zip	Nashville / TN / 37211
Telephone	(615) 481-1514
Extension	
Email	jasmyncheatham@gmail.com

Form Notes for Form 8:

None

Form 9
List of MCH Priority Needs

State: Tennessee

Application Year 2024

No.	Priority Need
1.	Increase family planning
2.	Decrease pregnancy-associated mortality
3.	Increase breastfeeding
4.	Decrease infant mortality
5.	Decrease overweight and obesity among children
6.	Increase prevention and mitigation of Adverse Childhood Experiences (ACEs)
7.	Decrease tobacco and e-cigarette use among adolescents
8.	Increase medical homes among children with special healthcare needs
9.	Improve transition from pediatric to adult care among children with special health care needs
10.	Improve mental health

Form Notes for Form 9:

None

Field Level Notes for Form 9:

None

Form 9 State Priorities – Needs Assessment Year – Application Year 2021

No.	Priority Need	Priority Need Type (New, Revised or Continued Priority Need for this five-year reporting period)
1.	Increase family planning	New
2.	Decrease pregnancy-associated mortality	New
3.	Increase breastfeeding	New
4.	Decrease infant mortality	Continued
5.	Decrease overweight and obesity among children	Continued
6.	Increase prevention and mitigation of Adverse Childhood Experiences (ACEs)	Continued
7.	Decrease tobacco and e-cigarette use among adolescents	Revised
8.	Increase medical homes among children with special healthcare needs	Revised
9.	Improve transition from pediatric to adult care among children with special health care needs	Continued

Form 10
National Outcome Measures (NOMs)

State: Tennessee

Form Notes for Form 10 NPMs, NOMs, SPMs, SOMs, and ESMs.

None

NOM 1 - Percent of pregnant women who receive prenatal care beginning in the first trimester

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2021	74.2 %	0.2 %	59,467	80,178
2020	73.7 %	0.2 %	57,080	77,404
2019	74.6 %	0.2 %	58,240	78,098
2018	75.6 %	0.2 %	56,759	75,035
2017	74.8 %	0.2 %	56,693	75,746
2016	74.2 %	0.2 %	51,493	69,385
2015	74.2 %	0.2 %	55,756	75,125
2014	74.2 %	0.2 %	56,654	76,364
2013	71.6 %	0.2 %	54,489	76,103
2012	70.4 %	0.2 %	53,419	75,885
2011	69.9 %	0.2 %	51,605	73,832
2010	70.6 %	0.2 %	52,663	74,579
2009	69.5 %	0.2 %	54,058	77,795

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20, a confidence interval width >20% points or >1.2 times the estimate, or >10% missing data and should be interpreted with caution

NOM 1 - Notes:

None

Data Alerts: None

NOM 2 - Rate of severe maternal morbidity per 10,000 delivery hospitalizations

Data Source: HCUP - State Inpatient Databases (SID)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020	88.6	3.5	662	74,693
2019	73.1	3.2	536	73,285
2018	79.4	3.4	562	70,742
2017	79.7	3.4	558	70,014
2016	73.8	3.4	480	65,006
2015	90.8	4.4	439	48,340
2014	90.9	3.8	587	64,567
2013	106.2	4.0	709	66,787
2012	96.1	3.8	635	66,091
2011	89.5	3.6	627	70,040
2010	82.2	3.5	572	69,591
2009	76.6	3.3	556	72,589
2008	76.1	3.2	570	74,884

Legends:

Indicator has a numerator ≤10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 2 - Notes:

None

Data Alerts: None

NOM 3 - Maternal mortality rate per 100,000 live births

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2017_2021	40.2	3.2	162	402,623
2016_2020	31.6	2.8	127	401,713
2015_2019	26.4	2.6	107	404,709
2014_2018	24.9	2.5	101	405,861

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 3 - Notes:

None

Data Alerts: None

NOM 4 - Percent of low birth weight deliveries (<2,500 grams)

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend				
Year	**Annual Indicator**	**Standard Error**	**Numerator**	**Denominator**
2021	9.3 %	0.1 %	7,595	81,683
2020	8.9 %	0.1 %	7,002	78,653
2019	9.2 %	0.1 %	7,356	80,283
2018	9.3 %	0.1 %	7,471	80,473
2017	9.2 %	0.1 %	7,409	80,813
2016	9.3 %	0.1 %	7,431	80,084
2015	9.2 %	0.1 %	7,460	81,384
2014	9.0 %	0.1 %	7,297	81,441
2013	9.1 %	0.1 %	7,307	79,962
2012	9.2 %	0.1 %	7,377	80,318
2011	9.0 %	0.1 %	7,176	79,554
2010	9.0 %	0.1 %	7,179	79,451
2009	9.2 %	0.1 %	7,539	82,172

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20, a confidence interval width >20% points or >1.2 times the estimate, or >10% missing data and should be interpreted with caution

NOM 4 - Notes:

None

Data Alerts: None

NOM 5 - Percent of preterm births (<37 weeks)

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend				
Year	**Annual Indicator**	**Standard Error**	**Numerator**	**Denominator**
2021	11.3 %	0.1 %	9,218	81,658
2020	10.9 %	0.1 %	8,594	78,642
2019	11.2 %	0.1 %	8,993	80,340
2018	11.1 %	0.1 %	8,911	80,541
2017	11.1 %	0.1 %	8,962	80,847
2016	11.3 %	0.1 %	9,085	80,340
2015	11.0 %	0.1 %	8,959	81,538
2014	10.8 %	0.1 %	8,780	81,497
2013	11.1 %	0.1 %	8,826	79,691
2012	11.2 %	0.1 %	8,961	79,807
2011	11.1 %	0.1 %	8,729	78,903
2010	11.4 %	0.1 %	8,988	78,936
2009	11.3 %	0.1 %	9,231	81,518

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20, a confidence interval width >20% points or >1.2 times the estimate, or >10% missing data and should be interpreted with caution

NOM 5 - Notes:

None

Data Alerts: None

NOM 6 - Percent of early term births (37, 38 weeks)

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend				
Year	**Annual Indicator**	**Standard Error**	**Numerator**	**Denominator**
2021	29.7 %	0.2 %	24,287	81,658
2020	28.4 %	0.2 %	22,363	78,642
2019	28.6 %	0.2 %	22,962	80,340
2018	27.9 %	0.2 %	22,468	80,541
2017	27.6 %	0.2 %	22,338	80,847
2016	27.2 %	0.2 %	21,868	80,340
2015	26.6 %	0.2 %	21,662	81,538
2014	26.1 %	0.2 %	21,293	81,497
2013	26.2 %	0.2 %	20,856	79,691
2012	27.8 %	0.2 %	22,149	79,807
2011	28.9 %	0.2 %	22,784	78,903
2010	30.1 %	0.2 %	23,721	78,936
2009	31.5 %	0.2 %	25,645	81,518

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20, a confidence interval width >20% points or >1.2 times the estimate, or >10% missing data and should be interpreted with caution

NOM 6 - Notes:

None

Data Alerts: None

NOM 7 - Percent of non-medically indicated early elective deliveries

Data Source: CMS Hospital Compare

Multi-Year Trend				
Year	**Annual Indicator**	**Standard Error**	**Numerator**	**Denominator**
2021/Q1-2021/Q4	2.0 %			
2020/Q4-2021/Q3	2.0 %			
2020/Q3-2021/Q1	2.0 %			
2019/Q4-2020/Q3	2.0 %			
2019/Q1-2019/Q4	2.0 %			
2018/Q4-2019/Q3	2.0 %			
2018/Q3-2019/Q2	2.0 %			
2018/Q2-2019/Q1	2.0 %			
2018/Q1-2018/Q4	2.0 %			
2017/Q4-2018/Q3	2.0 %			
2017/Q3-2018/Q2	2.0 %			
2017/Q2-2018/Q1	2.0 %			
2017/Q1-2017/Q4	2.0 %			
2016/Q4-2017/Q3	2.0 %			
2016/Q3-2017/Q2	2.0 %			
2016/Q2-2017/Q1	2.0 %			
2016/Q1-2016/Q4	2.0 %			
2015/Q4-2016/Q3	2.0 %			
2015/Q3-2016/Q2	1.0 %			
2015/Q2-2016/Q1	2.0 %			
2015/Q1-2015/Q4	2.0 %			
2014/Q4-2015/Q3	2.0 %			
2014/Q3-2015/Q2	2.0 %			

Year	Annual Indicator	Standard Error	Numerator	Denominator
2014/Q2-2015/Q1	2.0 %			
2014/Q1-2014/Q4	3.0 %			
2013/Q4-2014/Q3	3.0 %			
2013/Q3-2014/Q2	3.0 %			
2013/Q2-2014/Q1	4.0 %			

Legends:

NOM 7 - Notes:

None

Data Alerts: None

NOM 8 - Perinatal mortality rate per 1,000 live births plus fetal deaths

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020	6.0	0.3	476	78,930
2019	6.7	0.3	537	80,689
2018	6.8	0.3	555	81,028
2017	6.8	0.3	549	81,276
2016	6.8	0.3	555	81,107
2015	6.4	0.3	521	81,958
2014	6.8	0.3	554	81,875
2013	7.0	0.3	558	80,281
2012	7.2	0.3	582	80,674
2011	7.4	0.3	595	79,909
2010	6.6	0.3	524	79,743
2009	6.8	0.3	561	82,469

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 8 - Notes:

None

Data Alerts: None

NOM 9.1 - Infant mortality rate per 1,000 live births

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020	6.4	0.3	502	78,689
2019	7.0	0.3	560	80,450
2018	6.9	0.3	556	80,751
2017	7.3	0.3	591	81,016
2016	7.4	0.3	594	80,807
2015	7.0	0.3	568	81,685
2014	6.9	0.3	561	81,602
2013	6.8	0.3	544	79,992
2012	7.2	0.3	582	80,371
2011	7.4	0.3	592	79,588
2010	7.9	0.3	626	79,495
2009	8.0	0.3	657	82,211

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 9.1 - Notes:

None

Data Alerts: None

NOM 9.2 - Neonatal mortality rate per 1,000 live births

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020	3.9	0.2	305	78,689
2019	4.5	0.2	364	80,450
2018	4.5	0.2	361	80,751
2017	4.6	0.2	372	81,016
2016	4.2	0.2	343	80,807
2015	4.1	0.2	335	81,685
2014	4.3	0.2	349	81,602
2013	4.2	0.2	333	79,992
2012	4.3	0.2	349	80,371
2011	4.6	0.2	365	79,588
2010	4.6	0.2	368	79,495
2009	4.8	0.2	396	82,211

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 9.2 - Notes:

None

Data Alerts: None

NOM 9.3 - Post neonatal mortality rate per 1,000 live births

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend				
Year	**Annual Indicator**	**Standard Error**	**Numerator**	**Denominator**
2020	2.5	0.2	197	78,689
2019	2.4	0.2	196	80,450
2018	2.4	0.2	195	80,751
2017	2.7	0.2	219	81,016
2016	3.1	0.2	251	80,807
2015	2.9	0.2	233	81,685
2014	2.6	0.2	212	81,602
2013	2.6	0.2	211	79,992
2012	2.9	0.2	233	80,371
2011	2.9	0.2	227	79,588
2010	3.2	0.2	258	79,495
2009	3.2	0.2	261	82,211

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 9.3 - Notes:

None

Data Alerts: None

NOM 9.4 - Preterm-related mortality rate per 100,000 live births

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020	207.1	16.2	163	78,689
2019	264.8	18.2	213	80,450
2018	216.7	16.4	175	80,751
2017	201.2	15.8	163	81,016
2016	211.6	16.2	171	80,807
2015	189.8	15.3	155	81,685
2014	230.4	16.8	188	81,602
2013	193.8	15.6	155	79,992
2012	209.0	16.1	168	80,371
2011	214.9	16.5	171	79,588
2010	245.3	17.6	195	79,495
2009	255.4	17.7	210	82,211

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 9.4 - Notes:

None

Data Alerts: None

NOM 9.5 - Sudden Unexpected Infant Death (SUID) rate per 100,000 live births

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020	143.6	13.5	113	78,689
2019	125.5	12.5	101	80,450
2018	153.6	13.8	124	80,751
2017	149.4	13.6	121	81,016
2016	153.5	13.8	124	80,807
2015	153.0	13.7	125	81,685
2014	111.5	11.7	91	81,602
2013	123.8	12.5	99	79,992
2012	164.2	14.3	132	80,371
2011	154.5	14.0	123	79,588
2010	171.1	14.7	136	79,495
2009	153.3	13.7	126	82,211

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 9.5 - Notes:

None

Data Alerts: None

NOM 10 - Percent of women who drink alcohol in the last 3 months of pregnancy

Data Source: Pregnancy Risk Assessment Monitoring System (PRAMS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2021	5.0 %	1.0 %	3,930	78,428
2020	6.8 %	1.4 %	5,094	75,045
2019	4.8 %	1.1 %	3,631	76,202
2015	5.5 %	1.0 %	4,299	78,404
2014	5.8 %	1.1 %	4,524	77,863
2013	4.8 %	1.0 %	3,677	77,144
2012	6.7 %	1.1 %	5,139	77,036
2009	5.6 %	1.1 %	4,474	79,825
2008	3.4 %	0.8 %	2,774	81,407

Legends:

Indicator has an unweighted denominator <30 and is not reportable

Indicator has an unweighted denominator between 30 and 59 or confidence interval width >20% points or >1.2 times the estimate and should be interpreted with caution

NOM 10 - Notes:

None

Data Alerts: None

NOM 11 - Rate of neonatal abstinence syndrome per 1,000 birth hospitalizations

Data Source: HCUP - State Inpatient Databases (SID)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020	9.6	0.4	694	72,133
2019	10.9	0.4	779	71,219
2018	14.6	0.5	995	68,376
2017	16.2	0.5	1,099	67,827
2016	18.0	0.5	1,134	63,143
2015	16.9	0.6	793	46,904
2014	15.3	0.5	959	62,637
2013	12.5	0.4	815	65,309
2012	8.9	0.4	584	65,480
2011	6.0	0.3	414	69,570
2010	5.4	0.3	375	69,409
2009	4.3	0.2	311	72,741
2008	3.0	0.2	225	75,307

Legends:

Indicator has a numerator ≤10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 11 - Notes:

None

Data Alerts: None

NOM 12 - Percent of eligible newborns screened for heritable disorders with on time physician notification for out of range screens who are followed up in a timely manner. (DEVELOPMENTAL)

Federally available Data (FAD) for this measure is not available/reportable.

NOM 12 - Notes:

None

Data Alerts: None

NOM 13 - Percent of children meeting the criteria developed for school readiness (DEVELOPMENTAL)

Federally available Data (FAD) for this measure is not available/reportable.

NOM 13 - Notes:

None

Data Alerts: None

NOM 14 - Percent of children, ages 1 through 17, who have decayed teeth or cavities in the past year

Data Source: National Survey of Children's Health (NSCH)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020_2021	12.8 %	1.2 %	180,162	1,411,000
2019_2020	11.4 %	1.3 %	160,975	1,414,671
2018_2019	13.1 %	1.4 %	183,494	1,400,701
2017_2018	13.7 %	1.6 %	189,299	1,379,241
2016_2017	10.7 %	1.5 %	149,356	1,391,773
2016	8.9 %	1.6 %	124,646	1,402,272

Legends:

Indicator has an unweighted denominator <30 and is not reportable

Indicator has a confidence interval width >20% points, >1.2 times the estimate, or that is inestimable and should be interpreted with caution

NOM 14 - Notes:

None

Data Alerts: None

NOM 15 - Child Mortality rate, ages 1 through 9, per 100,000

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend				
Year	**Annual Indicator**	**Standard Error**	**Numerator**	**Denominator**
2021	21.8	1.7	163	748,023
2020	19.5	1.6	145	743,703
2019	20.7	1.7	154	742,209
2018	22.3	1.7	165	739,940
2017	23.3	1.8	173	741,775
2016	23.2	1.8	172	741,404
2015	18.3	1.6	135	739,432
2014	20.6	1.7	152	738,611
2013	21.1	1.7	156	738,334
2012	22.4	1.7	166	739,838
2011	20.0	1.7	147	736,697
2010	22.0	1.7	163	740,978
2009	20.0	1.7	148	738,731

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 15 - Notes:

None

Data Alerts: None

NOM 16.1 - Adolescent mortality rate ages 10 through 19, per 100,000

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend				
Year	**Annual Indicator**	**Standard Error**	**Numerator**	**Denominator**
2021	54.9	2.5	485	883,615
2020	48.0	2.4	410	854,258
2019	42.0	2.2	359	855,582
2018	44.9	2.3	384	855,439
2017	43.5	2.3	370	850,432
2016	39.9	2.2	336	842,341
2015	39.8	2.2	335	840,920
2014	36.7	2.1	309	841,738
2013	35.5	2.1	299	841,885
2012	40.3	2.2	340	844,247
2011	37.1	2.1	315	848,300
2010	38.2	2.1	327	856,127
2009	42.4	2.2	363	855,924

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 16.1 - Notes:

None

Data Alerts: None

NOM 16.2 - Adolescent motor vehicle mortality rate, ages 15 through 19, per 100,000

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2019_2021	20.6	1.3	264	1,284,599
2018_2020	18.1	1.2	230	1,272,469
2017_2019	15.9	1.1	203	1,274,577
2016_2018	15.3	1.1	195	1,272,255
2015_2017	15.5	1.1	197	1,267,849
2014_2016	15.1	1.1	191	1,262,485
2013_2015	14.1	1.1	177	1,259,614
2012_2014	15.5	1.1	195	1,260,128
2011_2013	16.9	1.2	214	1,267,375
2010_2012	18.9	1.2	243	1,285,474
2009_2011	19.2	1.2	250	1,302,264
2008_2010	21.7	1.3	285	1,312,853
2007_2009	28.1	1.5	368	1,307,973

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 16.2 - Notes:

None

Data Alerts: None

NOM 16.3 - Adolescent suicide rate, ages 15 through 19, per 100,000

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2019_2021	10.7	0.9	138	1,284,599
2018_2020	10.5	0.9	134	1,272,469
2017_2019	12.0	1.0	153	1,274,577
2016_2018	13.2	1.0	168	1,272,255
2015_2017	12.4	1.0	157	1,267,849
2014_2016	11.2	0.9	142	1,262,485
2013_2015	10.1	0.9	127	1,259,614
2012_2014	9.8	0.9	123	1,260,128
2011_2013	8.7	0.8	110	1,267,375
2010_2012	7.8	0.8	100	1,285,474
2009_2011	7.8	0.8	102	1,302,264
2008_2010	7.2	0.7	94	1,312,853
2007_2009	7.1	0.7	93	1,307,973

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 16.3 - Notes:

None

Data Alerts: None

NOM 17.1 - Percent of children with special health care needs (CSHCN), ages 0 through 17

Data Source: National Survey of Children's Health (NSCH)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020_2021	21.2 %	1.3 %	320,158	1,508,190
2019_2020	22.2 %	1.4 %	334,628	1,505,845
2018_2019	21.6 %	1.5 %	325,137	1,505,049
2017_2018	20.6 %	1.6 %	308,848	1,502,862
2016_2017	19.1 %	1.5 %	285,900	1,494,648
2016	19.0 %	1.9 %	282,585	1,488,549

Legends:

Indicator has an unweighted denominator <30 and is not reportable

Indicator has a confidence interval width >20% points, >1.2 times the estimate, or that is inestimable and should be interpreted with caution

NOM 17.1 - Notes:

None

Data Alerts: None

NOM 17.2 - Percent of children with special health care needs (CSHCN), ages 0 through 17, who receive care in a well-functioning system

Data Source: National Survey of Children's Health (NSCH)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020_2021	17.4 %	2.7 %	55,610	320,158
2019_2020	18.4 %	2.7 %	61,686	334,628
2018_2019	17.2 %	2.7 %	55,932	325,137
2017_2018	13.3 %	2.5 %	41,061	308,848
2016_2017	17.2 %	3.0 %	49,083	285,167
2016	20.7 %	4.5 %	58,242	281,120

Legends:

Indicator has an unweighted denominator <30 and is not reportable

Indicator has a confidence interval width >20% points, >1.2 times the estimate, or that is inestimable and should be interpreted with caution

NOM 17.2 - Notes:

None

Data Alerts: None

NOM 17.3 - Percent of children, ages 3 through 17, diagnosed with an autism spectrum disorder

Data Source: National Survey of Children's Health (NSCH)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020_2021	2.2 %	0.6 %	27,500	1,274,330
2019_2020	2.4 %	0.7 %	30,446	1,246,244
2018_2019	3.3 %	0.7 %	41,516	1,243,702
2017_2018	3.0 %	0.6 %	37,557	1,253,631
2016_2017	2.0 %	0.6 %	24,820	1,232,350
2016	1.8 %	0.8 %	21,252	1,212,557

Legends:

Indicator has an unweighted denominator <30 and is not reportable

Indicator has a confidence interval width >20% points, >1.2 times the estimate, or that is inestimable and should be interpreted with caution

NOM 17.3 - Notes:

None

Data Alerts: None

NOM 17.4 - Percent of children, ages 3 through 17, diagnosed with Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder (ADD/ADHD)

Data Source: National Survey of Children's Health (NSCH)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020_2021	11.0 %	1.2 %	140,697	1,276,631
2019_2020	10.9 %	1.3 %	134,680	1,236,248
2018_2019	10.5 %	1.2 %	128,774	1,222,343
2017_2018	10.6 %	1.3 %	131,344	1,234,743
2016_2017	10.2 %	1.3 %	124,036	1,217,529
2016	10.1 %	1.6 %	121,186	1,201,276

Legends:

Indicator has an unweighted denominator <30 and is not reportable

Indicator has a confidence interval width >20% points, >1.2 times the estimate, or that is inestimable and should be interpreted with caution

NOM 17.4 - Notes:

None

Data Alerts: None

NOM 18 - Percent of children, ages 3 through 17, with a mental/behavioral condition who receive treatment or counseling

Data Source: National Survey of Children's Health (NSCH)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020_2021	49.3 %	5.0 %	82,904	168,182
2019_2020	46.6 %	5.6 %	75,421	161,813
2018_2019	42.7 %	5.3 %	82,660	193,489
2017_2018	40.6 %	5.6 %	84,514	207,992
2016_2017	41.7 %	6.2 %	69,811	167,435
2016	48.7 %	7.9 %	71,834	147,604

Legends:

Indicator has an unweighted denominator <30 and is not reportable

Indicator has a confidence interval width >20% points, >1.2 times the estimate, or that is inestimable and should be interpreted with caution

NOM 18 - Notes:

None

Data Alerts: None

NOM 19 - Percent of children, ages 0 through 17, in excellent or very good health

Data Source: National Survey of Children's Health (NSCH)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020_2021	89.6 %	1.2 %	1,348,635	1,505,469
2019_2020	89.0 %	1.2 %	1,338,089	1,502,828
2018_2019	87.9 %	1.3 %	1,319,049	1,500,238
2017_2018	88.7 %	1.4 %	1,326,928	1,495,696
2016_2017	89.7 %	1.3 %	1,336,207	1,488,972
2016	89.2 %	1.6 %	1,326,511	1,486,938

Legends:

Indicator has an unweighted denominator <30 and is not reportable

Indicator has a confidence interval width >20% points, >1.2 times the estimate, or that is inestimable and should be interpreted with caution

NOM 19 - Notes:

None

Data Alerts: None

NOM 20 - Percent of children, ages 2 through 4, and adolescents, ages 10 through 17, who are obese (BMI at or above the 95th percentile)

Data Source: WIC

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020	14.6 %	0.2 %	4,376	30,061
2018	15.2 %	0.2 %	6,693	44,025
2016	14.6 %	0.2 %	7,457	51,157
2014	14.9 %	0.2 %	8,083	54,429
2012	15.3 %	0.2 %	8,130	53,033
2010	16.0 %	0.2 %	9,126	57,153
2008	14.7 %	0.2 %	7,596	51,616

Legends:

Indicator has a denominator <20 and is not reportable

Indicator has a confidence interval width >20% points or >1.2 times the estimate and should be interpreted with caution

Data Source: Youth Risk Behavior Surveillance System (YRBSS)

Multi-Year Trend				
Year	**Annual Indicator**	**Standard Error**	**Numerator**	**Denominator**
2021	18.3 %	1.8 %	45,412	248,670
2019	20.9 %	1.4 %	57,059	273,316
2017	20.5 %	1.2 %	56,429	275,401
2015	18.6 %	1.0 %	49,124	263,806
2013	16.9 %	0.9 %	41,957	248,583
2011	15.2 %	0.8 %	40,424	266,111
2009	15.7 %	1.0 %	42,186	267,892
2007	16.8 %	0.9 %	45,330	269,544
2005	14.4 %	1.3 %	37,410	259,109

Legends:

Indicator has an unweighted denominator <100 and is not reportable

Indicator has a confidence interval width >20% points or >1.2 times the estimate and should be interpreted with caution

Data Source: National Survey of Children's Health (NSCH)

Multi-Year Trend				
Year	**Annual Indicator**	**Standard Error**	**Numerator**	**Denominator**
2020_2021	22.5 %	2.2 %	151,132	671,813
2019_2020	20.8 %	2.3 %	136,346	655,528
2018_2019	20.4 %	2.4 %	130,946	642,532
2017_2018	16.7 %	2.5 %	111,281	666,245
2016_2017	15.6 %	2.3 %	98,467	631,225
2016	19.2 %	2.8 %	111,864	583,745

Legends:

Indicator has an unweighted denominator <30 and is not reportable

Indicator has a confidence interval width >20% points, >1.2 times the estimate, or that is inestimable and should be interpreted with caution

NOM 20 - Notes:

None

Data Alerts: None

NOM 21 - Percent of children, ages 0 through 17, without health insurance

Data Source: American Community Survey (ACS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2021	4.7 %	0.3 %	72,038	1,535,209
2019	4.9 %	0.3 %	74,160	1,510,670
2018	4.7 %	0.3 %	70,287	1,509,769
2017	4.2 %	0.3 %	62,707	1,505,959
2016	3.5 %	0.3 %	52,909	1,502,677
2015	4.3 %	0.3 %	63,432	1,493,057
2014	5.2 %	0.3 %	77,115	1,493,436
2013	5.7 %	0.4 %	84,902	1,492,149
2012	5.6 %	0.4 %	83,030	1,492,012
2011	5.8 %	0.4 %	86,513	1,489,552
2010	5.3 %	0.3 %	79,838	1,499,117
2009	5.8 %	0.3 %	85,685	1,489,741

Legends:

Indicator has an unweighted denominator <30 and is not reportable

Indicator has a confidence interval width >20% points, >1.2 times the estimate, or that is inestimable and should be interpreted with caution

NOM 21 - Notes:

None

Data Alerts: None

NOM 22.1 - Percent of children who have completed the combined 7-vaccine series (4:3:1:3*:3:1:4) by age 24 months

Data Source: National Immunization Survey (NIS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2018	72.3 %	3.2 %	61,000	84,000
2017	63.0 %	4.1 %	52,000	83,000
2016	69.0 %	4.4 %	56,000	81,000
2015	73.9 %	3.6 %	62,000	84,000
2014	63.8 %	4.2 %	54,000	84,000
2013	71.2 %	4.0 %	59,000	83,000
2012	66.4 %	4.5 %	55,000	83,000
2011	70.1 %	3.7 %	58,000	82,000

Legends:

Estimate not reported because unweighted sample size for the denominator < 30 or 95% confidence interval width/estimate >1.2

Estimates with 95% confidence interval widths >20 or that are inestimable might not be reliable

NOM 22.1 - Notes:

None

Data Alerts: None

NOM 22.2 - Percent of children, ages 6 months through 17 years, who are vaccinated annually against seasonal influenza

Data Source: National Immunization Survey (NIS) – Flu

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2021_2022	54.2 %	1.8 %	770,914	1,423,654
2020_2021	55.9 %	1.8 %	792,443	1,417,608
2019_2020	63.7 %	1.7 %	904,896	1,420,559
2018_2019	62.1 %	1.8 %	883,469	1,423,801
2017_2018	61.5 %	2.1 %	867,500	1,411,591
2016_2017	57.4 %	2.0 %	799,927	1,393,844
2015_2016	61.8 %	1.9 %	865,797	1,400,513
2014_2015	61.8 %	2.0 %	871,825	1,409,807
2013_2014	60.2 %	2.0 %	836,358	1,390,019
2012_2013	56.4 %	2.3 %	789,668	1,400,851
2011_2012	50.4 %	2.7 %	695,541	1,379,253
2010_2011	56.6 %	3.8 %	777,299	1,373,320
2009_2010	48.9 %	3.9 %	617,746	1,263,285

Legends:

Estimate not reported because unweighted sample size for the denominator < 30 or because the relative standard error is >0.3.

Estimates with 95% confidence interval half-widths > 10 might not be reliable

NOM 22.2 - Notes:

None

Data Alerts: None

NOM 22.3 - Percent of adolescents, ages 13 through 17, who have received at least one dose of the HPV vaccine

Data Source: National Immunization Survey (NIS) - Teen

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2021	75.3 %	3.0 %	330,108	438,286
2020	71.7 %	2.9 %	309,759	432,079
2019	61.9 %	3.7 %	263,805	425,944
2018	62.3 %	3.5 %	265,046	425,286
2017	56.1 %	3.4 %	238,814	425,789
2016	55.3 %	3.4 %	235,979	426,750
2015	48.7 %	3.3 %	207,308	425,570

Legends:

Estimate not reported because unweighted sample size for the denominator < 30 or 95% confidence interval width/estimate > 1.2

Estimates with 95% confidence interval widths > 20 or that are inestimable might not be reliable

NOM 22.3 - Notes:

None

Data Alerts: None

NOM 22.4 - Percent of adolescents, ages 13 through 17, who have received at least one dose of the Tdap vaccine

Data Source: National Immunization Survey (NIS) - Teen

Multi-Year Trend				
Year	**Annual Indicator**	**Standard Error**	**Numerator**	**Denominator**
2021	92.0 %	1.9 %	403,183	438,286
2020	88.8 %	2.1 %	383,596	432,079
2019	89.1 %	2.4 %	379,649	425,944
2018	90.7 %	1.9 %	385,687	425,286
2017	89.4 %	2.0 %	380,743	425,789
2016	89.3 %	2.2 %	381,010	426,750
2015	79.7 %	2.7 %	339,136	425,570
2014	86.0 %	2.3 %	363,547	422,685
2013	80.0 %	2.7 %	338,276	422,624
2012	77.4 %	3.2 %	325,269	420,423
2011	67.6 %	3.2 %	283,974	420,127
2010	58.7 %	3.2 %	243,261	414,201
2009	48.0 %	3.1 %	199,390	415,570

Legends:

Estimate not reported because unweighted sample size for the denominator < 30 or 95% confidence interval width/estimate > 1.2

Estimates with 95% confidence interval widths > 20 or that are inestimable might not be reliable

NOM 22.4 - Notes:

None

Data Alerts: None

NOM 22.5 - Percent of adolescents, ages 13 through 17, who have received at least one dose of the meningococcal conjugate vaccine

Data Source: National Immunization Survey (NIS) - Teen

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2021	88.1 %	2.3 %	386,131	438,286
2020	83.2 %	2.5 %	359,298	432,079
2019	79.3 %	3.0 %	337,888	425,944
2018	85.2 %	2.5 %	362,229	425,286
2017	75.0 %	3.1 %	319,476	425,789
2016	76.3 %	3.0 %	325,708	426,750
2015	76.7 %	2.9 %	326,284	425,570
2014	74.0 %	3.0 %	312,756	422,685
2013	67.8 %	3.1 %	286,448	422,624
2012	69.4 %	3.4 %	291,733	420,423
2011	63.3 %	3.3 %	265,999	420,127
2010	50.6 %	3.2 %	209,556	414,201
2009	52.1 %	3.1 %	216,515	415,570

Legends:

Estimate not reported because unweighted sample size for the denominator < 30 or 95% confidence interval width/estimate >1.2

Estimates with 95% confidence interval widths > 20 or that are inestimable might not be reliable

NOM 22.5 - Notes:

None

Data Alerts: None

NOM 23 - Teen birth rate, ages 15 through 19, per 1,000 females

Data Source: National Vital Statistics System (NVSS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2021	21.5	0.3	4,613	214,193
2020	23.3	0.3	4,826	207,490
2019	23.7	0.3	4,918	207,809
2018	25.3	0.4	5,258	207,756
2017	26.6	0.4	5,516	207,240
2016	28.0	0.4	5,766	206,065
2015	30.6	0.4	6,267	204,782
2014	33.2	0.4	6,756	203,551
2013	34.8	0.4	7,105	204,285
2012	38.4	0.4	7,910	205,905
2011	40.8	0.4	8,497	208,285
2010	43.5	0.5	9,254	212,929
2009	48.4	0.5	10,378	214,436

Legends:

Indicator has a numerator <10 and is not reportable

Indicator has a numerator <20 and should be interpreted with caution

NOM 23 - Notes:

None

Data Alerts: None

NOM 24 - Percent of women who experience postpartum depressive symptoms following a recent live birth

Data Source: Pregnancy Risk Assessment Monitoring System (PRAMS)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2021	13.0 %	1.6 %	10,082	77,580
2020	15.3 %	2.0 %	11,403	74,330
2019	15.5 %	2.1 %	11,792	75,888
2015	15.4 %	1.6 %	12,063	78,110
2014	13.6 %	1.6 %	10,620	78,096
2013	18.1 %	1.8 %	13,695	75,835
2012	17.2 %	1.6 %	13,157	76,677

Legends:

Indicator has an unweighted denominator <30 and is not reportable

Indicator has an unweighted denominator between 30 and 59 or a confidence interval width >20% points or >1.2 times the estimate and should be interpreted with caution

NOM 24 - Notes:

None

Data Alerts: None

NOM 25 - Percent of children, ages 0 through 17, who were unable to obtain needed health care in the past year

Data Source: National Survey of Children's Health (NSCH)

Multi-Year Trend

Year	Annual Indicator	Standard Error	Numerator	Denominator
2020_2021	4.1 %	0.7 %	61,431	1,506,537
2019_2020	3.6 %	0.8 %	53,268	1,492,738
2018_2019	3.2 %	0.9 %	47,687	1,490,019
2017_2018	2.4 %	0.7 %	35,789	1,499,644
2016_2017	1.8 %	0.5 %	26,301	1,484,581
2016	2.1 %	0.8 %	30,908	1,471,004

Legends:

Indicator has an unweighted denominator <30 and is not reportable

Indicator has a confidence interval width >20% points, >1.2 times the estimate, or that is inestimable and should be interpreted with caution

NOM 25 - Notes:

None

Data Alerts: None

Form 10
National Performance Measures (NPMs)

State: Tennessee

NPM 1 - Percent of women, ages 18 through 44, with a preventive medical visit in the past year

Federally Available Data					
Data Source: Behavioral Risk Factor Surveillance System (BRFSS)					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective			75	76	77
Annual Indicator		74.6	76.0	68.3	72.6
Numerator		875,792	897,415	808,894	868,079
Denominator		1,174,631	1,180,193	1,185,003	1,195,830
Data Source		BRFSS	BRFSS	BRFSS	BRFSS
Data Source Year		2018	2019	2020	2021

Previous NPM-1 BRFSS data for survey year 2017 that was pre-populated under the 2018 Annual Report Year is no longer displayed since it is not comparable with 2018 survey data.

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	76.5	79.0	82.0

Field Level Notes for Form 10 NPMs:

None

NPM 3 - Percent of very low birth weight (VLBW) infants born in a hospital with a Level III+ Neonatal Intensive Care Unit (NICU)

Federally available Data (FAD) for this measure is not available/reportable.

State Provided Data				
	2019	2020	2021	2022
Annual Objective			85	85.5
Annual Indicator	84.5	84.5	80	82
Numerator				
Denominator				
Data Source	Birth Statistical System	Birth Statistical System	Birth Statistical System	Birth Statistical System
Data Source Year	CY 2018	CY 2019	CY 2020	CY 2021
Provisional or Final ?	Final	Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	86.0	86.5	87.0

Field Level Notes for Form 10 NPMs:

None

NPM 4A - Percent of infants who are ever breastfed

Federally Available Data				
Data Source: National Immunization Survey (NIS)				
	2019	**2020**	**2021**	**2022**
Annual Objective			83	84
Annual Indicator	82.2	75.8	79.1	78.8
Numerator	63,360	53,802	60,163	58,108
Denominator	77,089	70,947	76,011	73,742
Data Source	NIS	NIS	NIS	NIS
Data Source Year	2016	2017	2018	2019

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	85.0	86.0	87.0

Field Level Notes for Form 10 NPMs:

None

NPM 4B - Percent of infants breastfed exclusively through 6 months

Federally Available Data				
Data Source: National Immunization Survey (NIS)				
	2019	**2020**	**2021**	**2022**
Annual Objective			26	28
Annual Indicator	24.5	27.2	22.4	24.9
Numerator	18,257	19,012	16,600	17,966
Denominator	74,506	69,987	73,999	72,238
Data Source	NIS	NIS	NIS	NIS
Data Source Year	2016	2017	2018	2019

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	30.0	32.0	34.0

Field Level Notes for Form 10 NPMs:

None

NPM 5A - Percent of infants placed to sleep on their backs

Federally Available Data					
Data Source: Pregnancy Risk Assessment Monitoring System (PRAMS)					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective	82	83	82	83	84
Annual Indicator	83.0	83.0	79.4	78.4	79.1
Numerator	63,387	63,387	59,805	58,480	60,875
Denominator	76,381	76,381	75,369	74,548	76,934
Data Source	PRAMS	PRAMS	PRAMS	PRAMS	PRAMS
Data Source Year	2015	2015	2019	2020	2021

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	85.0	86.0	87.0

Field Level Notes for Form 10 NPMs:

None

NPM 5B - Percent of infants placed to sleep on a separate approved sleep surface

Federally Available Data			
Data Source: Pregnancy Risk Assessment Monitoring System (PRAMS)			
	2020	**2021**	**2022**
Annual Objective	31	32	33
Annual Indicator	37.9	40.1	39.4
Numerator	27,572	29,031	28,955
Denominator	72,769	72,337	73,461
Data Source	PRAMS	PRAMS	PRAMS
Data Source Year	2019	2020	2021

State Provided Data					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective		0	31	32	33
Annual Indicator	0	0	92	89.5	79.2
Numerator					
Denominator					
Data Source	No data source	No data source	PRAMS	PRAMS	PRAMS
Data Source Year	No data	No data	2019	2020	2021
Provisional or Final ?	Final	Final	Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	90.5	90.5	90.8

Field Level Notes for Form 10 NPMs:

None

NPM 5C - Percent of infants placed to sleep without soft objects or loose bedding

Federally Available Data			
Data Source: Pregnancy Risk Assessment Monitoring System (PRAMS)			
	2020	**2021**	**2022**
Annual Objective	46	48	50
Annual Indicator	44.8	50.2	53.3
Numerator	32,496	36,072	39,426
Denominator	72,533	71,863	73,951
Data Source	PRAMS	PRAMS	PRAMS
Data Source Year	2019	2020	2021

State Provided Data					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective		0	46	48	50
Annual Indicator	0	0	76.7	80	52.9
Numerator					
Denominator					
Data Source	No data source	No data source	PRAMS	PRAMS	PRAMS
Data Source Year	No data	No data	2019	2020	2021
Provisional or Final ?	Final	Final	Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	76.8	77.0	77.3

Field Level Notes for Form 10 NPMs:

None

NPM 8.1 - Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day

Federally Available Data					
Data Source: National Survey of Children's Health (NSCH) - CHILD					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective	30.4	31.2	31.5	31.9	32.2
Annual Indicator	27.3	31.5	35.2	30.6	27.7
Numerator	140,812	163,612	176,434	148,444	137,097
Denominator	516,001	519,562	500,965	485,754	495,348
Data Source	NSCH-CHILD	NSCH-CHILD	NSCH-CHILD	NSCH-CHILD	NSCH-CHILD
Data Source Year	2016_2017	2017_2018	2018_2019	2019_2020	2020_2021

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	29.0	30.5	32.0

Field Level Notes for Form 10 NPMs:

None

NPM 11 - Percent of children with and without special health care needs, ages 0 through 17, who have a medical home - Children with Special Health Care Needs

Federally Available Data					
Data Source: National Survey of Children's Health (NSCH) - CSHCN					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective	56.5	59.2	53.3	60	65
Annual Indicator	50.4	53.3	48.5	46.5	49.3
Numerator	143,840	164,583	157,666	155,739	157,779
Denominator	285,167	308,848	325,137	334,628	320,158
Data Source	NSCH-CSHCN	NSCH-CSHCN	NSCH-CSHCN	NSCH-CSHCN	NSCH-CSHCN
Data Source Year	2016_2017	2017_2018	2018_2019	2019_2020	2020_2021

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	70.0	75.0	80.0

Field Level Notes for Form 10 NPMs:

None

NPM 12 - Percent of adolescents with and without special health care needs, ages 12 through 17, who received services to prepare for the transition to adult health care - Children with Special Health Care Needs

Federally Available Data					
Data Source: National Survey of Children's Health (NSCH) - CSHCN					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective	14.1	14.7	34.2	40	45
Annual Indicator	14.4	16.6	22.2	22.1	24.2
Numerator	17,666	26,590	30,583	30,634	37,238
Denominator	122,975	159,749	137,839	138,824	153,684
Data Source	NSCH-CSHCN	NSCH-CSHCN	NSCH-CSHCN	NSCH-CSHCN	NSCH-CSHCN
Data Source Year	2016_2017	2017_2018	2018_2019	2019_2020	2020_2021

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	50.0	55.0	60.0

Field Level Notes for Form 10 NPMs:

None

NPM 14.2 - Percent of children, ages 0 through 17, who live in households where someone smokes - Adolescent Health

Federally Available Data					
Data Source: National Survey of Children's Health (NSCH)					
	2018	**2019**	**2020**	**2021**	**2022**
Annual Objective	29	23.8		19.4	19.2
Annual Indicator	21.1	18.6	18.6	19.5	20.8
Numerator	311,958	276,334	271,871	286,194	303,920
Denominator	1,478,634	1,485,841	1,464,986	1,464,685	1,458,803
Data Source	NSCH	NSCH	NSCH	NSCH	NSCH
Data Source Year	2016_2017	2017_2018	2018_2019	2019_2020	2020_2021

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	19.1	19.0	18.8

Field Level Notes for Form 10 NPMs:

None

Form 10
State Performance Measures (SPMs)

State: Tennessee

SPM 1 - Percent of new mothers whose pregnancy was intended

Measure Status:	Active

State Provided Data

	2018	2019	2020	2021	2022
Annual Objective	49.9	49.9	62	62	63
Annual Indicator	50.6	51.5	62	59	59
Numerator					
Denominator					
Data Source	PRAMS	PRAMS	PRAMS	PRAMS	PRAMS
Data Source Year	2015	2017	2016-2018	2020	2021
Provisional or Final ?	Provisional	Final	Final	Final	Final

Annual Objectives

	2023	2024	2025
Annual Objective	63.0	64.0	64.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: baseline = 3-year average	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: New data is not yet available, repeating data from previous year.	

SPM 2 - Percent of facilities implementing patient safety recommendations

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			12.5	63
Annual Indicator		54	25	44
Numerator				
Denominator				
Data Source		MMR Annual Performance Review Report	MMR Annual Performance Review Report	MMR Annual Performance Review Report
Data Source Year		2019	2020	2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	66.0	69.0	72.0

Field Level Notes for Form 10 SPMs:

None

SPM 3 - Percent of community level recommendations implemented

Measure Status:	Inactive - Replaced			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			10	12.5
Annual Indicator			15	0
Numerator				
Denominator				
Data Source			MMRIA and ERASE MM APR document	n/a
Data Source Year			2020	n/a
Provisional or Final ?			Final	Final

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**

Field Note:
SPM3 inactivated and replaced with SPM23.

SPM 4 - Percent of Tennessee newborns who initiated breastfeeding

Measure Status:	Active

State Provided Data					
	2018	2019	2020	2021	2022
Annual Objective	82	84	80.7	81.2	81.7
Annual Indicator	80.9	80.8	80.6	81.2	81.1
Numerator					
Denominator					
Data Source	TDH PHA - Birth Statistical System	TDH PHA - Birth Statistical System	TDH PHA - Birth Statistical System	TDH PHA - Birth Statistical System	TDH PHA - Birth Statistical System
Data Source Year	CY2017	CY2018	CY2019	CY2020	CY2021
Provisional or Final ?	Final	Final	Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	82.2	82.7	83.2

Field Level Notes for Form 10 SPMs:

None

SPM 5 - Percent of safe sleep diaper bag recipients who reported making a behavioral change in their infant sleep practices because of the items included in the bag

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			47
Annual Indicator		45	44
Numerator			
Denominator			
Data Source		TDH	TDH
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	50.0	52.0	55.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Data is unavailable for 2020.	
2.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: For SPM 5, the annual objective in 2021 should have been 45%.	
3.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: For SPM 5, the annual objective in 2022 should have been 47%.	

SPM 6 - Percent of schools with at least 50% physical education class time spent in moderate to vigorous physical activity

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			10	20
Annual Indicator			0	90.2
Numerator				
Denominator				
Data Source			N/A	2022 QPE Survey
Data Source Year			N/A	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	90.7	91.7	93.2

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**

Field Note:
The state did not track progress on SPM 6 until Year 2; annual indicator will be provided in next year's application.

SPM 7 - Rate of Double Up Food Bucks purchases per SNAP recipient

Measure Status:	Inactive - Replaced		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			0
Annual Indicator			0
Numerator			
Denominator			
Data Source			n/a
Data Source Year			n/a
Provisional or Final ?			Final

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: The state did not track progress on SPM 7 until Year 2; annual indicator will be provided in next year's application.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: SPM7 inactivated & replaced with SPM24	

SPM 8 - Percent of children with two or more ACEs

Measure Status:	Active

State Provided Data					
	2018	2019	2020	2021	2022
Annual Objective	27.5	24	23	22.5	22
Annual Indicator	24.6	24.1	20.1	0	21.5
Numerator					
Denominator					
Data Source	NSCH	NSCH	NSCH	N/A	NSCH
Data Source Year	2016	2017	2018	N/A	2020
Provisional or Final ?	Final	Final	Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	21.6	21.2	21.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: There was a decreases by 3.2% in FY 2020 from baseline (23.3%). Data for FY 2021 have not been released yet by NSCH.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: FY2020/2021 data was reported since NSCS has not released the FY2021/2022 data.	

SPM 9 - Percent of substantiated child maltreatment cases among families served by home visiting programs

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			0.3	3.3
Annual Indicator		4.2	1.5	3.2
Numerator				
Denominator				
Data Source		EBHV	EBHV	EBHV
Data Source Year		2019	2020	2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	3.2	3.1	3.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Baseline	
2.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: For SPM 9, the annual objective for 2021 should have been 3.3%.	
3.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: Increased from last year.	

SPM 10 - Percent of caregivers who experience intimate partner violence and do not receive professional support services among families served by home visiting

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			7	5
Annual Indicator			0	0
Numerator				
Denominator				
Data Source			EBHV	EBHV
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	4.0	3.5	3.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**

Field Note:
caregivers identified with IPV are offered professional support.

SPM 11 - Percent of high school students currently using cigarettes

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			6.4	5.8
Annual Indicator		7.1	0	4.9
Numerator				
Denominator				
Data Source		2019	N/A	2021
Data Source Year		YRBS	N/A	YRBS
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	5.3	4.8	4.3

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Baseline	
2.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: For SPM 11, the state is unable to provide an annual indicator for 2021 as YRBS is only released in odd number years.	

SPM 12 - Percent of high school students currently using e-cigarettes

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			18	17.9
Annual Indicator		22.1	0	19
Numerator				
Denominator				
Data Source		YRBS	N/A	YRBS
Data Source Year		2019	N/A	2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	17.8	17.8	17.7

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Basline	
2.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: For SPM 12, the state is unable to provide an annual indicator for 2021 as YRBS is only released in odd number years.	

SPM 13 - Number of adolescents enrolled in cessation program

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			0	20
Annual Indicator		7	22	16
Numerator				
Denominator				
Data Source		QuitLine and NOT Program (ALA))	QuitLine and NOT Program (ALA))	QuitLine only
Data Source Year		CY 2020	CY 2021	CY 2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	50.0	100.0	125.0

Field Level Notes for Form 10 SPMs:

None

SPM 14 - Number of CYSHCN receiving care in a medical home

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			800	850
Annual Indicator		2,194	2,196	2,100
Numerator				
Denominator				
Data Source		PTBMIS	PTBMIS	PTBMIS
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	900.0	950.0	1,000.0

Field Level Notes for Form 10 SPMs:

None

SPM 15 - Percent of providers with increased knowledge on medical home and care coordination

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			25	35
Annual Indicator			0	0
Numerator				
Denominator				
Data Source			N/A	CYSHCN
Data Source Year			N/A	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	50.0	65.0	75.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: No data to report at this time. Provider training and survey are planned for Year 3.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: No data to report at this time. Provider training and survey are planned for Year 3. Data source will be from the program once the surveys are conducted an analyzed.	

SPM 16 - Percent of providers reporting improved system of care for CYSCHN

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			35
Annual Indicator			0
Numerator			
Denominator			
Data Source			CYSHCN
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	50.0	65.0	75.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: No data to report at this time. Provider training and survey are planned for Year 3.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: No data to report at this time. Provider training and survey are planned for Year 3. Data source will be from the program once the surveys are conducted an analyzed.	

SPM 17 - Percent of families who complete an annual visit with their primary care provider

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			10
Annual Indicator		7.5	7.4
Numerator			
Denominator			
Data Source		CHANT	CHANT
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	12.5	15.0	17.5

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: Baseline	

SPM 18 - Percent of youth reporting with increased knowledge on transition resources and services

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			100
Annual Indicator		100	100
Numerator			
Denominator			
Data Source		CYSHCN	YAC
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	100.0	100.0	100.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: Baseline	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: Data from YAC Conference and YAC members who create annual transition plan.	

SPM 19 - Percent of YSHCN served by CHANT who complete an annual transition plan

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			75
Annual Indicator		72	72
Numerator			
Denominator			
Data Source		PTBMIS	PTBMIS (CSS)
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	80.0	85.0	90.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: Baseline	

SPM 20 - Percent of youth leaders participating in advisory councils providing resources to other youth

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			30
Annual Indicator		26.3	35.3
Numerator			
Denominator			
Data Source		CYSHCN	CYSHCN
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	30.0	30.0	30.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: Baseline	

SPM 21 - Percent of women who reported 14+ days of poor mental health in the past month

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			18.2
Annual Indicator			21.3
Numerator			
Denominator			
Data Source			BRFSS
Data Source Year			2021
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	17.8	17.4	17.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**

Field Note:
The state did not track progress on SPM 21 until Year 2; annual indicator will be provided in next year's application.

SPM 22 - Percent of children who had difficulties obtaining mental health care among those who received or needed care during the past 12 months, age 3-17 years

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			25
Annual Indicator			58.7
Numerator			
Denominator			
Data Source			NSCH
Data Source Year			2021
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	24.0	23.0	22.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**

Field Note:
The state did not track progress on SPM 22 until Year 2; annual indicator will be provided in next year's application.

SPM 23 - Number community level recommendations implemented

Measure Status:	Active

State Provided Data	
	2022
Annual Objective	
Annual Indicator	13
Numerator	
Denominator	
Data Source	MHTF/Community Grants
Data Source Year	2021
Provisional or Final ?	Final

Annual Objectives		
	2024	2025
Annual Objective	15.0	16.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**

Field Note:
Baseline data. FY22 Annual Objective is 6.

SPM 24 - Rate of Double Up Food Bucks purchases per SNAP recipient

Measure Status:	Active

State Provided Data	
	2022
Annual Objective	
Annual Indicator	18
Numerator	
Denominator	
Data Source	Nourish Knoxville tracking database
Data Source Year	2022
Provisional or Final ?	Final

Annual Objectives		
	2024	2025
Annual Objective	20.8	24.0

Field Level Notes for Form 10 SPMs:

1.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: baseline data should be 18.03	
2.	**Field Name:**	**2024**
	Column Name:	**Annual Objective**
	Field Note: 2024 annual objective should be 20.82	
3.	**Field Name:**	**2025**
	Column Name:	**Annual Objective**
	Field Note: 2025 annual objective should be 23.95	

Form 10
State Outcome Measures (SOMs)

State: Tennessee

SOM 1 - Rate of pregnancy-associated mortality to live birth

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			95.6	93.2
Annual Indicator		78.3	124.5	124.5
Numerator				
Denominator				
Data Source		MMRIA and birth records	MMRIA and birth records	MMRIA and birth records
Data Source Year		CY 2019	CY 2020	CY 2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	90.9	89.5	88.2

Field Level Notes for Form 10 SOMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Baseline	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: 2021 Maternal deaths have not been entirely reviewed	

SOM 2 - Rate of pregnancy-related mortality to live births

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			25.6	23.5
Annual Indicator		28.6	58.5	58.5
Numerator				
Denominator				
Data Source		MMRIA and birth records	MMRIA and birth records	MMRIA and birth records
Data Source Year		CY 2019	CY 2020	CY 2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	22.0	21.8	20.5

Field Level Notes for Form 10 SOMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Baseline	
2.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: For SOM 2, the annual objective for 2021 should have been 24.2.	
3.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: 2021 Maternal deaths have not been entirely reviewed	

SOM 3 - Percent of public school 6th graders who are overweight or obese

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			43.3	44.8
Annual Indicator		43.6	45	47.4
Numerator				
Denominator				
Data Source		CSH BMI Report	CSH BMI Report	CSH BMI Report
Data Source Year		2017-2018	2019-2020	2021-2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	47.0	46.5	46.0

Field Level Notes for Form 10 SOMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Baseline	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: 2020-21 report never got released due to COVID. 2021-22 report has not yet been released. However, we were able to get the 2021-22 data from TDE and TDH. This is a statistically significant increase from 2019-20.	

SOM 4 - Percent of WIC recipients aged 2-4 years who are overweight or obese

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			31
Annual Indicator	31.2	32	28.7
Numerator			
Denominator			
Data Source	WIC	WIC	WIC
Data Source Year	CY 2020	CY 2021	CY 2022
Provisional or Final ?	Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	27.5	26.5	25.0

Field Level Notes for Form 10 SOMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Baseline	
2.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: For SOM 4, the annual objective should have been 30.2%	

SOM 5 - Percent of adults reporting Chronic obstructive pulmonary disease (COPD)

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			9.3	9.2
Annual Indicator		9.7	9.5	10.4
Numerator				
Denominator				
Data Source		BRFSS	BRFSS	BRFSS
Data Source Year		2019	2020	2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	9.6	9.6	9.5

Field Level Notes for Form 10 SOMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Baseline	
2.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: objective should be 9.7%	
3.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: objective should be 9.6%	

SOM 6 - Percent of adults reporting cardiovascular disease

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			5.3	5.3
Annual Indicator		4.9	5.1	5.2
Numerator				
Denominator				
Data Source		BRFSS	BRFSS	BRFSS
Data Source Year		2019	2020	2021
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	5.3	5.2	5.2

Field Level Notes for Form 10 SOMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Baseline	

SOM 7 - Age-adjusted mortality rate from tobacco-attributable cancers among Tennesseans aged 35+

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			176.4	171.4
Annual Indicator		190.8	188	188
Numerator				
Denominator				
Data Source		CDC WONDER	CDC WONDER	CDC WONDER
Data Source Year		CY 2019	CY 2020	CY 2020
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	166.4	161.3	156.3

Field Level Notes for Form 10 SOMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Baseline	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: CY 2020 data is the latest available	

SOM 8 - Percent of pregnancy-associated deaths in which mental health conditions was a contributing factor

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			25
Annual Indicator			23
Numerator			
Denominator			
Data Source			MMR
Data Source Year			2017-2020
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	18.0	16.0	14.0

Field Level Notes for Form 10 SOMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: The state did not track progress on SOM 8 until Year 2; annual indicator will be provided in next year's application.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: Annual objective should be 20%	

Form 10
Evidence-Based or –Informed Strategy Measures (ESMs)

State: Tennessee

ESM 1.1 - Create pre/posttests to assesses provider knowledge of and confidence using PATH (Parenthood/Pregnancy Attitude, Timing, and How important is pregnancy prevention).

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			Yes
Annual Indicator		No	No
Numerator			
Denominator			
Data Source		TDH	TDH
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	Yes	Yes	Yes

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**

Field Note:
Pre/post tests have not yet been created.

ESM 1.2 - Percent of family planning encounters that occur via telehealth

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			0.4
Annual Indicator		0.3	1.2
Numerator			
Denominator			
Data Source		PTBMIS	PTBMIS
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	0.8	1.6	3.2

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**

Field Note:
For ESM 1.2, the annual objective for 2021 should have been 0.2%.

ESM 1.3 - Number of women receiving patient navigation for women's health services

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			250
Annual Indicator		0	0
Numerator			
Denominator			
Data Source		REDCap	REDCap
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	250.0	250.0	250.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**

Field Note:
Year 1 was used to establish funding for women's health navigators, so the objective for number of women navigated was zero. Services are expected to begin in July 2022.

ESM 1.4 - Percent of births covered by hospitals implementing data-driven, clinical recommendations

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			65
Annual Indicator		55	55
Numerator			
Denominator			
Data Source		NVSS	NVSS
Data Source Year		2020	2021
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	75.0	85.0	90.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: Baseline	

ESM 1.8 - Percent of recommendations with who/what/when components

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			75	79
Annual Indicator			68	68
Numerator				
Denominator				
Data Source			MMR Program	MMR Program
Data Source Year			CY 2020	CY 2021
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	84.0	89.0	94.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**

Field Note:
Case review incomplete; using last year's data

ESM 3.1 - Percent of Tennessee birthing hospitals participating in perinatal quality collaborative projects

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			33	33
Annual Indicator		41	43.3	36.2
Numerator				
Denominator				
Data Source		TIPQC	TIPQC	TIPQC
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	33.0	33.0	33.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**

Field Note:
21 birthing hospitals out of 58 birthing hospitals in TN

ESM 4.1 - Number of credentialed lactation professionals within WIC

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			166	176
Annual Indicator		156	148	159
Numerator				
Denominator				
Data Source		WIC Monitoring Reports	WIC Monitoring Reports	WIC Monitoring Reports
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	186.0	196.0	206.0

Field Level Notes for Form 10 ESMs:

None

ESM 4.2 - Percent of Breastfeeding Welcomed Here (BFWH)-designated businesses with ideal workplace lactation policies

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			0	0
Annual Indicator			0	38
Numerator				
Denominator				
Data Source			BFWH Tracking Spreadsheet	BFWH Tracking Spreadsheet
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	0.0	0.0	0.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: Survey will be implemented in Year 3.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: Results are from the survey pilot which was limited to Knox County BFWH businesses. 21 businesses completed the survey.	

ESM 4.3 - Recognition process implemented for Breastfeeding Welcomed Here (BFWH)-designated businesses

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			Yes	Yes
Annual Indicator			No	No
Numerator				
Denominator				
Data Source			BFWH Tracking Spreadsheet	BFWH Tracking Spreadsheet
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	Yes	Yes	Yes

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: Survey will be implemented in Year 3.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: Survey results indicated BFWH businesses were not interested or not sure about a tiered recognition system, so new recognition ideas are being explored	

ESM 5.1 - Percent of hospitals receiving national recognition or implementing approved safe sleep policy

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			100	100
Annual Indicator			100	100
Numerator				
Denominator				
Data Source			TDH	TDH
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	100.0	100.0	100.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: 50% of birthing hospitals have received national recognition; 100% have implemented an approved safe sleep policy.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: 50% of birthing hospitals have received national recognition; 100% have implemented an approved safe sleep policy.	

ESM 5.2 - Number of diaper bags with safe sleep educational materials distributed

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			663	676
Annual Indicator		1,636	1,928	1,932
Numerator				
Denominator				
Data Source		TDH	TDH	TDH
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	690.0	704.0	718.0

Field Level Notes for Form 10 ESMs:

None

ESM 8.1.1 - Percent of physical education teachers receiving professional development related to 50% of PE class time spent in moderate to vigorous physical activity

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			5	15
Annual Indicator			0	0
Numerator				
Denominator				
Data Source			N/A	N/A
Data Source Year			N/A	N/A
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	25.0	35.0	45.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: The state did not track progress on ESM 8.1.1 until Year 2; annual indicator will be provided in next year's applicaiton.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: The 2022 QPE Survey did not collect this information as expected. The 2023 district application survey will ask this question along with other types of PD. The ESM will have to be modified to reflect this change.	

ESM 8.1.2 - Percentage of TN counties in which trainings related to mental health and physical health have occurred

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			10
Annual Indicator			5.3
Numerator			
Denominator			
Data Source			TDH/CDHP Tracking Database
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	20.0	30.0	40.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: The state did not track progress on ESM 8.1.2 until Year 2; annual indicator will be provided in next year's applicaiton.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: Five counties received MAM training, including Cannon, Hawkins, Sumner, Carroll, and Wilson. Targets for 2023-25 have been revised.	

ESM 8.1.3 - Number of Gold Sneaker certified childcare facilities

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			700	800
Annual Indicator		549	643	643
Numerator				
Denominator				
Data Source		Gold Sneaker Database	Gold Sneaker Database	Gold Sneaker Database
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	900.0	950.0	1,000.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Baseline	

ESM 8.1.4 - Percent of LHD primary care clinics writing HPHP prescriptions annually

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			25
Annual Indicator			57.1
Numerator			
Denominator			
Data Source			TDH
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	40.0	55.0	65.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: The state did not track progress on ESM 8.1.4 until Year 2; annual indicator will be provided in next year's applicaiton.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: Based on 32 out of 56 clinics writing scripts. Revised targets for 2023-25.	

ESM 8.1.5 - Number of Healthy Parks Healthy Person prescriptions written

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			125	400
Annual Indicator		0	195	289
Numerator				
Denominator				
Data Source		TDEC HPHP Rx portal	TDEC HPHP Rx portal	TDEC HPHP Rx portal
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	550.0	700.0	850.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: Objectives are cumulative.	

ESM 8.1.6 - Percentage of TN counties with completed built environment projects

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			20	30
Annual Indicator			0	95
Numerator				
Denominator				
Data Source			OPP and Project Diabetes tracking databases	OPP and Project Diabetes tracking databases
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	40.0	50.0	60.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**

Field Note:
The state did not track progress on ESM 8.1.6 until Year 2; annual indicator will be provided in next year's application.

ESM 8.1.7 - Percent of eligible venues offering the Double Up Food Bucks Program

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			35	45
Annual Indicator			0	76.2
Numerator				
Denominator				
Data Source			Nourish Knoxville tracking database	Nourish Knoxville tracking database
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	55.0	65.0	75.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: The state did not track progress on ESM 8.1.7 until Year 2; annual indicator will be provided in next year's applicaiton.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: Based on 16 of 21 eligible venues.	

ESM 8.1.8 - Percent of staff with an increase in ACEs and TIC knowledge as evidenced by post training evaluation

Measure Status:	Inactive - Measure retired due to the unlikelihood of having the staff available to fulfill it.		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			80
Annual Indicator			0
Numerator			
Denominator			
Data Source			EBHV
Data Source Year			2022
Provisional or Final ?			Final

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: The program was unable to track progress on ESM 8.1.8 in Year 1 as the staff person that was involved with this project is no longer with the agency.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: Data unavailable	

ESM 8.1.9 - Percent of families with improved protective factors score

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			50	52
Annual Indicator			49.9	50
Numerator				
Denominator				
Data Source			EBHV	EBHV
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	54.0	56.0	58.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Data unavailable for 2020.	

ESM 8.1.10 - Percent of families enrolled in CHANT care coordination who partially or fully complete pathways identified

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective			41	42
Annual Indicator			42.6	45.2
Numerator				
Denominator				
Data Source			CHANT	CHANT
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	43.0	44.0	45.0

Field Level Notes for Form 10 ESMs:

None

ESM 11.1 - Number of CYSHCN who receive CHANT/CSS care coordination

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			2,500	3,000
Annual Indicator			4,885	4,930
Numerator				
Denominator				
Data Source			PTBMIS	PTBMIS
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	3,500.0	4,000.0	4,500.0

Field Level Notes for Form 10 ESMs:

None

ESM 11.2 - Percent of providers adopting medical home approach

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			40
Annual Indicator			0
Numerator			
Denominator			
Data Source			CYSHCN
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	55.0	65.0	75.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: No data to report at this time. Training and survey are expected to occur in Year 3.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: No data at this time - training and survey are to be conducted, expected to happen in Year 3. Data source will be from the program once the surveys are conducted an analyzed	

ESM 11.3 - Percent of providers reporting increased knowledge on systems of care

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			20
Annual Indicator			0
Numerator			
Denominator			
Data Source			CYSHCN
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	30.0	40.0	50.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: No data to report at this time. Training and survey are expected to occur in Year 3.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: No data at this time - training and survey are to be conducted, expected to happen in Year 3. Data source will be from the program once the surveys are conducted an analyzed	

ESM 11.4 - Number of families provided education and resources on importance of medical home access and utilization

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective				
Annual Indicator		1,383	1,424	1,749
Numerator				
Denominator				
Data Source		CHANT	CHANT	CHANT
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	800.0	900.0	1,000.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: annual objective should be 600	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: annual objective should be 700	

ESM 11.5 - Number of families receiving referrals to their child's primary care provider

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			375	400
Annual Indicator		222	216	272
Numerator				
Denominator				
Data Source		CHANT	CHANT	CHANT
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	425.0	450.0	475.0

Field Level Notes for Form 10 ESMs:

None

ESM 11.6 - Percent of providers who report an increase in their knowledge of available resources

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			25
Annual Indicator			0
Numerator			
Denominator			
Data Source			CYSHCN
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	50.0	75.0	100.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: No data to report at this time. Training and survey are expected to occur in Year 3.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: No data at this time - training and survey are to be conducted, expected to happen in Year 3. Data source will be from the program once the surveys are conducted an analyzed.	

ESM 11.7 - Percent of families who report an increase in access and utilization of resources

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			35
Annual Indicator			0
Numerator			
Denominator			
Data Source			CYSHCN
Data Source Year			2022
Provisional or Final ?			Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	40.0	50.0	60.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: No data to report at this time. Training and survey are expected to occur in Year 3.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: No data at this time - training and survey are to be conducted, expected to happen in Year 3. Data source will be from the program once the surveys are conducted an analyzed.	

ESM 11.8 - Percent of CHANT families who schedule an annual visit with their child's primary care provider

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			25	35
Annual Indicator			3.2	16
Numerator				
Denominator				
Data Source			CHANT	CH
Data Source Year			2021	2022
Provisional or Final ?			Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	45.0	55.0	65.0

Field Level Notes for Form 10 ESMs:

None

ESM 11.9 - Percent of CYSHCN receiving CHANT care coordination who receive medical home education

Measure Status:	Active		
State Provided Data			
	2020	**2021**	**2022**
Annual Objective			75
Annual Indicator		5.4	16.2
Numerator			
Denominator			
Data Source		CHANT	CHANT
Data Source Year		2021	2022
Provisional or Final ?		Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	85.0	95.0	100.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**

Field Note:
2870 eligible for CYSHCN received CHANT/CSS care coordination during FY. Of these, none marked already having a medical home, 555 are on medical home pathway, and 90 received education.

ESM 12.1 - Number of transition resource kits disseminated

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			150	300
Annual Indicator		0	100	366
Numerator				
Denominator				
Data Source		CYSHCN	CYSHCN	CYSHCN
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	600.0	1,200.0	2,400.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: No kits disseminated due to COVID.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: Data source FV and Program data for YAC and Attendees at YAC Conference, and training offered by FV	

ESM 12.2 - Number of youth with special health care needs trained as mentors

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			25	35
Annual Indicator		0	5	6
Numerator				
Denominator				
Data Source		CYSHCN	CYSHCN	CYSHCN
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	45.0	55.0	65.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: No mentors trained due to COVID.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: Program data. Number of YAC Members.	

ESM 12.3 - Number of parents and youth with special health care needs who receive leadership and self-advocacy training

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			50	75
Annual Indicator		71	150	475
Numerator				
Denominator				
Data Source		CYSHCN	CYSHCN	CYSHCN
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	100.0	125.0	150.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: 60 youth and 415 parents received leadership and self-advocacy training in Year 1.	
2.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: 60 youth, 415 parents	

ESM 14.2.1 - Number of tobacco-free sports teams

Measure Status:	Active			
State Provided Data				
	2019	**2020**	**2021**	**2022**
Annual Objective				
Annual Indicator		77	88	145
Numerator				
Denominator				
Data Source		Tobacco-free Sports Teams Database	Tobacco-free Sports Teams Database	Tobacco-free Sports Teams Database
Data Source Year		CY 2020	CY 2021	CY 2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	**2024**	**2025**
Annual Objective	83.0	85.0	88.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: Objective is cumulative	
2.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: Objective is cumulative	
3.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: Objective is cumulative & should be 81	

ESM 14.2.2 - Number of social media posts promoting text-based cessation services

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective				
Annual Indicator		0	9	33
Numerator				
Denominator				
Data Source		TDH Office of Communications	TDH Office of Communications	TDH Office of Communications
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	12.0	24.0	24.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: objective should be 12	

ESM 14.2.3 - Number of anti-tobacco social media posts

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective				
Annual Indicator		8	27	281
Numerator				
Denominator				
Data Source		TDH Office of Communications	TDH Office of Communications	TDH Office of Communications
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	12.0	24.0	24.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**

Field Note:
94 unique posts duplicated across three social media platforms

ESM 14.2.4 - Number of youth who attend the state anti-tobacco conference trainings

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			75	300
Annual Indicator		0	0	238
Numerator				
Denominator				
Data Source		TNSTRONG Registration	TNSTRONG Registration	TNSTRONG Registration
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	300.0	350.0	400.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2020**
	Column Name:	**State Provided Data**
	Field Note: No conference held due to COVID.	
2.	**Field Name:**	**2021**
	Column Name:	**State Provided Data**
	Field Note: No conference held in Year 1 due to COVID.	

ESM 14.2.5 - Number of ambassadors recruited

Measure Status:	Active

State Provided Data				
	2019	2020	2021	2022
Annual Objective			26	26
Annual Indicator		23	18	20
Numerator				
Denominator				
Data Source		TNSTRONG Ambassador Registration	TNSTRONG Ambassador Registration	TNSTRONG Ambassador Registration
Data Source Year		2020	2021	2022
Provisional or Final ?		Final	Final	Final

Annual Objectives			
	2023	2024	2025
Annual Objective	26.0	26.0	26.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**
	Field Note: 20 recruited; 31 total serving	

ESM 14.2.6 - Percent of eligible women who enroll in Baby and Me Tobacco Free

Measure Status:	Active

State Provided Data	
	2022
Annual Objective	
Annual Indicator	13.9
Numerator	
Denominator	
Data Source	TDH
Data Source Year	2022
Provisional or Final ?	Final

Annual Objectives		
	2024	2025
Annual Objective	14.7	15.0

Field Level Notes for Form 10 ESMs:

1.	**Field Name:**	**2022**
	Column Name:	**State Provided Data**

Field Note:
FY 2022 annual objective should be 14.1%

Form 10
State Performance Measure (SPM) Detail Sheets

State: Tennessee

SPM 1 - Percent of new mothers whose pregnancy was intended
Population Domain(s) – Women/Maternal Health

Measure Status:	Active
Goal:	To increase the percentage of new mothers whose pregnancy was intended
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of mothers reporting that their pregnancy was intended **Denominator:** Number of mothers that responded to the survey
Data Sources and Data Issues:	Pregnancy Risk Assessment Monitoring System (PRAMS)
Significance:	Unintended pregnancy is associated with increased risks for mothers and infants. If a woman is not planning to get pregnant, she may have unhealthy behaviors or delay getting health care during pregnancy, which can in turn affect her health and that of her infant. Most unintended pregnancies result from not using contraception or from not using it consistently or correctly. Family planning and contraceptive services provide social, economic, and health benefits and by allowing men and women to time and space the number of children they want, contraception prevents unintended, often high-risk pregnancies—too close together, too often, too early or too late in life—that can lead to maternal and child death and injury.

SPM 2 - Percent of facilities implementing patient safety recommendations
Population Domain(s) – Women/Maternal Health

Measure Status:	Active
Goal:	To reduce severe maternal morbidity and mortality through improved quality of care.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of birthing facilities implementing patient safety recommendations **Denominator:** Number of birthing facilities in Tennessee
Data Sources and Data Issues:	Maternal Mortality Review Information Application (MMRIA) and Vital Records Birth Statistical System
Significance:	Healthcare and other community-based agencies are strategically poised to identify at-risk populations for severe maternal morbidity and maternal mortality. Therefore, supporting these agencies is important in the secondary prevention of severe maternal morbidity and maternal deaths. This measure will be calculated as number of agencies funded with details on the populations they reach/serve.

SPM 3 - Percent of community level recommendations implemented
Population Domain(s) – Women/Maternal Health

Measure Status:	Inactive - Replaced
Goal:	To reduce severe maternal morbidity and mortality through community-level interventions.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of recommendations addressed at the community level **Denominator:** Total number of community-level recommendations
Data Sources and Data Issues:	Maternal Mortality Review Information Application (MMRIA)
Significance:	Healthcare and other community-based agencies are strategically poised to identify at-risk populations for severe maternal morbidity and maternal mortality. Therefore, supporting these agencies is important in the secondary prevention of severe maternal morbidity and maternal deaths. This measure will be calculated as number of agencies funded with details on the populations they reach/serve.

SPM 4 - Percent of Tennessee newborns who initiated breastfeeding
Population Domain(s) – Perinatal/Infant Health

Measure Status:	Active
Goal:	To increase the percent of Tennessee newborns who initiated breastfeeding
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of Tennessee newborns who initiated breastfeeding **Denominator:** Number of Tennessee newborns
Data Sources and Data Issues:	Tennessee Birth Statistical System
Significance:	Breastfeeding has a multitude of health benefits for both mother and infant. Initiation of breastfeeding has been associated with a reduction in infant mortality, so breastfeeding promotion and support warrants inclusion as a strategy of infant mortality reduction efforts.

SPM 5 - Percent of safe sleep diaper bag recipients who reported making a behavioral change in their infant sleep practices because of the items included in the bag
Population Domain(s) – Perinatal/Infant Health

<table>
<tr><td>Measure Status:</td><td>Active</td></tr>
<tr><td>Goal:</td><td>To increase the percentage of safe sleep diaper bag recipients who report making a behavioral change in their infant safe sleep practices because of the items included in the bag.</td></tr>
<tr><td>Definition:</td><td>
<table>
<tr><td>Unit Type:</td><td>Percentage</td></tr>
<tr><td>Unit Number:</td><td>100</td></tr>
<tr><td>Numerator:</td><td>Number of safe sleep diaper bag recipients who report making a behavioral change in their infant safe sleep practices because of the items included in the bag</td></tr>
<tr><td>Denominator:</td><td>Number of evidence-based home visiting (EBHV) and Community Health Access and Navigation in Tennessee (CHANT) who reported receiving a safe sleep diaper bag from their home visitor</td></tr>
</table>
</td></tr>
<tr><td>Healthy People 2030 Objective:</td><td>Increase the proportion of infants who are put to sleep on their backs (MICH-14). Baseline: 78.7 percent of infants born in 2016 were put to sleep on their backs. Target: 88.9 percent. Data source: Pregnancy Risk Assessment Monitoring System (PRAMS), CDC/NCCDPHP.

Increase the proportion of infants who are put to sleep in a safe sleep environment (MICH-D03). No baseline data available.</td></tr>
<tr><td>Data Sources and Data Issues:</td><td>REDCap CHANT and EBHV data collection tools</td></tr>
<tr><td>Significance:</td><td>The Safe Sleep Diaper Bag Project was created in 2018 to provide EBHV participants with 1) standardized safe sleep education from their home visitor and 2) a diaper bag containing materials with safe sleep messaging. In 2019, the project was expanded to also include participants of the CHANT program. Diaper bags include several useful materials to aid in safe sleep including a onesie, sleep sack, safe sleep door hanger, Sleep Baby Safe and Snug book, Calm Baby Gently book, and nightlight. As of July 2021, over 1600 safe sleep diaper bags have been distributed to EBHV and CHANT caregivers. When asked by their home visitor whether the items in the diaper bag had caused them to change how they put their infant to sleep, 35 percent of EBHV recipients and 53 percent of CHANT recipients reported making a change. Tennessee aims to continue increasing these percentages by using data collected so far to make adjustments shown to be associated with higher percentages of reported behavioral change, such as reaching parents in the prenatal period (rather than after the baby’s birth). Increasing the prevalence of the recommended safe sleep behaviors is critical to reducing the rate of sleep-related infant death in Tennessee, and partnering with EBHV and CHANT provides the opportunity to reach vulnerable, underserved parents.</td></tr>
</table>

SPM 6 - Percent of schools with at least 50% physical education class time spent in moderate to vigorous physical activity
Population Domain(s) – Child Health

Measure Status:	Active
Goal:	Increase the percentage of state public elementary and middle schools that provide or require moderate to vigorous physical education
Definition:	<table><tr><td>**Unit Type:**</td><td>Percentage</td></tr><tr><td>**Unit Number:**</td><td>100</td></tr><tr><td>**Numerator:**</td><td>Number of schools completing the survey and providing a positive response for the “50% moderate/vigorous physical education” question</td></tr><tr><td>**Denominator:**</td><td>Number of schools completing the survey and providing a valid response for the “50% moderate/vigorous physical education” question</td></tr></table>
Healthy People 2030 Objective:	Reduce the proportion of children and adolescents with obesity — NWS04 Increase the proportion of children who do enough aerobic physical activity — PA09
Data Sources and Data Issues:	The Coordinated School Health (CSH) annual Quality Physical Education Survey, which is completed by the lead physical education teacher at each LEA school. There is currently no baseline data for this state performance measure. A question is being added to the annual TDE Quality Physical Education Survey in the fall of 2021 that will provide those data. Target values for subsequent years will be set at that time.
Significance:	Given the huge proportion of the week that most children spend in school, regular physical education can go a long way toward satisfying the daily standard for physical activity within the elementary and middle school age groups. The values will include a simple count of all public elementary and middle schools statewide and a count of those schools indicating on the QPE Survey that they provide physical education for their students that includes moderate or vigorous physical activity at least half of the PE class period.

SPM 7 - Rate of Double Up Food Bucks purchases per SNAP recipient
Population Domain(s) – Child Health

Measure Status:	Inactive - Replaced
Goal:	To increase the rate of Double Up Food Buck purchases transacted at eligible venues (e.g., farmers' markets and farmers' stores) in counties targeted by Nourish Knoxville per each SNAP recipient residing in those counties.
Definition:	**Unit Type:** Ratio **Unit Number:** 1 **Numerator:** Number of Double Up Food Bucks purchases transacted in the targeted counties **Denominator:** Total number of SNAP recipients in the targeted counties
Healthy People 2030 Objective:	NWS-04: Reduce the proportion of children and adolescents with obesity; NWS-06: Increase fruit consumption by people by aged 2 years and older; NWS-07: Increase vegetable consumption by people aged 2 years and older; NWS-08: Increase consumption of dark green vegetables, red and orange vegetables, and beans and peas by people aged 2 years and over; NWS-02: Eliminate very low food security in children
Data Sources and Data Issues:	Nourish Knoxville tracking database and program reports related to Double Up Food Bucks purchases and the Department of Human Services (DHS) database and website of aggregate SNAP recipients in the targeted counties (currently six); no known data issues.
Significance:	The consumption of healthier foods, especially fruits and vegetables, and healthier beverages is critical to maintaining or achieving healthy weight. Studies have shown that affordability of healthy food choices is often a barrier that influences access to foods that support healthy eating patterns. Concerted community planning and action among a diversified network of partners is critical to addressing low food security and increasing availability, access, affordability, and consumption related to healthier food and beverage options. Farmers' markets and farmers' stores, the TN Department of Health, the TN Department of Human Services (SNAP), and organizations such as Nourish Knoxville are key stakeholders in this effort. Partnerships can leverage shared resources in an effective and efficient manner. Values for this measure will be the number of Double Up Bucks purchases reimbursed by Nourish Nashville and well as the number of DHS SNAP recipients in the target geographic area.

SPM 8 - Percent of children with two or more ACEs
Population Domain(s) – Child Health

Measure Status:	Active
Goal:	To decrease the percent of children who experience 2 or more ACEs
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of children with 2 or more adverse childhood experiences **Denominator:** Number of children aged 0 -17 years
Data Sources and Data Issues:	NSCH- Limitation(s): 1) Data available upon release from the NSCH.
Significance:	Adverse childhood experiences (ACEs) are traumatic events occurring before age 18. ACEs include all types of abuse and neglect as well as parental mental illness, substance use, divorce, incarceration, and domestic violence. A landmark study in the 1990s found a significant relationship between the number of ACEs a person experienced and a variety of negative outcomes in adulthood, including poor physical and mental health, substance abuse, and risky behaviors. The more ACEs experienced, the greater the risk for these outcomes. The NSCH conducts a survey annually, which included tools to estimate the percent of children who experience one or more ACEs of the nine ACEs including child maltreatment, mental depression, IPV etc.

SPM 9 - Percent of substantiated child maltreatment cases among families served by home visiting programs
Population Domain(s) – Child Health

<table>
<tr><td>Measure Status:</td><td>Active</td></tr>
<tr><td>Goal:</td><td>To decrease percentage of children enrolled in home visiting that experience child maltreatment (i.e., substantiated claims to DCS)</td></tr>
<tr><td>Definition:</td><td>
<table>
<tr><td>Unit Type:</td><td>Percentage</td></tr>
<tr><td>Unit Number:</td><td>100</td></tr>
<tr><td>Numerator:</td><td>Number of children enrolled in a home visiting program who experience maltreatment (substantiated case)</td></tr>
<tr><td>Denominator:</td><td>Number of children enrolled in a home visiting program</td></tr>
</table>
</td></tr>
<tr><td>Data Sources and Data Issues:</td><td>The number of substantiated child maltreatment cases among children enrolled in home visiting (i.e., the numerator) comes from a merged DCS file; EBHV REDCap Data Collection System.

Data Issues: Because this measure is collaborative, it can only move forward as the merge is completed by DCS.</td></tr>
<tr><td>Significance:</td><td>The Injury and Violence Prevention goal of Healthy People 2020 is “prevent unintentional injuries and violence, and reduce their consequences.” Childhood abuse- physical, emotional, or sexual- is one of the ten categories of adverse childhood experiences. Prevention strategies of this ACE include increasing parenting skills and the promotion of strong, caring adult relationships by means of such programming as home visiting. We have chosen to focus on this measure as home visiting is potentially a prevention strategy of ACEs that will impact the aforementioned HP strategy.

Centers for Disease Control and Prevention, Kaiser Permanente. The ACE Study Survey Data [Unpublished Data]. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2016.

Healthy People 2020 [Internet]. Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion [cited 06/18/20].</td></tr>
</table>

SPM 10 - Percent of caregivers who experience intimate partner violence and do not receive professional support services among families served by home visiting
Population Domain(s) – Child Health

<table>
<tr><td>Measure Status:</td><td>Active</td></tr>
<tr><td>Goal:</td><td>To increase the percentage of enrolled home visiting caregivers who experience intimate partner violence and receive professional services.</td></tr>
<tr><td>Definition:</td><td>
<table>
<tr><td>Unit Type:</td><td>Percentage</td></tr>
<tr><td>Unit Number:</td><td>100</td></tr>
<tr><td>Numerator:</td><td>Number of primary caregivers who screen positive for IPV but are not referred to professional support services</td></tr>
<tr><td>Denominator:</td><td>Number of primary caregivers who screen positive for IPV</td></tr>
</table>
</td></tr>
<tr><td>Data Sources and Data Issues:</td><td>EBHV REDCAP Data Collection System, HITS Screen</td></tr>
<tr><td>Significance:</td><td>The Injury and Violence Prevention goal of Healthy People 2020 is “prevent unintentional injuries and violence, and reduce their consequences.” Injury and violence occurrences have been associated to premature death, an increase in years of potential life lost, depreciating mental health, and higher medical costs. This priority measure looks at how those that are and have previously experienced intimate partner violence are receiving professional services, which could possibly reduce the number of occurrences of the listed, negatively- associated health outcomes. The adverse child experience of witnessing domestic violence in the home could be mitigated by rehabilitative services received by a caregiver and thereby positively impact long-term health outcomes.

Centers for Disease Control and Prevention, Kaiser Permanente. The ACE Study Survey Data [Unpublished Data]. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2016.

Child and Adolescent Health Measurement Initiative. 2017-2018 National Survey of Children’s Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB).Retrieved [06/18/20] from [www.childhealthdata.org].

Healthy People 2020 [Internet]. Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion [cited 06/18/20].</td></tr>
</table>

SPM 11 - Percent of high school students currently using cigarettes
Population Domain(s) – Adolescent Health

Measure Status:	Active
Goal:	To decrease the number of adolescents who smoke cigarettes
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number (weighted) of TN public high school students reporting current (past 30 day) use of cigarette(s) **Denominator:** Number (weighted) of TN public high school students responding to current cigarette use question
Healthy People 2030 Objective:	TU-04 Reduce current tobacco use in adolescents TU-10 Eliminate cigarette smoking initiation in adolescents and young adults
Data Sources and Data Issues:	Youth Risk Behavior Surveillance System (YRBS), biennial survey
Significance:	This metric is one of the most important intermediate goals for tobacco control, denoting the current burden of combustible cigarette use among TN public high school students. Changes in this trend and its demographic distributions inform the Tobacco Control Program's goals, activities, and resource allocation. Achieving low prevalence of combustible cigarette use among adolescents is paramount to reducing the overall health burden tobacco places on Tennessee's broader population in the future.

SPM 12 - Percent of high school students currently using e-cigarettes
Population Domain(s) – Adolescent Health

Measure Status:	Active
Goal:	To reduce the number of adolescents currently using e-cigarettes
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number (weighted) of public high school students reporting current (past 30 day) use of e-cigarette(s) **Denominator:** Number (weighted) of public high school students responding to current e-cigarette use question
Healthy People 2030 Objective:	TU-04 Reduce current tobacco use in adolescents TU-10 Eliminate cigarette smoking initiation in adolescents and young adults
Data Sources and Data Issues:	Youth Risk Behavior Surveillance System (YRBS), biennial survey
Significance:	Similar to combustible cigarette use, this metric is one of the most important intermediate goals for tobacco control, denoting the current burden of emerging tobacco product (including e-cigarette) use among TN public high school students. Changes in this trend and its demographic distributions inform the Tobacco Control Program's goals, activities, and resource allocation. Achieving low prevalence of e-cigarette use among adolescents is paramount to reducing the overall health burden tobacco use places on Tennessee's broader population in the future.

SPM 13 - Number of adolescents enrolled in cessation program
Population Domain(s) – Adolescent Health

Measure Status:	Active
Goal:	To increase the number of youth who enroll in tobacco cessation programs
Definition:	**Unit Type:** Count **Unit Number:** 150 **Numerator:** Number of adolescent-aged unique enrollees to cessation program **Denominator:**
Healthy People 2030 Objective:	TU-04 Reduce current tobacco use in adolescents
Data Sources and Data Issues:	Tennessee Tobacco Quitline & American Lung Association N-O-T: Not On Tobacco Program
Significance:	Adolescent utilization of cessation programs in Tennessee has historically been low, despite a growing proportion of youth using or experimenting with e-cigarettes and other emerging products. Additionally, standardized guidelines and recommendations for health care professionals to promote and support cessation attempts among adolescents is absent. Given the emerging public health issue of youth e-cigarette and emerging product use, TUPCP seeks to fill a key gap in assisting adolescents to quit using tobacco products and e-cigarettes in Tennessee.

SPM 14 - Number of CYSHCN receiving care in a medical home
Population Domain(s) – Children with Special Health Care Needs

Measure Status:	Active
Goal:	To increase the number of CYSHCN receiving care in medical home
Definition:	**Unit Type:** Count **Unit Number:** 2,200 **Numerator:** Number of CYSHCN receiving care in medical home **Denominator:**
Data Sources and Data Issues:	Data source: PTBMIS Limitation: The question asked is “have you had annual exam at your primary care provider’s office in the past 12 months”. Having annual exam at PCP is not equivalent to medical home.
Significance:	It is important to ensure the children with special healthcare needs served by the Tennessee Children’s Special Services program receive preventive services in medical home setting.

SPM 15 - Percent of providers with increased knowledge on medical home and care coordination
Population Domain(s) – Children with Special Health Care Needs

Measure Status:	Active
Goal:	To increase the percent of providerswith increased knowledge of medical home and care coordination
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of providers with increased knowledge of medical home and care coordination **Denominator:** Number of providers recieving education and resources
Healthy People 2030 Objective:	MICH-30.1 Increase the proportion of children who have access to a medical home – 63.3% MICH-30.2 Increase the proportion of children with special health care needs who have access to a medical home – 51.8% MICH-31.1 Increase the proportion of children aged 0 to 11 years with special health care needs who receive their care in family-centered, comprehensive, and coordinated systems – 22.4% MICH-31.2 Increase the proportion of children aged 12 to 17 years with special health care needs who receive their care in family-centered, comprehensive, coordinated systems – 15.1%
Data Sources and Data Issues:	Data source: The program plans to provide training, education and resources and conduct a survey among those providers receiving the information. Limitation: Not all providers surveyed will return the survey with complete answers.
Significance:	Increased knowledge among providers on medical home best practices is expected to result in increased adoption in their practices, resulting in increased access and utilization of the medical home.

SPM 16 - Percent of providers reporting improved system of care for CYSCHN
Population Domain(s) – Children with Special Health Care Needs

<table>
<tr><td>Measure Status:</td><td>Active</td></tr>
<tr><td>Goal:</td><td>To increase the percent of providers reporting an improved system of care for CYSHCN.</td></tr>
<tr><td>Definition:</td><td>
<table>
<tr><td>Unit Type:</td><td>Percentage</td></tr>
<tr><td>Unit Number:</td><td>100</td></tr>
<tr><td>Numerator:</td><td>Number of providers surveyed who provided answers to the question reporting improved system of care in their practice</td></tr>
<tr><td>Denominator:</td><td>Number of providers provided information on systems of care</td></tr>
</table>
</td></tr>
<tr><td>Healthy People 2030 Objective:</td><td>MICH-30.1 Increase the proportion of children who have access to a medical home – 63.3%
MICH-30.2 Increase the proportion of children with special health care needs who have access to a medical home – 51.8%
MICH-31.1 Increase the proportion of children aged 0 to 11 years with special health care needs who receive their care in family-centered, comprehensive, and coordinated systems – 22.4%
MICH-31.2 Increase the proportion of children aged 12 to 17 years with special health care needs who receive their care in family-centered, comprehensive, coordinated systems – 15.1%</td></tr>
<tr><td>Data Sources and Data Issues:</td><td>Program plans to conduct a survey among providers.
Limitation: Not all providers surveyed will respond.</td></tr>
<tr><td>Significance:</td><td>Providers with better knowledge of systems of care are more likely to practice medical home approach services to children under their care.</td></tr>
</table>

SPM 17 - Percent of families who complete an annual visit with their primary care provider
Population Domain(s) – Children with Special Health Care Needs

Measure Status:	Active
Goal:	To increase the percentage of children who complete an annual visit with their primary care provider.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of children who complete an annual primary care visit in the medical home **Denominator:** Number of children/youth referred for an annual primary care visit in the medical home
Healthy People 2030 Objective:	MICH-30.1 Increase the proportion of children who have access to a medical home – 63.3% MICH-30.2 Increase the proportion of children with special health care needs who have access to a medical home – 51.8% MICH-31.1 Increase the proportion of children aged 0 to 11 years with special health care needs who receive their care in family-centered, comprehensive, and coordinated systems – 22.4% MICH-31.2 Increase the proportion of children aged 12 to 17 years with special health care needs who receive their care in family-centered, comprehensive, coordinated systems – 15.1%
Data Sources and Data Issues:	Data source: CHANT REDCap data, Call Center data system Limitation: matching data from different data systems
Significance:	It is important to ensure that children and families receive annual medical exams and preventive care in an assigned medical home setting especially for continuity of care and detecting potential problems early.

SPM 18 - Percent of youth reporting with increased knowledge on transition resources and services
Population Domain(s) – Children with Special Health Care Needs

Measure Status:	Active
Goal:	To increase the percent of youth surveyed with increased knowledge on transition resources and services.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of youth reporting increased knowledge on transition resources and services **Denominator:** Number of youth provided education and resources on transition resources and services
Healthy People 2030 Objective:	MICH-30.1 Increase the proportion of children who have access to a medical home – 63.3% MICH-30.2 Increase the proportion of children with special health care needs who have access to a medical home – 51.8% MICH-31.1 Increase the proportion of children aged 0 to 11 years with special health care needs who receive their care in family-centered, comprehensive, and coordinated systems – 22.4% MICH-31.2 Increase the proportion of children aged 12 to 17 years with special health care needs who receive their care in family-centered, comprehensive, coordinated systems – 15.1%
Data Sources and Data Issues:	Data source: The program plans to provide training, education and resources and conduct a survey among youth that participate in the youth advisory conference. Limitation: Not all youth attending the conference will complete and return the survey with complete answers.
Significance:	Increased knowledge among youth on transition resources and services is expected to result in increased development and completion of an annual transition plan.

SPM 19 - Percent of YSHCN served by CHANT who complete an annual transition plan
Population Domain(s) – Children with Special Health Care Needs

Measure Status:	Active
Goal:	To increase each year by 3 persons the number of youth participating in advisory councils and state policy development.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of youth served by CHANT who complete an annual transition plan **Denominator:** Number of YSHCN who are served by CHANT
Healthy People 2030 Objective:	MICH-30.1 Increase the proportion of children who have access to a medical home – 63.3% MICH-30.2 Increase the proportion of children with special health care needs who have access to a medical home – 51.8% MICH-31.1 Increase the proportion of children aged 0 to 11 years with special health care needs who receive their care in family-centered, comprehensive, and coordinated systems – 22.4% MICH-31.2 Increase the proportion of children aged 12 to 17 years with special health care needs who receive their care in family-centered, comprehensive, coordinated systems – 15.1% DH-5 Increase the proportion of youth with special health care needs whose health care provider has discussed transition planning from pediatric to adult health care – 41.2%
Data Sources and Data Issues:	Data source: PTBMIS Limitation: Not all YSHCN will receive services through CHANT
Significance:	The program is to encourage active participation and involvement of the youth in developing and completing an annual transition plan.

SPM 20 - Percent of youth leaders participating in advisory councils providing resources to other youth
Population Domain(s) – Children with Special Health Care Needs

Measure Status:	Active
Goal:	To increase each year by 3 persons the number of youth participating in advisory councils and state policy development.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of youth participating in advisory councils providing resources to other youth **Denominator:** Number of youth participating in advisory councils
Healthy People 2030 Objective:	MICH-30.1 Increase the proportion of children who have access to a medical home – 63.3% MICH-30.2 Increase the proportion of children with special health care needs who have access to a medical home – 51.8% MICH-31.1 Increase the proportion of children aged 0 to 11 years with special health care needs who receive their care in family-centered, comprehensive, and coordinated systems – 22.4% MICH-31.2 Increase the proportion of children aged 12 to 17 years with special health care needs who receive their care in family-centered, comprehensive, coordinated systems – 15.1% DH-5 Increase the proportion of youth with special health care needs whose health care provider has discussed transition planning from pediatric to adult health care – 41.2%
Data Sources and Data Issues:	Data source: Program records.
Significance:	The program is to encourage active participation and involvement of the youth and develop mentor-mentee relationships that will assist youth in completing a successful transition to adult care.

SPM 21 - Percent of women who reported 14+ days of poor mental health in the past month
Population Domain(s) – Cross-Cutting/Systems Building

Measure Status:	Active
Goal:	To decrease the percent of women who reported 14+ days of poor mental health in the past month
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of women who reported 14+ days when mental health was not good **Denominator:** Total number of female respondents
Healthy People 2030 Objective:	Related to Mental Health and Mental Disorders (MHMD) Objective 01: Reduce the suicide rate. (Baseline: 14.2 suicides per 100,000 population occurred in 2018 (age adjusted to the year 2000 standard population), Target: 12.8 suicides per 100,000 population)
Data Sources and Data Issues:	Tennessee Behavioral Risk Factor Surveillance System (https://www.tn.gov/content/dam/tn/health/documents/brfss/TN19CALC.pdf)
Significance:	Mental health conditions are among the most common health conditions in the United States. According to the World Health Organization, more than 50% of people will be diagnosed with a mental illness or disorder at some point in their lifetime.1 Mental health is an important component of overall health and wellbeing and impacts chronic health conditions, such as heart disease. This measure will be obtained from the Tennessee Behavioral Risk Factor Surveillance System. 1 Kessler RC, Angermeyer M, Anthony JC, et al. Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. World Psychiatry. 2007;6(3):168-176.

SPM 22 - Percent of children who had difficulties obtaining mental health care among those who received or needed care during the past 12 months, age 3-17 years
Population Domain(s) – Cross-Cutting/Systems Building

Measure Status:	Active
Goal:	To decrease the percent of children who had difficulties obtaining mental health care among those who received or needed care during the past 12 months
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Received or needed mental health care but it was somewhat difficult to get it; Received or needed mental health care but it was very difficult to get it; It was not possible to obtain care **Denominator:** Children age 3-17 years who received or needed any mental health treatment or counseling
Healthy People 2030 Objective:	Related to Mental Health and Mental Disorders (MHMD) Objective 03: Increase the proportion of children with mental health problems who get treatment. (Baseline: 73.3% of children aged 4 to 17 years with mental health problems received treatment in 2018, Target: 82.4%)
Data Sources and Data Issues:	National Survey of Children's Health (NSCH) (https://www.childhealthdata.org/browse/survey)
Significance:	Mental/behavioral health conditions among US children and adolescents are increasing in prevalence1. However, gaps in access to treatment remain, and a significant number of children with mental health conditions experience difficulties obtaining mental health care. This measure will be obtained from the National Survey of Children's Health. 1Ghandour RM, Sherman LJ, Vladutiu CJ, et al. Prevalence and Treatment of Depression, Anxiety, and Conduct Problems in US Children. J Pediatr. 2019;206:256-267.e3. doi:10.1016/j.jpeds.2018.09.021

SPM 23 - Number community level recommendations implemented
Population Domain(s) – Women/Maternal Health

Measure Status:	Active
Goal:	To implement recommendations from the MMR Committee in reducing maternal mortality
Definition:	**Unit Type:** Count **Unit Number:** 25 **Numerator:** Number of recommendations addressed at the community level **Denominator:**
Healthy People 2030 Objective:	MICH-5: Reduce the rate of maternal mortality. Baseline 12.7 maternal deaths per 100,000 live births in 2007. Target is 11.4 maternal deaths per 100,000 live births.
Data Sources and Data Issues:	MMRIA Files
Significance:	Community-level recommendations are far reaching and population-based strategies to improved access to care and better treatment, all of which are necessary for reduced maternal mortality

SPM 24 - Rate of Double Up Food Bucks purchases per SNAP recipient
Population Domain(s) – Child Health

Measure Status:	Active
Goal:	Increase the rate of Double Up Food Buck purchases transacted at eligible venues (e.g., farmers' markets and farmers' stores) in counties targeted by Nourish Knoxville per each SNAP recipient residing in those counties.
Definition:	**Unit Type:** Rate **Unit Number:** 1,000 **Numerator:** Number of Double Up Food Bucks purchases transacted in the targeted counties **Denominator:** Total number of SNAP recipients in the targeted counties
Healthy People 2030 Objective:	NWS-04: Reduce the proportion of children and adolescents with obesity; NWS-06: Increase fruit consumption by people by aged 2 years and older; NWS-07: Increase vegetable consumption by people aged 2 years and older; NWS-08: Increase consumption of dark green vegetables, red and orange vegetables, and beans and peas by people aged 2 years and over; NWS-02: Eliminate very low food security in children.
Data Sources and Data Issues:	Nourish Knoxville tracking database and program reports related to Double Up Food Bucks purchases and the Department of Human Services (DHS) database and website of aggregate SNAP recipients in the targeted counties (currently six); no known data issues.
Significance:	The consumption of healthier foods, especially fruits and vegetables, and healthier beverages is critical to maintaining or achieving healthy weight. Studies have shown that the affordability of healthy food choices is often a barrier that influences access to foods that support healthy eating patterns. Concerted community planning and action among a diversified network of partners is critical to addressing low food security and increasing availability, access, affordability, and consumption related to healthier food and beverage options. Farmers' markets and farmers' stores, the TN Department of Health, the TN Department of Human Services (SNAP), and organizations such as Nourish Knoxville are key stakeholders in this effort. Partnerships can leverage shared resources in an effective and efficient manner. Values for this measure will be the number of Double Up Bucks purchases reimbursed by Nourish Nashville as well as the number of DHS SNAP recipients in the target geographic area.

Form 10
State Outcome Measure (SOM) Detail Sheets

State: Tennessee

SOM 1 - Rate of pregnancy-associated mortality to live birth
Population Domain(s) – Women/Maternal Health

Measure Status:	Active
Goal:	To decrease the pregnancy-associated mortality
Definition:	**Unit Type:** Rate **Unit Number:** 100,000 **Numerator:** Number of pregnancy-associated deaths **Denominator:** Live births
Data Sources and Data Issues:	Maternal Mortality Review Information Application (MMRIA) and Vital Records Birth Statistical System
Significance:	Maternal mortality is a sentinel event and an indicator of a nation's health. Rate of pregnancy-associated mortality rate is calculated as a ratio of maternal deaths within 365 days after the end of a pregnancy per 100,000 live births. In calculating maternal mortality rate, we can identify populations that are disproportionately affected by maternal deaths and monitor Tennessee's progress in decreasing maternal mortality and severe maternal morbidity.

SOM 2 - Rate of pregnancy-related mortality to live births
Population Domain(s) – Women/Maternal Health

Measure Status:	Active
Goal:	To reduce the rate of pregnancy-related mortality
Definition:	**Unit Type:** Rate **Unit Number:** 100,000 **Numerator:** Pregnancy-related deaths **Denominator:** Live births
Data Sources and Data Issues:	Maternal Mortality Review Information Application (MMRIA) and Vital Records Birth Statistical System
Significance:	Maternal mortality is a sentinel event and an indicator of a nation's health. Maternal mortality rate is calculated as a ratio of maternal deaths within 365 days after the end of a pregnancy per 100,000 live births. In calculating maternal mortality rate, we can identify populations that are disproportionately affected by maternal deaths and monitor Tennessee's progress in decreasing maternal mortality and severe maternal morbidity.

SOM 3 - Percent of public school 6th graders who are overweight or obese
Population Domain(s) – Child Health

Measure Status:	Active
Goal:	Decrease the percentage of public school 6th graders who are overweight or obese
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of public school 6th graders who are overweight or obese **Denominator:** Number of TN public school 6th graders
Healthy People 2030 Objective:	Reduce the proportion of children and adolescents with obesity — NWS04
Data Sources and Data Issues:	Weight Status Database (TN Coordinated School Health). These annual data are based on direct height and weight measurements for participating students only in grades K, 2, 4, 6, 8, and any one year of high school who have permission from their parent to be measured. Therefore, there could be significant self-selection bias.
Significance:	This statistic is a direct, core measure of the child obesity priority for school-aged children. Sixth graders were selected as a cross-section of the target group, as these students represent both late elementary and early middle school populations. Both overweight and obesity are included in order to present a broader view of the health concern. Values for the measure will derive from the official CSH annual report entitled, “Tennessee Public Schools: A Summary of Weight Status Data.” The report includes statistics on students who have been identified with a BMI in the overweight or obese range.

SOM 4 - Percent of WIC recipients aged 2-4 years who are overweight or obese
Population Domain(s) – Child Health

Measure Status:	Active
Goal:	Decrease the percentage of WIC recipients aged 2-4 years who are overweight or obese
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of WIC recipients aged 2-4 years who are overweight or obese **Denominator:** Total number of WIC recipients aged 2-4 years
Healthy People 2030 Objective:	Reduce the proportion of children and adolescents with obesity — NWS04
Data Sources and Data Issues:	WIC program recipients database; no known data issues
Significance:	This statistic is a direct, core measure of the child obesity priority for pre-school aged children. The importance of starting children off right early in life when it comes to maintaining healthy weight through good nutrition and physical activity helps prevent further health problems related to obesity later in life. Values for the measure will derive from direct measurements taken by WIC clinical staff statewide.

SOM 5 - Percent of adults reporting Chronic obstructive pulmonary disease (COPD)
Population Domain(s) – Adolescent Health

Measure Status:	Active
Goal:	To decrease the rate of adults with COPD
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of hospital discharges with a principal diagnosis of COPD (ICD-9-CM codes 490-492, 496) among adults aged 45 years and over **Denominator:** Number of persons aged 45 years and over
Healthy People 2030 Objective:	RD-05 Reduce deaths from chronic obstructive pulmonary disease (COPD) in adults
Data Sources and Data Issues:	National Hospital Discharge Survey (NHDS), CDC/NCHS; Population Estimates, Census
Significance:	Asthma and chronic obstructive pulmonary disease (COPD) are significant public health burdens. Specific methods of detection, intervention, and treatment exist that may reduce this burden and promote health. Approximately 14.8 million adults have been diagnosed with COPD, and approximately 12 million people have not yet been diagnosed[1]. The burden of respiratory diseases affects individuals and their families, schools, workplaces, neighborhoods, cities, and states. [1] National Institutes of Health, National Heart, Lung, and Blood Institute (NHLBI). Morbidity and mortality: 2012 chart book on cardiovascular, lung and blood diseases. Bethesda, MD: NHLBI; 2012 Feb [cited 2016 Aug 15]. Available from: https://www.nhlbi.nih.gov/files/docs/research/2012_ChartBook_508.pdf

SOM 6 - Percent of adults reporting cardiovascular disease
Population Domain(s) – Adolescent Health

Measure Status:	Active
Goal:	To decrease the number of adult Tennesseans with cardiovascular disease
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number (weighted) of adults reporting they have ever been told they have angina or coronary heart disease **Denominator:** Number (weighted) of adults responding to coronary heart disease question
Healthy People 2030 Objective:	HDS-2 Reduce coronary heart disease deaths
Data Sources and Data Issues:	Behavioral Risk Factor Surveillance System (BRFSS), annual survey
Significance:	Cardiovascular disease continues to be a leading cause of death among adult Tennesseans. By addressing tobacco and e-cigarette use among adolescents, future prevalence of cardiovascular disease will be reduced, which in turn will reduce the mortality rate from cardiovascular disease in the state.

SOM 7 - Age-adjusted mortality rate from tobacco-attributable cancers among Tennesseans aged 35+
Population Domain(s) – Adolescent Health

Measure Status:	Active
Goal:	To decrease the number of deaths in Tennessee from tobacco-attributable cancers
Definition:	**Unit Type:** Rate **Unit Number:** 100,000 **Numerator:** Number of deaths from tobacco-attributable cancers **Denominator:** Number of deaths
Healthy People 2030 Objective:	C-01 Reduce the overall cancer death rate
Data Sources and Data Issues:	Tobacco-attributable cancer (or potentially all cancer) mortality rates will be derived from CDC Wonder
Significance:	Tobacco is the leading preventable cause of cancer death in Tennessee. By implementing the listed activities and effectively engaging partners, TUPCP aims to reduce Tennessee's mortality from tobacco-attributable cancers in the future.

SOM 8 - Percent of pregnancy-associated deaths in which mental health conditions was a contributing factor
Population Domain(s) – Cross-Cutting/Systems Building

Measure Status:	Active
Goal:	To decrease the percent of pregnancy-associated deaths in which mental health conditions was a contributing factor
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of pregnancy-associated deaths in which a mental health condition was a contributing factor **Denominator:** Number of pregnancy-associated deaths
Healthy People 2030 Objective:	Related to Mental Health and Mental Disorders (MHMD) Objective 01: Reduce the suicide rate. (Baseline: 14.2 suicides per 100,000 population occurred in 2018 (age adjusted to the year 2000 standard population), Target: 12.8 suicides per 100,000 population)
Data Sources and Data Issues:	Tennessee Maternal Mortality Review Annual Report (https://www.tn.gov/content/dam/tn/health/program-areas/maternal-mortality/MMR_Annual_Report_2021.pdf)
Significance:	Mental health conditions contributed to substantial percentages of pregnancy-associated deaths in Tennessee from 2017 to 20191. The TN Maternal Mortality Review Committee determined that a mental health condition was a contributing factor in 21% of all pregnancy-associated deaths. This measure will be obtained from the TN Maternal Mortality Review Annual Report. 12021 Tennessee Maternal Mortality Annual Report. Available at https://www.tn.gov/content/dam/tn/health/program-areas/maternal-mortality/MMR_Annual_Report_2021.pdf

Form 10
Evidence-Based or –Informed Strategy Measures (ESM) Detail Sheets

State: Tennessee

ESM 1.1 - Create pre/posttests to assesses provider knowledge of and confidence using PATH (Parenthood/Pregnancy Attitude, Timing, and How important is pregnancy prevention).
NPM 1 – Percent of women, ages 18 through 44, with a preventive medical visit in the past year

Measure Status:	Active
Goal:	Creation of pre/posttests to assesses provider knowledge of and confidence using PATH (Parenthood/Pregnancy Attitude, Timing, and How important is pregnancy prevention).
Definition:	**Unit Type:** Text **Unit Number:** Yes/No **Numerator:** Pre/post test **Denominator:**
Data Sources and Data Issues:	FP-01 (reduce the proportion of unintended pregnancies); FP-03 (reduce pregnancies in adolescents)
Evidence-based/informed strategy:	Increase knowledge, awareness, and usage of reproductive life plans through PATH across the state of Tennessee
Significance:	PATH is a patient-centered framework with a shared-decision making model that can be used with patients of any demographic without judgement to clarify the patient's reproductive goals and help them develop a reproductive life plan (RLP). Family planning providers play a key role in helping both women and men to reflect on their reproductive intentions, to complete a RLP and to access appropriate services to meet their RLP goals. PATH training is critical to ensuring a skilled family planning workforce that can provide client-centered, non-coercive, and culturally competent services.

ESM 1.2 - Percent of family planning encounters that occur via telehealth
NPM 1 – Percent of women, ages 18 through 44, with a preventive medical visit in the past year

Measure Status:	Active
Goal:	To increase the percentage of family planning encounters that occur via telehealth.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of family planning encounters occurring via telehealth **Denominator:** Total number of family planning encounters
Data Sources and Data Issues:	Tennessee Department of Health's Patient Tracking Billing Management Information System (PTBMIS).
Evidence-based/informed strategy:	Increase rural access to family planning services through telehealth.
Significance:	There are many barriers to accessing health care services, especially among poor and rural populations. These include lack of transportation, long travel distances, lack of childcare, and lack of sick leave. Providing family planning services via telehealth is one way to address these barriers and help clients access needed services.

ESM 1.3 - Number of women receiving patient navigation for women's health services
NPM 1 – Percent of women, ages 18 through 44, with a preventive medical visit in the past year

Measure Status:	Active
Goal:	To increase the number of women receiving patient navigation for women's health services
Definition:	**Unit Type:** Count **Unit Number:** 250 **Numerator:** Number of women receiving patient navigation services **Denominator:**
Data Sources and Data Issues:	To be determined (possibly electronic health record data or data collected via REDCap)
Evidence-based/informed strategy:	Increase access to women's health services by addressing and eliminating barriers to care through client navigation.
Significance:	Patient navigators are individuals whose primary responsibility is to provide personalized guidance to patients as they move through the health care system. Navigators can help remove barriers to care, foster patient autonomy and provide patients with information that enhances their ability to make appropriate health care choices and/or receive medical care with an enhanced sense of confidence about risks, benefits and responsibilities. Potential benefits of patient navigation include improved health outcomes, increased patient satisfaction, decreased no-show rates and reduced disparities in care.

ESM 1.4 - Percent of births covered by hospitals implementing data-driven, clinical recommendations
NPM 1 – Percent of women, ages 18 through 44, with a preventive medical visit in the past year

Measure Status:	Active
Goal:	To implement trainings at the facility level on patient safety recommendations to prevent maternal death.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of hospital births state-wide covered by facilities implementing data-driven, clinical recommendations from MMRIA data **Denominator:** Number of hospital state-wide births
Data Sources and Data Issues:	MMR Program Notes
Evidence-based/informed strategy:	Hospital Education: Provide training to hospitals on top causes of maternal death as identified by MMRC
Significance:	Documents (including infographics) on disparities in maternal health shows the gap in interventions and areas of need. These documents will also inform the public and stakeholders in maternal health on populations and health conditions that need target interventions, thus fostering health equity.

ESM 1.8 - Percent of recommendations with who/what/when components
NPM 1 – Percent of women, ages 18 through 44, with a preventive medical visit in the past year

Measure Status:	Active
Goal:	To provide recommendation for preventing maternal deaths
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Recommendations with who/what/when components **Denominator:** Number of recommendations
Data Sources and Data Issues:	Maternal Mortality Review Information Application (MMRIA)
Significance:	Recommendations from the MMRC provide actionable plans in preventing future maternal deaths. This measure is important to determine the domain of recommendation for prevention of maternal death.

ESM 3.1 - Percent of Tennessee birthing hospitals participating in perinatal quality collaborative projects
NPM 3 – Percent of very low birth weight (VLBW) infants born in a hospital with a Level III+ Neonatal Intensive Care Unit (NICU)

Measure Status:	Active
Goal:	To increase percent of Tennessee birthing hospitals participating in perinatal quality collaborative projects
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of Tennessee birthing hospitals participating in perinatal quality collaborative projects **Denominator:** Number of Tennessee birthing hospitals
Data Sources and Data Issues:	Family Health and Wellness tracking tool
Significance:	The Tennessee Initiative for Perinatal Quality Care seeks to improve health outcomes for mothers and infants by implementing data-driven provider- and community-based performance improvement initiatives. Current projects being implemented include initiatives targeted to neonatal abstinence syndrome, opioid use disorder, sleep-related infant death, and several maternal hypertension. More Tennessee birthing hospitals participating in these projects will ensure that the best evidence-based clinical practices are being allied to pressing public health facing mothers and infants. Ultimately, a higher percentage of birthing hospitals with these initiatives in place will lead to improved infant health outcomes and reduced disparities in access and treatment.

ESM 4.1 - Number of credentialed lactation professionals within WIC
NPM 4 – A) Percent of infants who are ever breastfed B) Percent of infants breastfed exclusively through 6 months

Measure Status:	Active
Goal:	To increase the number of credentialed lactation professionals within WIC (e.g., IBCLC, CLC, and CLS)
Definition:	**Unit Type:** Count **Unit Number:** 250 **Numerator:** Number of credentialed lactation professionals within WIC **Denominator:**
Data Sources and Data Issues:	WIC monitoring reports
Significance:	One barrier to breastfeeding is the lack of access to lactation professionals. Breastfeeding promotion and support is an integral part of the WIC Program. Increasing the number of trained lactation personnel will assist WIC mothers to make the best decision regarding infant feeding.

ESM 4.2 - Percent of Breastfeeding Welcomed Here (BFWH)-designated businesses with ideal workplace lactation policies
NPM 4 – A) Percent of infants who are ever breastfed B) Percent of infants breastfed exclusively through 6 months

Measure Status:	Active
Goal:	To increase the percent of BFWH-designated businesses with ideal workplace lactation policies
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of Breastfeeding Welcomed Here (BFWH)-designated businesses with ideal workplace lactation policies **Denominator:** Number of Breastfeeding Welcomed Here (BFWH)-designated businesses
Data Sources and Data Issues:	BFWH Tracking Spreadsheet
Evidence-based/informed strategy:	Re-enforce lactation policies that positively influence breastfeeding practices in the workplace.
Significance:	Lack of lactation support in the workplace continues to be a significant barrier for mothers returning to work. Breastfeeding initiation and duration rates tend be higher in in workplaces that have developed lactation policies, offer breastfeeding support programs, and designated spaces for mothers to breastfeed or express milk.

ESM 4.3 - Recognition process implemented for Breastfeeding Welcomed Here (BFWH)-designated businesses NPM 4 – A) Percent of infants who are ever breastfed B) Percent of infants breastfed exclusively through 6 months

Measure Status:	Active
Goal:	To implement a recognition process for BFWH-designated businesses with lactation workplace policies for employees.
Definition:	**Unit Type:** Text **Unit Number:** Yes/No **Numerator:** Implement recognition process for Breastfeeding Welcomed Here (BFWH)-designated businesses with lactation workplace policies for employees **Denominator:**
Data Sources and Data Issues:	FHW Program data
Significance:	Lack of lactation support in the workplace continues to be a significant barrier for mothers returning to work. BFWH businesses that have ideal workplace lactation policies will be recognized to celebrate businesses with policies and practices that seek support working mothers.

ESM 5.1 - Percent of hospitals receiving national recognition or implementing approved safe sleep policy
NPM 5 – A) Percent of infants placed to sleep on their backs B) Percent of infants placed to sleep on a separate approved sleep surface C) Percent of infants placed to sleep without soft objects or loose bedding

Measure Status:	Active
Goal:	Increase the number of hospitals teaching parents to place infants in a safe sleep environment.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of birthing hospitals (1) recognized as a National Cribs for Kids certified hospital or with an approved safe sleep policy, and (2) submitting crib audit reports with ≤ 10% of infants being found in an unsafe sleep environment **Denominator:** Number of birthing hospitals in Tennessee
Data Sources and Data Issues:	Family Health and Wellness tracking tool
Significance:	The infant sleep behaviors modeled by hospital staff after birth have been shown to be important in determining the practices new parents adopt when returning home. Because of this highly influential role, it is key to ensure that all birthing hospitals in Tennessee are exemplifying proper safe sleep behaviors and demonstrating to parents that babies should sleep alone, on their back, and in a crib, bassinet, or pack n' play. By increasing the number of hospitals that meet this standard, we can increase the number of Tennessee parents who benefit from a positive example of safe sleep and, by extension, the number who continue to put their infant to sleep safely at home.

ESM 5.2 - Number of diaper bags with safe sleep educational materials distributed
NPM 5 – A) Percent of infants placed to sleep on their backs B) Percent of infants placed to sleep on a separate approved sleep surface C) Percent of infants placed to sleep without soft objects or loose bedding

Measure Status:	Active
Goal:	Increase the number of diaper bags with safe sleep educational materials that have been distributed
Definition:	**Unit Type:** Count **Unit Number:** 2,000 **Numerator:** Number of safe sleep diaper bags that have been distributed **Denominator:**
Data Sources and Data Issues:	REDCap CHANT and EBHV data collection tools
Significance:	The Safe Sleep Diaper Bag Project was created in 2018 to provide EBHV participants with 1) standardized safe sleep education from their home visitor and 2) a diaper bag containing materials with safe sleep messaging. In 2019, the project was expanded to also include participants of the CHANT program. Diaper bags include several useful materials to aid in safe sleep including a onesie, sleep sack, safe sleep door hanger, Sleep Baby Safe and Snug book, Calm Baby Gently book, and nightlight. As of July 2021, over 1600 safe sleep diaper bags have been distributed to EBHV and CHANT caregivers. When asked by their home visitor whether the items in the diaper bag had caused them to change how they put their infant to sleep, 35 percent of EBHV recipients and 53 percent of CHANT recipients reported making a change. Going forward, Tennessee aims to continue to increase the total number of EBHV and CHANT clients who receive the safe sleep diaper bag, particularly in areas with historically high rates of sleep-related infant death. Evaluation data collected so far demonstrate that substantial percentages of caregivers report that the bag was useful in causing them to adopt the recommended safe sleep practices for their infant, validating Tennessee's effort to increase the project's reach as much as possible throughout the state.

ESM 8.1.1 - Percent of physical education teachers receiving professional development related to 50% of PE class time spent in moderate to vigorous physical activity
NPM 8.1 – Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day

Measure Status:	Active
Goal:	Increase the percentage of PE teachers receiving professional development on physical education and physical activity related to 50% of PE class time spent in moderate to vigorous physical activity.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of PE teachers receiving PD related to 50% of PE class time spent in moderate to vigorous PA **Denominator:** Number of total PE teachers Statewide
Data Sources and Data Issues:	The Coordinated School Health (CSH) tracking survey. Quality Physical Education Survey question is being added for the Fall administration. No known data issues.
Significance:	Direct professional development and technical assistance among school and LEA staff is essential to producing opportunities to increase both physical education and physical activity within the school setting. Values will be simple counts of PE teachers receiving professional development divided by the total number of PE teachers statewide.

ESM 8.1.2 - Percentage of TN counties in which trainings related to mental health and physical health have occurred
NPM 8.1 – Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day

Measure Status:	Active
Goal:	Collaborate with DOE to increase the number of counties receiving professional learning opportunities that connect mental health and physical health for PHEs and Health Councils, and youth (i.e., trauma-informed care, Youth Mental Health 1st Aid trai
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of counties receiving training, resources, and tools to promote the connection between mental health and physical health **Denominator:** Total number of TN counties (n=95)
Data Sources and Data Issues:	Reduce the proportion of children and adolescents with obesity — NWS04 Increase interprofessional prevention education in health professions training programs — ECBPD08 Increase the proportion of children and adolescents who get preventive mental health care in school — EMCD06
Evidence-based/informed strategy:	Support school-based efforts to promote physical activity and good nutrition
Significance:	There is a synergistic relationship between good mental health and physical health. For example, physical activity promotes healthy weight as well as good mental health. Trusted county professionals and organizations, such as PHEs, health councils, local schools, and youth groups, are a key channel for raising awareness of the connection between mental health and physical health. TDH can support these professionals and groups with evidence-based training, technical assistance, and other resources. Values for this measure will be simple counts derived from program reports and tracking databases that are being developed.

ESM 8.1.3 - Number of Gold Sneaker certified childcare facilities
NPM 8.1 – Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day

Measure Status:	Active
Goal:	Increase the number of TN Gold Sneaker certified childcare facilities
Definition:	**Unit Type:** Count **Unit Number:** 1,200 **Numerator:** Number of TN Gold Sneaker certified childcare facilities **Denominator:**
Data Sources and Data Issues:	Gold Sneaker Initiative tracking system, which is continuous and up to date; no known issues
Significance:	The Gold Sneaker Initiative provides a framework, guidance, and policies pertaining to healthy nutrition, physical activity, tobacco prevention, and other health issues for childcare providers. In addition, Gold Sneaker is now a requirement for one component of the DHS 3-Star Quality rating, which gives childcare facilities an additional incentive to be certified and to follow policies. Values will be a simple count of the number of current, active Gold Sneaker certified childcare centers.

ESM 8.1.4 - Percent of LHD primary care clinics writing HPHP prescriptions annually
NPM 8.1 – Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day

Measure Status:	Active
Goal:	To increase the percentage of LHD primary care clinics writing HPHP prescriptions annually.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of LHD primary care clinics writing HPHP prescriptions **Denominator:** Total number of LHD primary care clinics
Data Sources and Data Issues:	NWS-04: Reduce the proportion of children and adolescents with obesity; PA-09: Increase the proportion of children who do enough aerobic physical activity
Evidence-based/informed strategy:	Community Health Services (CHS) - list or map of LHD primary care clinics; TDH electronic health records (Provider Rx); No known data issues
Significance:	Regular physical activity among children is a critical component to maintaining healthy weight or losing excess weight. The HPHP provides an easy and fun way for people to use state parks to remain active, and the program provides incentives for participation as well. Electronic health records show provider referrals from the West region are low as compared to other TDH regions. Increasing provider referrals from TDH clinics in the West region will promote physical activity and address health equity. Values will derive from the number of LHD primary clinics writing HPHP prescriptions.

ESM 8.1.5 - Number of Healthy Parks Healthy Person prescriptions written
NPM 8.1 – Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day

Measure Status:	Active
Goal:	Increase the number of TN Healthy Parks Health Person (HPHP) prescriptions written
Definition:	**Unit Type:** Count **Unit Number:** 850 **Numerator:** Number of TN Healthy Parks Health Person (HPHP) prescriptions written **Denominator:**
Data Sources and Data Issues:	TDH EHR tracking of HPHP prescription check off box. This check off box has not yet been incorporated into the TDH EHR template.
Significance:	Studies have shown that when a doctor or other health care provider writes a prescription or recommends a certain course of action or behavior to a patient, the patient's likelihood of adopting that behavior increases tremendously. In that regard, there has been good success thus far with the HPHP prescription program encouraging patients to download and use the HPHP app. Values will derive from the number of times the TDH EHR system shows that the HPHP prescription program was used with a patient, provided that a check off box is developed for the system.

ESM 8.1.6 - Percentage of TN counties with completed built environment projects
NPM 8.1 – Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day

Measure Status:	Active
Goal:	Increase the number of school and community based physical activity clubs or completed built environment projects
Definition:	**Unit Type:** Count **Unit Number:** 812 **Numerator:** Number of physical activity clubs or completed built environment projects **Denominator:**
Data Sources and Data Issues:	The CDHP/OPP tracking database of physical activity clubs and the OPP and Project Diabetes tracking databases of completed built environment projects. Historically, it has been difficult to determine what PA clubs are current and/or still active.
Significance:	Physical activity clubs and community built environment projects increase both access to and availability of physical activity opportunities in the community. Clubs have the additional benefit and reinforcement of being a fun, group activity. Values will be simple counts of the number of such clubs and projects as reported to TDH through LHDs and other sources.

ESM 8.1.7 - Percent of eligible venues offering the Double Up Food Bucks Program
NPM 8.1 – Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day

Measure Status:	Active
Goal:	To increase the percentage of eligible venues (e.g., farmers' markets and farmers' stores) in counties targeted by Nourish Knoxville that offer the Double Up Food Bucks Program.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of eligible venues in targeted counties that offer the Double Up Food Bucks Program **Denominator:** Total number of eligible venues in targeted counties
Data Sources and Data Issues:	Nourish Knoxville tracking database and program reports related to eligible venues and the reach of the Double Up Food Bucks Program in targeted counties (currently six); no known data issues
Significance:	The consumption of healthier foods, especially fruits and vegetables, and healthier beverages is critical to maintaining or achieving healthy weight. Studies have shown that accessibility of healthy food choices influences healthy eating patterns. Concerted community planning and action among a diversified network of partners is critical to addressing low food security and increasing availability, access, affordability, and consumption related to healthier food and beverage options. Farmers' markets and farmers' stores, the TN Department of Health, the TN Department of Human Services (SNAP), and organizations such as Nourish Knoxville are key stakeholders in this effort. Partnerships can leverage shared resources in an effective and efficient manner. Values for this measure will be a simple list and number of eligible venues and the number of those venues offering the Double Up Food Bucks Program.

ESM 8.1.8 - Percent of staff with an increase in ACEs and TIC knowledge as evidenced by post training evaluation
NPM 8.1 – Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day

Measure Status:	Inactive - Measure retired due to the unlikelihood of having the staff available to fulfill it.
Goal:	To increase provider ACE and TIC knowledge
Definition:	<table><tr><td>**Unit Type:**</td><td>Percentage</td></tr><tr><td>**Unit Number:**</td><td>100</td></tr><tr><td>**Numerator:**</td><td>Staff who increased knowledge as a result of training</td></tr><tr><td>**Denominator:**</td><td>Total number of staff who participated in staff training</td></tr></table>
Data Sources and Data Issues:	REDCap survey tool- Limitation(s): data collection tool is still under development
Evidence-based/informed strategy:	Increase knowledge and practice of ACE and Trauma Informed Care (TIC).
Significance:	Training on the science of ACEs is necessary to transform the organization and community partners into service delivery systems that are trauma informed and leaders who plan with prevention in mind. Over the course of the year, TDH will provide refresher training to its Child Fatality Review team members in the Building Strong Brains curriculum and will implement evidence based strategies for ACEs prevention and mitigation. This will increase awareness of ACEs.

ESM 8.1.9 - Percent of families with improved protective factors score
NPM 8.1 – Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day

Measure Status:	Active
Goal:	To increase the percentage of families who have an improved protective factors score
Definition:	<table><tr><td>**Unit Type:**</td><td>Percentage</td></tr><tr><td>**Unit Number:**</td><td>100</td></tr><tr><td>**Numerator:**</td><td>Number of families enrolled in home visiting with an improved protective factors score at the time of reporting</td></tr><tr><td>**Denominator:**</td><td>Number of families enrolled in home visiting during the reporting year who have at least one protective factors score</td></tr></table>
Data Sources and Data Issues:	EBHV REDCAP Data Collection System, Annual Protective Factors Survey
Significance:	Protective factors are characteristics of strong parenting skills that reduce the effects of toxic stress and build resiliency in children. Protective factors have been shown to be essential in preventing ACES. Examples of protective factors include a parenting relationship that promotes literacy through healthy conversation and dedicated time to reading with an adult. A core activity of home visiting curriculum seeks to support parents in building resiliency for their families. This measure will demonstrate the capacity of home visiting to increase protective factors in families. Centers for Disease Control and Prevention, Kaiser Permanente. The ACE Study Survey Data [Unpublished Data]. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2016. Healthy People 2020 [Internet]. Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion [cited 06/18/20]. Kidcentral TN. “Adverse Childhood Experience: Protective Factors”. https://www.kidcentraltn.com/support/crisis-services-for-children/adverse-childhood-experience--protective-factors.html [accessed 06/19/20].

ESM 8.1.10 - Percent of families enrolled in CHANT care coordination who partially or fully complete pathways identified
NPM 8.1 – Percent of children, ages 6 through 11, who are physically active at least 60 minutes per day

Measure Status:	Active
Goal:	To increase the number of families enrolled into CHANT care coordination who partially or fully complete pathways identified
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of enrolled families + families that exit and fully or partially complete pathways **Denominator:** Total number of referrals received
Data Sources and Data Issues:	CHANT REDCap Database Limitation(s): 1) includes only participants of CHANT in the state, 2) in any given reporting period, the numerator and denominator may not include the same sample since the receipt of services can take place in a different reporting period than the referral.
Significance:	Health status and related health behaviors are determined by influences at multiple levels: personal, organizational/institutional, environmental, and policy. Because significant and dynamic interrelationships exist among these different levels of health determinants, educational and community-based programs are most likely to succeed in improving health and wellness when they address influences at all levels and in a variety of environments/settings.

ESM 11.1 - Number of CYSHCN who receive CHANT/CSS care coordination
NPM 11 – Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

Measure Status:	Active
Goal:	To increase the number of children and youth with special health care needs receiving CHANT/CSS care coordination.
Definition:	**Unit Type:** Count **Unit Number:** 5,000 **Numerator:** Number of CYSHCN receiving CHANT/CSS care coordination **Denominator:**
Data Sources and Data Issues:	CYSHCN MCH/Title V Program data and PTBMIS
Significance:	It is important to ensure the children with special healthcare needs served by the Tennessee Children's Special Services program receive care coordination services to assist in system navigation.

ESM 11.2 - Percent of providers adopting medical home approach
NPM 11 – Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

Measure Status:	Active
Goal:	To increase the percentage of providers adopting medical home approach in their practice
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of providers reporting adoption of the medical home approach **Denominator:** Number of providers participating in the medical home collaborative
Data Sources and Data Issues:	Program will host learning collaborative for providers, families and community members. Pre and Post assessments will be administered to determine providers who report adopting medical home approach.
Evidence-based/informed strategy:	Create a shared vision for integrating and improving CYSHCN system of care.
Significance:	By increasing the number of providers who adopt a medical home approach in their practices, this will also increase the number of children who receive care in a medical home.

ESM 11.3 - Percent of providers reporting increased knowledge on systems of care
NPM 11 – Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

<table>
<tr><td>Measure Status:</td><td>Active</td></tr>
<tr><td>Goal:</td><td>To increase the percentage of providers reporting an increase in knowledge on systems of care.</td></tr>
<tr><td>Definition:</td><td>
<table>
<tr><td>Unit Type:</td><td>Percentage</td></tr>
<tr><td>Unit Number:</td><td>100</td></tr>
<tr><td>Numerator:</td><td>Number of providers reporting increased knowledge on systems of care</td></tr>
<tr><td>Denominator:</td><td>Number of providers participating in the medical home collaborative</td></tr>
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</td></tr>
<tr><td>Data Sources and Data Issues:</td><td>Create a shared vision for integrating and improving CYSHCN system of care.</td></tr>
<tr><td>Evidence-based/informed strategy:</td><td>Program will host learning collaborative for providers, families and community members. Pre and Post assessments will be administered to determine providers who report increased knowledge.</td></tr>
<tr><td>Significance:</td><td>By increasing providers’ knowledge on systems of care will increase the number of children who receive coordinated, comprehensive care in a medical home.</td></tr>
</table>

ESM 11.4 - Number of families provided education and resources on importance of medical home access and utilization
NPM 11 – Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

Measure Status:	Active
Goal:	To increase the number of families who receive education and resources on the importance of coordinated and comprehensive care in the medical home.
Definition:	**Unit Type:** Count **Unit Number:** 1,800 **Numerator:** Number of families provided education and resources **Denominator:**
Data Sources and Data Issues:	Data Sources: CHANT program data and Call Center data; Limitations: Retrieving data from separate data systems
Significance:	It is important to ensure that children and families receive annual medical exams and preventive care in an assigned medical home setting. Providing education and knowledge on the importance of care in the medical home will be significant in increasing actual utilization of the medical home.

ESM 11.5 - Number of families receiving referrals to their child's primary care provider
NPM 11 – Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

Measure Status:	Active
Goal:	To increase the number of families referred to their child's primary care provider.
Definition:	**Unit Type:** Count **Unit Number:** 500 **Numerator:** Number of referrals to the primary care providers **Denominator:**
Data Sources and Data Issues:	CHANT program data and Call Center data
Significance:	It is important to ensure that children and families receive annual medical exams and preventive care in an assigned medical home setting. Identifying and providing referrals to the primary care provider will be significant in increasing actual utilization of the medical home.

ESM 11.6 - Percent of providers who report an increase in their knowledge of available resources
NPM 11 – Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

Measure Status:	Active
Goal:	To increase the percentage of providers reporting increased resource referrals for CYSHCN.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of providers who report an increase in the number of referrals provided **Denominator:** Number of providers receiving educational material on available resources for children and youth with special health care needs
Data Sources and Data Issues:	Program will distribute resource information to providers. A pre-post questionnaire will be used to determine if increase in referrals occur based on resources provided.
Evidence-based/informed strategy:	Inform and educate families and providers to promote systems change.
Significance:	It is important that providers receive information on available resources and make referrals for CYSHCN by doing so, access and utilization of the medical home will increase and additional opportunities for systems change with the potential of increasing knowledge of providers and families of CYSHCN

ESM 11.7 - Percent of families who report an increase in access and utilization of resources
NPM 11 – Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

Measure Status:	Active
Goal:	To increase the percentage of families who reporting increased access and utilization of CYSHCN.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of families who report an increase in access and utilization of resources **Denominator:** Number of families receiving list of available resources
Data Sources and Data Issues:	Program will distribute resource information to families. A pre-post questionnaire will be used to determine if increase in access and utilizations occur based on resources provided.
Evidence-based/informed strategy:	Inform and educate families and providers to promote systems change.v
Significance:	It is important that families receive information on available resources. Care for CYSHCN involves multiple stakeholders, including primary and specialty care providers as well as non-medical service providers. For CYSHCN to thrive, partnership between care providers and families is critical that resources are made available for as many needs as possible including health and community based. By doing so medical home access and utilization will increase.

ESM 11.8 - Percent of CHANT families who schedule an annual visit with their child's primary care provider
NPM 11 – Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

Measure Status:	Active
Goal:	To increase the percent families who schedule their child's primary care appointment.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of CHANT families who schedule appointments **Denominator:** Number of CHANT families referred to primary care provider
Data Sources and Data Issues:	CHANT program data and Call Center data
Significance:	It is important to ensure that children and families receive annual medical exams and preventive care in an assigned medical home setting. Assisting families to schedule appointments will be significant in increasing actual utilization of the medical home.

ESM 11.9 - Percent of CYSHCN receiving CHANT care coordination who receive medical home education
NPM 11 – Percent of children with and without special health care needs, ages 0 through 17, who have a medical home

Measure Status:	Active
Goal:	To increase the percent of children and youth with special health care needs receiving CHANT care coordination who receive medical home education.
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of CYSHCN receiving CHANT care coordination who receive medical home education **Denominator:** Number of CYSHCN receiving CHANT care coordination
Data Sources and Data Issues:	Data source: PTBMIS and REDCap Limitations: Families may reject CSS services because they do not want to go through the CHANT screening and assessment
Evidence-based/informed strategy:	Increase the number of CYSHCN who have access to patient and family-centered care coordination.
Significance:	It is important to ensure the children with special healthcare needs served by the Tennessee Children's Special Services program receive medical home education to increase access and utilization and ensure positive health outcomes.

ESM 12.1 - Number of transition resource kits disseminated
NPM 12 – Percent of adolescents with and without special health care needs, ages 12 through 17, who received services to prepare for the transition to adult health care

Measure Status:	Active
Goal:	To increase the number of youth with special health care needs that receive resources necessary for successful transition.
Definition:	**Unit Type:** Count **Unit Number:** 2,600 **Numerator:** Number of kits disseminated **Denominator:**
Data Sources and Data Issues:	CYSHCN MCH/Title V Program data
Significance:	Youth who receive education and knowledge on transition planning are expected to be successful transitioning to adult independence.

ESM 12.2 - Number of youth with special health care needs trained as mentors
NPM 12 – Percent of adolescents with and without special health care needs, ages 12 through 17, who received services to prepare for the transition to adult health care

Measure Status:	Active
Goal:	To increase the number of youth with special health care needs that receive mentor other youth with special health care needs to serve as leaders on the Youth Advisory Council.
Definition:	**Unit Type:** Count **Unit Number:** 75 **Numerator:** Number of youth with special health care needs trained as mentors **Denominator:**
Data Sources and Data Issues:	CYSHCN MCH/Title V Program data
Significance:	The program is to encourage active participation and involvement of the youth and families in policy development.

ESM 12.3 - Number of parents and youth with special health care needs who receive leadership and self-advocacy training
NPM 12 – Percent of adolescents with and without special health care needs, ages 12 through 17, who received services to prepare for the transition to adult health care

Measure Status:	Active
Goal:	To increase the number of parents and youth with special health care needs that receive leadership and self-advocacy training.
Definition:	**Unit Type:** Count **Unit Number:** 500 **Numerator:** Number of parents and youth with special health care needs who receive leadership and self-advocacy training **Denominator:**
Data Sources and Data Issues:	CYSHCN MCH/Title V Program data
Significance:	Youth and parents are provided leadership training and are able to provide mentoring and peer to peer support to other parents and youth with special health care needs. Trained parents and YSHCN are better equipped to become self-advocates and participate in the decision making process and policy development.

ESM 14.2.1 - Number of tobacco-free sports teams
NPM 14.2 – Percent of children, ages 0 through 17, who live in households where someone smokes

Measure Status:	Active
Goal:	To support smoke free environments as the social norm
Definition:	**Unit Type:** Count **Unit Number:** 200 **Numerator:** Sports teams making initial tobacco-free pledge **Denominator:**
Data Sources and Data Issues:	Tennessee Tobacco Control Program data
Significance:	The measure is significant in that it underlies the social norm change affected by youth leaders publicly pledging to their school, peers, and community to be tobacco free. The number of sports teams taking the tobacco-free pledge will consist of sports teams which are making their initial pledge (excluding re-pledges in subsequent years).

ESM 14.2.2 - Number of social media posts promoting text-based cessation services
NPM 14.2 – Percent of children, ages 0 through 17, who live in households where someone smokes

Measure Status:	Active
Goal:	To increase youth tobacco cessation.
Definition:	**Unit Type:** Count **Unit Number:** 40 **Numerator:** Number of social media posts promoting text-based cessation services **Denominator:**
Data Sources and Data Issues:	Tobacco Control Program data
Significance:	Cessation-supporting text services have been shown to be effective for youth and young adults who are experimenting with or currently using tobacco products. TDH and partner promotions of these services through social media aims to increase text service utilization.

ESM 14.2.3 - Number of anti-tobacco social media posts
NPM 14.2 – Percent of children, ages 0 through 17, who live in households where someone smokes

Measure Status:	Active
Goal:	To decrease youth tobacco use.
Definition:	**Unit Type:** Count **Unit Number:** 300 **Numerator:** Number of social media posts to TDH and TNSTRONG social media accounts **Denominator:**
Data Sources and Data Issues:	TDH Communications Office will track the number of anti-tobacco focused social media posts via Facebook, Twitter, and Instagram using designated hashtags.
Significance:	Anti-tobacco messaging is another cornerstone of tobacco control efforts and impacts the rate at which youth experiment with and initiate smoking and tobacco use. Social media's influence and pervasiveness among adolescents enables TUPCP and youth advocates to reach the target population more effectively.

ESM 14.2.4 - Number of youth who attend the state anti-tobacco conference trainings
NPM 14.2 – Percent of children, ages 0 through 17, who live in households where someone smokes

Measure Status:	Active
Goal:	Decrease tobacco use among youth through peer-to-peer intervention and youth advocates for anti-tobacco policy.
Definition:	**Unit Type:** Count **Unit Number:** 450 **Numerator:** Youth attendees at annual TNSTRONG conference/trainings **Denominator:**
Data Sources and Data Issues:	Tobacco Control Program - TNSTRONG Attendee Registration system
Significance:	TNSTRONG attendees, similar to ambassadors, are trained on peer-to-peer interventions and policy change, and are an essential component to reaching and influencing youth throughout Tennessee. TNSTRONG youth attendees are defined as school-aged individuals who attend the TNSTRONG event in their capacity as students (as opposed to presenters or chaperones).

ESM 14.2.5 - Number of ambassadors recruited
NPM 14.2 – Percent of children, ages 0 through 17, who live in households where someone smokes

Measure Status:	Active
Goal:	Decrease tobacco use among youth through peer-to-peer intervention and youth advocates for anti-tobacco policy.
Definition:	**Unit Type:** Count **Unit Number:** 26 **Numerator:** Number of ambassadors recruited **Denominator:**
Data Sources and Data Issues:	Tobacco Control Program data
Significance:	Youth who are recruited to serve as TNSTRONG ambassadors represent an important component of the TCP's efforts to reach and influence local youth. Ambassadors are often leaders within their schools and communities and are trained on peer-to-peer intervention and policy change. The number of ambassadors recruited will be tracked annually and will consist of the total number of ambassadors inclusive of those in their second year (of a two year cycle).

ESM 14.2.6 - Percent of eligible women who enroll in Baby and Me Tobacco Free
NPM 14.2 – Percent of children, ages 0 through 17, who live in households where someone smokes

Measure Status:	Active
ESM Subgroup(s):	Pregnant Women
Goal:	Increase percent of eligible women who enroll in Baby and Me Tobacco
Definition:	**Unit Type:** Percentage **Unit Number:** 100 **Numerator:** Number of women enrolled in Tennessee's Prenatal Smoking Cessation Program for the state fiscal year **Denominator:** Number of women who gave birth during the state fiscal year who reported smoking during the third trimester of pregnancy (from birth certificate data)
Data Sources and Data Issues:	Vital Statistics birth statistical file
Evidence-based/informed strategy:	Reduce infant deaths due to prematurity and low birthweight by reducing infant exposure to tobacco
Significance:	Smoking during pregnancy increases the risk of preterm birth, low birth weight, and birth defects of the mouth and lip in developing infants. Tennessee's rates of prenatal smoking are nearly two times that of the nation as a whole and significant disparities exist by race/ethnicity and place, with higher rates seen for Non-Hispanic White women and those in the eastern part of the state. Tennessee's Prenatal Smoking Cessation Program is an evidence-based smoking cessation program which uses education, support, carbon monoxide monitoring and incentives (vouchers for diapers and wet wipes) to encourage and support abstinence from cigarette smoking. Studies have demonstrated that infants of women who receive psychosocial interventions for prenatal smoking cessation have a lower risk of low birthweight, and neonatal intensive care unit (NICU) admission. Reducing the percentage of Tennessee pregnant women who smoke during pregnancy is critically important to reducing the rate of poor birth outcomes and preterm-related infant mortality.

Form 11
Other State Data

State: Tennessee

The Form 11 data are available for review via the link below.

Form 11 Data

Form 12
MCH Data Access and Linkages

State: Tennessee

Annual Report Year 2022

	Access				Linkages	
Data Sources	(A) State Title V Program has Consistent Annual Access to Data Source	(B) State Title V Program has Access to an Electronic Data Source	(C) Describe Periodicity	(D) Indicate Lag Length for Most Timely Data Available in Number of Months	(E) Data Source is Linked to Vital Records Birth	(F) Data Source is Linked to Another Data Source
1) Vital Records Birth	Yes	Yes	More often than monthly	0		
2) Vital Records Death	Yes	Yes	More often than monthly	0	Yes	
3) Medicaid	No	No	Never	NA	No	
4) WIC	Yes	Yes	Daily	0	Yes	
5) Newborn Bloodspot Screening	Yes	Yes	Daily	0	Yes	
6) Newborn Hearing Screening	Yes	Yes	Daily	0	Yes	
7) Hospital Discharge	Yes	Yes	Quarterly	6	Yes	
8) PRAMS or PRAMS-like	Yes	Yes	More often than monthly	6	Yes	