DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
7500 Security Boulevard, Mail Stop S2-25-26
Baltimore, Maryland 21244-1850

State Demonstrations Group

December 12, 2024

Stephen Smith
Director of TennCare
Tennessee Department of Finance and Administration
310 Great Circle Road
Nashville, TN 37243

Dear Director Smith:

The Centers for Medicare & Medicaid Services (CMS) completed its review of the Evaluation Design, which is required by the Special Terms and Conditions (STCs), specifically, STC #89 "Draft Evaluation Design" of Tennessee's section 1115 demonstration, "TennCare III" (Project No: 11- W-00369/4 and 21-W-00075/9), effective through December 31, 2030. CMS has determined that the Evaluation Design, which was submitted on July 7, 2021 and revised on September 9, 2022, September 20, 2024, and November 22, 2024, meets the requirements set forth in the STCs and our evaluation design guidance, and therefore approves the state's Evaluation Design.

CMS has added the approved Evaluation Design to the demonstration's STCs as Attachment J. A copy of the STCs, which includes the new attachment, is enclosed with this letter. In accordance with 42 CFR 431.424, the approved Evaluation Design may now be posted to the state's Medicaid website within 30 days. CMS will also post the approved Evaluation Design as a standalone document, separate from the STCs, on Medicaid.gov.

Please note that next Interim Evaluation Report, consistent with the approved Evaluation Design, is due to CMS on December 31, 2026, and that the following Interim Evaluation Report is due to CMS by December 31, 2029 or with the state's extension application. Likewise, a Summative Evaluation Report, consistent with this approved design, is due to CMS within 18 months of the end of the demonstration period. In accordance with 42 CFR 431.428 and the STCs, we look forward to receiving updates on evaluation activities in the demonstration monitoring reports.

We appreciate our continued partnership on the TennCare III section 1115 demonstration. If you have any questions, please contact your CMS demonstration team.

Sincerely,

Danielle Daly -S

Digitally signed by Danielle Daly -S
Date: 2024.12.12 06:06:54 -05'00'

Danielle Daly
Director
Division of Demonstration Monitoring and Evaluation

cc: Tandra Hodges, State Monitoring Lead, CMS Medicaid and CHIP Operations Group

Tennessee Department of Finance & Administration

Division of TennCare

TennCare III Evaluation Design (Revised)

Project No. 11-W-00369/4

Updated November 19, 2024

Division of TennCare

Table of Contents

A. General Background Information

Section 1115 of the Social Security Act allows states to design and implement innovative Medicaid program strategies to enhance cost-efficiency and quality of care for Medicaid-eligible populations. The Secretary of Health and Human Services (HHS) and the Centers for Medicare and Medicaid Services (CMS) have the authority to approve demonstration projects that grant states certain program flexibilities. States can use Section 1115 demonstrations to employ these flexibilities while continuing to meet minimum care standards set by federal law.

On January 8, 2021, CMS approved Tennessee's Section 1115 demonstration project, TennCare III (Project Number 11-W-00369/4). The TennCare III approval period spans from January 8, 2021 to December 31, 2030.

As part of the demonstration's Special Terms and Conditions (STCs), CMS requires an evaluation of the program's ability to meet its intended goals. This Evaluation Design addresses CMS general guidance on Section 1115 demonstration evaluations as well as the Tennessee-specific requirements outlined in the STCs. The Evaluation Design will guide subsequent TennCare III Evaluation Reports.

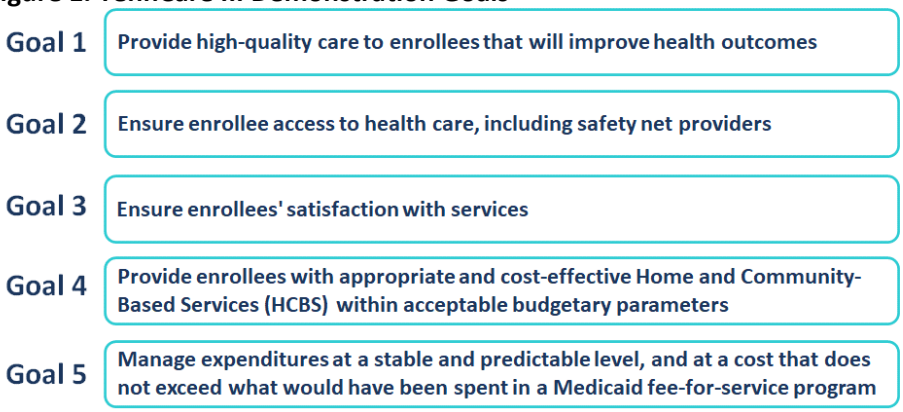
This Evaluation Design will guide the federally-required independent evaluation of TennCare III, and is organized as follows:

- Section A: General Background Information
- Section B: Evaluation Questions and Hypotheses
- Section C: Methodology
- Section D: Methodological Limitations
- Section E: Attachments

1. Demonstration Goals

Over the course of the TennCare III demonstration period, TennCare seeks to achieve five primary demonstration goals, which inform the evaluation of TennCare III. Each goal, outlined in **Figure 1**, aligns with Section 1115(a) and Medicaid program objectives, including improving health outcomes, quality of care, and access to care for Medicaid beneficiaries.[1]

Figure 1. TennCare III Demonstration Goals



These goals have served as the foundation of the TennCare program since its inception.

[1] CMS, About Section 1115 Demonstrations, https://www.medicaid.gov/medicaid/section-1115-demonstrations/about-section-1115-demonstrations/index.html

2. Description of the Demonstration and Implementation History

TennCare, which began in January of 1994, is one of the longest-running Medicaid demonstrations in the nation. The original TennCare demonstration created the first Medicaid managed care program in Tennessee. The original TennCare demonstration employed managed care organizations (MCOs) and extended coverage to many previously uninsured individuals.

TennCare II, which revised the existing TennCare demonstration and divided program populations into "TennCare Medicaid" (for enrollees who are Medicaid-eligible under Tennessee's Title XIX State Plan) and "TennCare Standard" (for enrollees who are Medicaid-eligible through the demonstration's expenditure authorities), was first implemented in July 2002. Over time, the TennCare demonstration has been revised to integrate more components of the Medicaid program into managed care.

The current TennCare III demonstration, which began on January 8, 2021, subsumes TennCare II and continues many of the existing TennCare II authorities, as well as new flexibilities.

This Evaluation Design covers continuing and new policies.

Continuing Policies under TennCare III

The majority of TennCare III demonstration policies pre-date its approval and are a continuation of TennCare II components. The managed care system, CHOICES program, Employment and Community First (ECF) CHOICES program, Katie Beckett/Medicaid Diversion program, and retroactive eligibility waiver were all implemented in prior demonstration periods and will continue under TennCare III. This subsection further describes select key, continuing policies continuing under TennCare III.

CHOICES Program

The CHOICES managed long-term services and supports (MLTSS) program was first implemented in 2010 to provide older adults and adults with physical disabilities an integrated benefits package of long-term services and supports (LTSS), which includes both home and community-based services (HCBS) and nursing facility (NF) services. Under TennCare III, the State will continue the CHOICES program for eligible individuals and, in doing so, maintain or expand access to HCBS for TennCare enrollees who are elderly or physically disabled.

ECF CHOICES Program

The ECF CHOICES program, implemented in 2016, expanded the use of managed care to provide HCBS to individuals who have an intellectual or developmental disability (I/DD). This program provides an integrated HCBS benefits package that includes integrated employment supports. The ECF CHOICES program will continue under TennCare III and the State will prioritize reducing the ECF CHOICES waitlist, increasing enrollee independence, and continuing to achieve individual employment goals for the I/DD population.

Katie Beckett/Medicaid Diversion Program

In November 2020, the State began implementing a Katie Beckett/Medicaid Diversion program for children with disabilities or complex needs whose parents' income or assets render the child ineligible for traditional Medicaid coverage. The State's program consists of two parts: Part A and Part B.

The Katie Beckett component of the program (Part A) is targeted to children with the most severe needs, and provides a pathway to traditional Medicaid coverage, supplemented by a package of essential supportive

services. The Medicaid Diversion component of the program (Part B) provides a targeted package of services and supports designed to prevent or delay the need for traditional Medicaid supports.

Retroactive Eligibility Waiver

TennCare's retroactive eligibility waiver enables the State not to extend eligibility to an enrollee prior to the date that an application for assistance is made. This waiver was first authorized by CMS in 1994 and will continue under TennCare III; however, the waiver will no longer apply to certain pregnant women and children who enroll in TennCare. Under TennCare III, these pregnant women and children will receive retroactive coverage for medical costs incurred up to three months before the month of application.

Uncompensated Care Pools

TennCare authorizes the State to make uncompensated care payments to hospitals and other safety net providers. The demonstration includes two funds that provide from which uncompensated care payments may be made, the "Virtual DSH" fund and the Uncompensated Care Fund for Charity Care. TennCare III gives the State certain flexibility to adjust the distribution methodology for uncompensated care payments.

New Policies under TennCare III

Multiple policies and flexibilities were approved by CMS as part of the TennCare III demonstration. As a means of advancing the programmatic goals outlined in Section A.1, CMS has authorized the following:

- **Designated State Investment Programs (DSIPs).** Provides Tennessee with an opportunity to obtain shared savings.
- **Fraud Penalties.** Allows TennCare to temporarily suspend Medicaid eligibility for enrollees convicted of Medicaid fraud.
- **Integration of Services for Individuals with Intellectual Disabilities.** Integrates 1915(c) HCBS waiver services for individuals with intellectual disabilities and ICF/IID services into the larger managed care program.[2]

Designated State Investment Programs (DSIPs)

The TennCare III demonstration gives Tennessee the opportunity to share in savings each year if the State underspends the budget neutrality cap. The shared savings component of the demonstration creates potential opportunities for the State to make key investments in the Medicaid program and the health of Medicaid beneficiaries.

Fraud Penalties

TennCare has the authority to suspend, for up to 12 months, Medicaid eligibility for individuals who have been convicted of Medicaid fraud.

Amendment 1: Integration of Services for Individuals with Intellectual Disabilities

After the approval of TennCare III, the State submitted a demonstration amendment, Amendment 1, to integrate services for members with intellectual disabilities into the managed care program authorized under the demonstration. The State plans to integrate all Medicaid services for individuals with intellectual disabilities into the TennCare managed care program. Specific services to be integrated include Intermediate Care Facility Services for Individuals with Intellectual Disabilities (ICF/IID) and the State's remaining Section 1915(c) HCBS waiver services. Affected HCBS will continue to be authorized under Section 1915(c) waivers,

[2] Pending CMS approval of TennCare III, Amendment I.

but the associated services will be added to the package of managed care benefits administered by the MCOs. Pending CMS approval of this amendment, the independent evaluator will examine the related research questions included in this Evaluation Design.

Amendment 2: Extending Coverage to Children Adopted from State Custody

After the approval of TennCare III, the State submitted a demonstration amendment, Amendment 2, to extend its coverage to children adopted from state custody who do not currently qualify for TennCare. This group of children will receive services through TennCare's existing managed care program and will receive the same benefits as all other children enrolled in TennCare. Pending CMS approval of this amendment, the independent evaluator will examine the related research question included in this Evaluation Design.

Amendment 3: Increase HCBS Expenditure Caps

After the approval of TennCare III, the State submitted a demonstration amendment, Amendment 3, to increase HCBS expenditure caps for certain CHOICES and ECF CHOICES members and to add Enabling Technology as a covered service in CHOICES and ECF CHOICES. These changes were initially implemented via an emergency 1115 authority during the COVID-19 public health emergency, and Amendment 3 codified these polices within the demonstration on a permanent basis. These changes are expected to contribute to key goals of the TennCare demonstration reflected in the evaluation design, specifically Goal 4 around providing enrollees with appropriate and cost-effective HCBS.

Amendment 4: Transition to Per Member Per Month (PMPM) Budget Neutrality Cap and Removal of Closed Drug Formulary

After the approval of TennCare III, the State submitted a demonstration amendment, Amendment 4, to transition its budget neutrality framework from an aggregate cap to a PMPM basis and remove the authority to implement a closed drug formulary. TennCare adjusted this Evaluation Design to reflect these changes and the independent evaluator will examine the related research questions included in this Evaluation Design.

Amendment 5: Supporting Strong Families

After the approval of TennCare III, the State submitted a demonstration amendment, Amendment 5, to make several updates, including expand eligibility for parents and caretaker relatives of dependent children, provide a new benefit to cover a supply of diapers for infants and young children enrolled in TennCare and the Children's Health Insurance Program, and enhance HCBS available to individuals with disabilities under the demonstration, with particular emphasis on employment supports. The independent evaluator will examine the related research questions included in this Evaluation Design.

Amendment 6: Extending Coverage to Working Individuals with Disabilities

After the approval of TennCare III, the State submitted a demonstration amendment, Amendment 6, to expand TennCare coverage to additional working individuals with disabilities. Individuals who qualify will receive the full TennCare benefits package through the managed care program as provided to all other persons enrolled in TennCare and may receive HCBS to the extent they are eligible. These changes are expected to contribute to key goals of the TennCare demonstration reflected in the evaluation design, specifically Goal 4 around providing enrollees with appropriate and cost-effective HCBS.

Other Components of TennCare III

In addition to the continuing and new demonstration policies, other notable aspects of TennCare III include the following.

Administrative Flexibilities

TennCare has the authority to both extend TennCare eligibility and expand benefit packages without prior CMS approval. Any coverage or benefit changes made without prior CMS approval must be additive in nature. TennCare can use this flexibility to make meaningful decisions about program management and quickly respond to changes in the enrollee population or emerging public health issues. Since January 2021, TennCare has brought forth a number of program improvements through administrative flexibilities, such as expanding dental benefit for all adults, expanding postpartum coverage from 60 days to 12 months following the end of pregnancy, and adding new employment support services to CHOICES. The independent evaluator will examine the related research questions in this design.

3. Population Groups Impacted by the Demonstration

The independent evaluator will evaluate whether TennCare III has the intended effect on the target populations, further described in Section C.4. The Evaluation will encompass all populations described in the STCs.

B. Evaluation Questions and Hypotheses

Section B outlines the hypotheses and research questions (RQs) related to each of the five demonstration goals described in Section A. In addition, this Section includes the TennCare III Driver Diagram and related Logic Models.

1. Goal 1: Provide high-quality care to enrollees that will improve health outcomes

The Evaluation will test four hypotheses to evaluate whether TennCare III policies have maintained or improved health outcomes. **Figure 2** outlines the hypotheses and RQs that relate to Goal 1.

Note: Because the majority of TennCare III policies are continued from prior iterations of the TennCare demonstration, it is intended for the independent evaluator to isolate the effects that TennCare III has on these efforts, where feasible.

Figure 2. Goal 1 – Hypotheses and Research Questions

Hypotheses	Research Questions
Hypothesis 1.1 – Following implementation of the TennCare III demonstration, quality of care and health outcomes for TennCare enrollees will maintain or improve.	**Primary RQ 1.1.a:** Has the implementation of TennCare III maintained or improved physical health outcomes for TennCare enrollees? **Primary RQ 1.1.b:** Has the implementation of TennCare III maintained or increased the utilization rates of preventive or wellness services for TennCare enrollees? **Primary RQ 1.1.c:** Has the implementation of TennCare III maintained or increased the utilization rates of EPSDT services for TennCare enrollees? **Primary RQ 1.1.d:** Has the implementation of TennCare III maintained or improved the management of behavioral health (BH) conditions for TennCare enrollees?
Hypothesis 1.2 – Following implementation of the TennCare III demonstration, opioid	**Primary RQ 1.2.a:** Has the implementation of TennCare III maintained or decreased opioid misuse among TennCare enrollees (i.e., first-time, acute, and chronic opioid users)? **Primary RQ 1.2.b:** Has the implementation of TennCare III maintained or decreased the

Hypotheses	Research Questions
misuse will maintain or decrease among TennCare enrollees, access to medication-assisted treatment (MAT) will maintain or increase, and health outcomes associated with opioid misuse will maintain or improve.	number of Neonatal Abstinence Syndrome live births? **Primary RQ 1.2.c:** Has the implementation of TennCare III maintained or improved the rate of opioid use disorder (OUD) treatment for TennCare enrollees? **Primary RQ 1.2.d:** Has the implementation of TennCare III maintained or improved access to MAT?
Hypothesis 1.3 – Following implementation of the TennCare III demonstration, quality outcomes and quality of life for TennCare CHOICES enrollees and individuals with I/DD will maintain or improve.	**Primary RQ 1.3.a:** Has the implementation of TennCare III maintained or improved quality outcomes for CHOICES enrollees? **Primary RQ 1.3.b:** Has the implementation of TennCare III maintained or improved quality of life for CHOICES enrollees? **Primary RQ 1.3.c:** Has the implementation of TennCare III maintained or improved quality outcomes for individuals with I/DD? **Primary RQ 1.3.d:** Has the implementation of TennCare III maintained or improved quality of life for individuals with I/DD?
Hypothesis 1.4 – Following enrollment in the Katie Beckett program, quality of life, family outcomes, and health outcomes will maintain or improve for children eligible for Parts A and B of the Katie Beckett program.	**Primary RQ 1.4.a:** Has enrollment in the Katie Beckett program maintained or improved quality of life for eligible children? **Primary RQ 1.4.b:** Has enrollment in the Katie Beckett program maintained or improved health and family outcomes for eligible children?
Hypothesis 1.5 – Following implementation of the TennCare III demonstration, costs associated with treating conditions related to diapers for children under age 2 will decrease, as will the rates of those conditions.	**Primary RQ 1.5.a:** Has the implementation of TennCare IIII decreased the costs associated with the treatment of diaper rash/diaper dermatitis, as well as the rates of those conditions, in children under age 2? **Primary RQ 1.5.b:** Has the implementation of TennCare IIII decreased the costs associated with the treatment of urinary tract infections (UTIs), as well as the rates of UTIs, in children under age 2?

2. Goal 2: Ensure enrollee access to health care, including safety net providers

The Evaluation will test ten hypotheses to evaluate whether TennCare III policies have impacted enrollee access to health care, including safety net providers. **Figure 3** outlines the hypotheses and RQs that relate to Goal 2.

Note: Because the majority of TennCare III policies are continued from prior iterations of the TennCare

demonstration, it is intended for the independent evaluator to isolate the effects that TennCare III has on these efforts, where feasible.

Figure 3. Goal 2 – Hypotheses and Research Questions

Hypotheses	Research Questions
Hypothesis 2.1 – Following implementation of the TennCare III demonstration, enrollee utilization of services will maintain or improve.	**Primary RQ 2.1.a:** Has the implementation of TennCare III maintained or improved enrollee utilization of services?[3] • Primary care visits • Inpatient visits • BH visits • Prescription drugs **Subsidiary RQ 2.1.a.i:** Has the implementation of TennCare III maintained or improved utilization of primary care? **Subsidiary RQ 2.1.a.ii:** Has the implementation of TennCare III maintained or improved utilization of inpatient care? **Subsidiary RQ 2.1.a.iii:** Has the implementation of TennCare III maintained or improved utilization of BH treatment? **Subsidiary RQ 2.1.a.iv:** Has the implementation of TennCare III maintained or improved utilization of outpatient prescription drugs?
Hypothesis 2.2 – Following implementation of the TennCare III demonstration, access to comprehensive primary care will maintain or increase.	**Primary RQ 2.2.a:** Has the implementation of TennCare III maintained or increased the number and proportion of TennCare enrollees cared for through the PCMH model?
Hypothesis 2.3 – Following implementation of the TennCare III demonstration, member engagement in prenatal and postpartum care will maintain or increase.	**Primary RQ 2.3.a:** Has the implementation of TennCare III maintained or increased member engagement in prenatal care? **Primary RQ 2.3.b:** Has the implementation of TennCare III maintained or increased member engagement in postpartum care? **Primary RQ 2.3.b.i:** Has the implementation of TennCare III increased the months of continuous coverage for postpartum women? **Primary RQ 2.3.b.ii:** Has the implementation of TennCare III increased the use of lactation consultation services among postpartum women?
Hypothesis 2.4 – Following implementation of the	**Primary RQ 2.4.a:** What strategies did the MCOs implement to address non-medical needs affecting enrollees' health?

[3] The independent evaluator will examine whether observed changes in service utilization measures suggest that the volume and mix of services utilized is shifting in the direction of lower cost types of care, when clinically appropriate (e.g., if increased primary care visits are observed, if there is an association between primary care visit rates and emergency department visit and inpatient visit rates). The independent evaluator will interpret the service utilization measures in the context of other measures in the Evaluation (e.g., health outcome measures).

Hypotheses	Research Questions
TennCare III demonstration, MCOs will encourage and/or facilitate the identification of non-medical needs affecting enrollees' health and the referral of enrollees to resources.	**Primary RQ 2.4.b:** Has the percentage of enrollees screened for non-medical needs affecting enrollees' health increased following the implementation of TennCare III? **Primary RQ 2.4.c:** Has the percentage of enrollees referred to resources to address non-medical needs affecting enrollees' health increased following the implementation of TennCare III?
Hypothesis 2.5 – Following implementation of the TennCare III demonstration, participant engagement in dental services for eligible TennCare III enrollees will maintain or increase.	**Primary RQ 2.5.a:** Has participant engagement in dental services for TennCare children and adolescents maintained or increased following implementation of TennCare III? **Primary RQ 2.5.b:** Has participant engagement in dental services for pregnant TennCare enrollees maintained or increased following implementation of TennCare III? **Primary RQ 2.5.c:** Has participant engagement in dental services for postpartum TennCare enrollees increased following implementation of TennCare III? **Primary RQ 2.5.d:** Has participant engagement in dental services for adult TennCare enrollees increased following implementation of TennCare III?
Hypothesis 2.6 – Under TennCare III, enrollees will receive Medicaid benefits in excess of those available under the Medicaid State Plan.	**Primary RQ 2.6.a:** What benefits did TennCare enrollees receive that were in excess of the benefits authorized under the Medicaid State Plan following implementation of TennCare III?
Hypothesis 2.7 – DSIPs will continue to provide important services to Tennesseans and expand the provision of health-related services.	**Primary RQ 2.7.a:** What is the amount expended on DSIPs under the demonstration? **Primary RQ 2.7.b:** What additional services and populations served have occurred as a result of freeing up state funds that would otherwise have been used for DSIPs? **Primary RQ 2.7.c:** How much has the State invested in other health-related programs as a result of freeing up state funds that would otherwise have been used for DSIPs?
Hypothesis 2.8 – Following implementation of the TennCare III demonstration, TennCare's UC pools will maintain or increase TennCare enrollee access to eligible safety net providers.	**Primary RQ 2.8.a:** Have TennCare's UC pools maintained or increased access to care for TennCare enrollees served by eligible safety net providers? **Primary RQ 2.8.b:** How has the implementation of TennCare III impacted UC costs?
Hypothesis 2.9 – The retroactive eligibility waiver will not significantly impact	**Primary RQ 2.9.a:** Do Medicaid eligible individuals in Tennessee subject to the retroactive eligibility waiver enroll in Medicaid at the same rates as eligible individuals in other states who have access to retroactive eligibility?

Hypotheses	Research Questions
likelihood of enrollment, health status of enrollees, or have an adverse financial impact.	**Primary RQ 2.9.b:** Does the retroactive eligibility waiver significantly impact likelihood of enrollment continuity for enrollees? **Primary RQ 2.9.c:** Do the health outcomes of enrollees subject to the retroactive eligibility waiver differ from those of enrollees in other states who have access to retroactive eligibility? **Primary RQ 2.9.d:** What are common barriers to timely renewal for enrollees subject to the retroactive eligibility waiver? **Primary RQ 2.9.e:** Do Medicaid eligible individuals in Tennessee subject to the waiver of retroactive eligibility experience greater 'medical debt' relative to members in the program who are exempt from the waiver? **Primary RQ 2.9.f:** Are Medicaid eligible individuals in need of acute care able to enroll in TennCare quickly?
Hypothesis 2.10 – Rates of adoption for children in state custody will increase when Medicaid coverage is available for all children.[4]	**Primary RQ 2.10.a:** Has the implementation of TennCare III (and resulting extension of TennCare coverage to children adopted from state custody) increased the number and percentage of children adopted from state custody?

3. Goal 3: Ensure enrollees' satisfaction with services

The Evaluation will test one hypothesis to evaluate whether TennCare III policies have impacted enrollee satisfaction with services. **Figure 4** outlines the hypotheses and RQs that relate to Goal 3.

Note: Because the majority of TennCare III policies are continued from prior iterations of the TennCare demonstration, it is intended for the independent evaluator to isolate the effects that TennCare III has on these efforts, where feasible.

Figure 4. Goal 3 – Hypotheses and Research Questions

Hypotheses	Research Questions
Hypothesis 3.1 – Following implementation of the TennCare III demonstration, TennCare enrollee satisfaction with health care services will maintain or improve.	**Primary RQ 3.1.a:** Has the implementation of TennCare III maintained or improved TennCare enrollee satisfaction with overall health care? **Primary RQ 3.1.b:** Has the implementation of TennCare III maintained or improved CHOICES enrollee satisfaction? **Primary RQ 3.1.c:** Has the implementation of TennCare III maintained or improved satisfaction of individuals with I/DD? **Primary RQ 3.1.d:** Are parents of children enrolled in the Katie Beckett program satisfied with the services received from TennCare?

[4] The independent evaluator will assess this hypothesis pending CMS's approval of the State's proposal to cover these children.

4. Goal 4: Provide enrollees with appropriate and cost-effective Home and Community-Based Services (HCBS) within acceptable budgetary parameters

The Evaluation will test six hypotheses to evaluate whether TennCare III policies have impacted the provision of appropriate and cost-effective HCBS. **Figure 5** outlines the hypotheses and RQs that relate to Goal 4.

Note: Because the majority of TennCare III policies are continued from prior iterations of the TennCare demonstration, it is intended for the independent evaluator to isolate the effects that TennCare III has on these efforts, where feasible.

Figure 5. Goal 4 – Hypotheses and Research Questions

Hypotheses	Research Questions
Hypothesis 4.1 – Following implementation of the TennCare III demonstration, the proportion of individuals who receive HCBS rather than NF care will maintain or increase.	**Primary RQ 4.1.a:** Has the implementation of TennCare III maintained or increased the number and percentage of CHOICES enrollees actively receiving HCBS? **Primary RQ 4.1.b:** Has the implementation of TennCare III maintained or increased the ratio of HCBS to NF service costs for CHOICES enrollees? **Primary RQ 4.1.c:** Has the implementation of TennCare III maintained or decreased the average LTSS costs per CHOICES enrollee?[5] **Primary RQ 4.1.d:** Has the implementation of TennCare III maintained or increased the number and percentage of individuals with I/DD actively receiving HCBS? **Primary RQ 4.1.e:** Has the implementation of TennCare III maintained or increased the ratio of HCBS to ICF/IID service costs for individuals with I/DD? **Primary RQ 4.1.f:** Has implementation of the TennCare III demonstration maintained or decreased the average LTSS costs per individual with I/DD? **Primary RQ 4.1.g:** Has the implementation of TennCare III maintained or increased the level of institutional transition and diversion for CHOICES enrollees?
Hypothesis 4.2 – Following implementation of the TennCare III demonstration, participation levels in integrated employment for individuals with I/DD will maintain or increase.	**Primary RQ 4.2.a:** Has the implementation of TennCare III maintained or increased the number of individuals with I/DD that participate in integrated employment and earn at or above the minimum wage?
Hypothesis 4.3 – The integration of existing HCBS waivers into managed care will maintain or improve the ability for individuals with	**Primary RQ 4.3.a:** Has the integration of existing HCBS waivers into managed care maintained or improved the ability for individuals with I/DD to choose services?

[5] The independent evaluator will consider impacts of the COVID-19 pandemic, including potential increases in NF payments.

Hypotheses	Research Questions
I/DD to choose services.[6]	
Hypothesis 4.4 – Following enrollment in the Katie Beckett program, access to care for children eligible for Parts A and B of the Katie Beckett program will maintain or improve.	**Primary RQ 4.4.a:** Has enrollment in the Katie Beckett program maintained or improved access to care for eligible children?
Hypothesis 4.5 – Following implementation of the TennCare III demonstration, premium requirements for participants in Part A of the Katie Beckett program will not reduce the likelihood of enrollment or enrollment continuity among participants.	**Primary RQ 4.5.a:** How many and what percentage of children approved for Part A of the Katie Beckett program do not enroll due to non-payment of the premium? **Primary RQ 4.5.b:** How many and what percentage of Katie Beckett Part A program enrollees are suspended from the program due to non-payment of premiums? **Primary RQ 4.5.c:** How many and what percentage of Katie Beckett Part A program enrollees voluntarily separate from the program? **Subsidiary RQ 4.5.c.i:** Among Katie Beckett Part A program enrollees who voluntarily separate from the program, to what extent is this voluntary separation associated with the premium requirements? **Primary RQ 4.5.d:** What is the health insurance status and reported change in health status among Katie Beckett Part A enrollees that were: • Suspended from the program due to non-payment of premiums; or • Voluntarily separated from the program? **Subsidiary RQ 4.5.d.i:** What is the health insurance status and reported change in health status among Katie Beckett Part A enrollees that were suspended from the program due to non-payment of premiums? **Subsidiary RQ 4.5.d.ii:** What is the health insurance status and reported change in health status among Katie Beckett Part A enrollees that voluntarily separated from the program?
Hypothesis 4.6 – Part B of the Katie Beckett program (Medicaid Diversion) will delay and/or divert eligible children from enrolling in TennCare.	**Primary RQ 4.6.a:** Has the implementation of Part B of the Katie Beckett program delayed and/or diverted eligible children from enrolling in TennCare?

5. Goal 5: Manage expenditures at a stable and predictable level, and at a cost that does not exceed what would have been spent in a Medicaid fee-for-service program

The Evaluation will test three hypotheses to evaluate whether TennCare III policies have impacted TennCare's ability to manage expenditures at a stable and predictable level, and at a cost that does not exceed what would have been spent in a Medicaid fee-for-service program. **Figure 6** outlines the hypotheses and RQs that

[6] The independent evaluator will assess this hypothesis pending CMS's approval of the State's proposal to integrate these services.

relate to Goal 5.

Figure 6. Goal 5 – Hypotheses and Research Questions

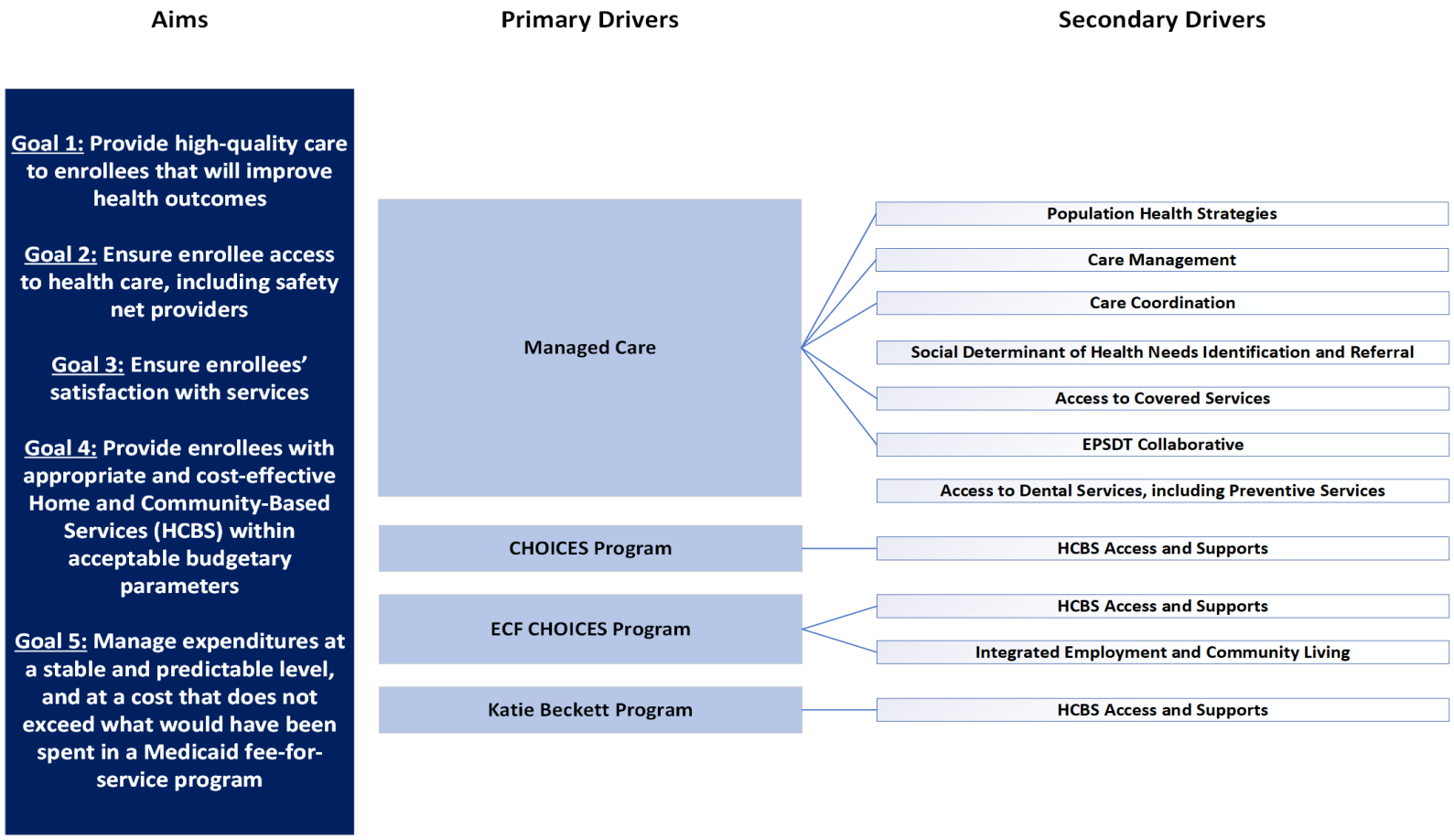
Hypotheses	Research Questions
Hypothesis 5.1 – Following implementation of the TennCare III demonstration, TennCare expenditures will grow at a slower and more sustainable rate than the average national Medicaid expenditures.	**Primary RQ 5.1.a:** Has TennCare maintained an expenditure growth rate that is slower than the average national Medicaid expenditure growth rate?[7] **Primary RQ 5.1.b:** What is the difference between TennCare's aggregate costs by expenditure group compared to the budget neutrality test limits by expenditure group and how does this change over the duration of the demonstration period? **Primary RQ 5.1.c:** What are the administrative operational costs of the demonstration?
Hypothesis 5.2 – Following the implementation of TennCare's authority to suspend Medicaid eligibility for enrollees who have been convicted of Medicaid fraud, the number of Medicaid fraud incidents in State or Local courts will maintain or decrease.	**Primary RQ 5.2.a:** Has the implementation of TennCare's authority to suspend Medicaid eligibility for individuals convicted of Medicaid fraud maintained or decreased the number of enrollees who have been convicted of Medicaid fraud in State or Local courts? **Primary RQ 5.2.b:** What is the reported health insurance status among individuals who are suspended from TennCare due to a Medicaid fraud conviction?

[7] The independent evaluator will consider impacts of the American Rescue Plan, including enhanced Federal Medical Assistance Percentages (FMAP) funds.

6. TennCare III Driver Diagram

The TennCare III Driver Diagram, illustrated in **Figure 7**, establishes a visual relationship between TennCare's five programmatic goals (aims), the primary drivers that advance those goals, and the secondary drivers fundamental to support the primary drivers.

Figure 7. TennCare III Driver Diagram



7. TennCare III Logic Models

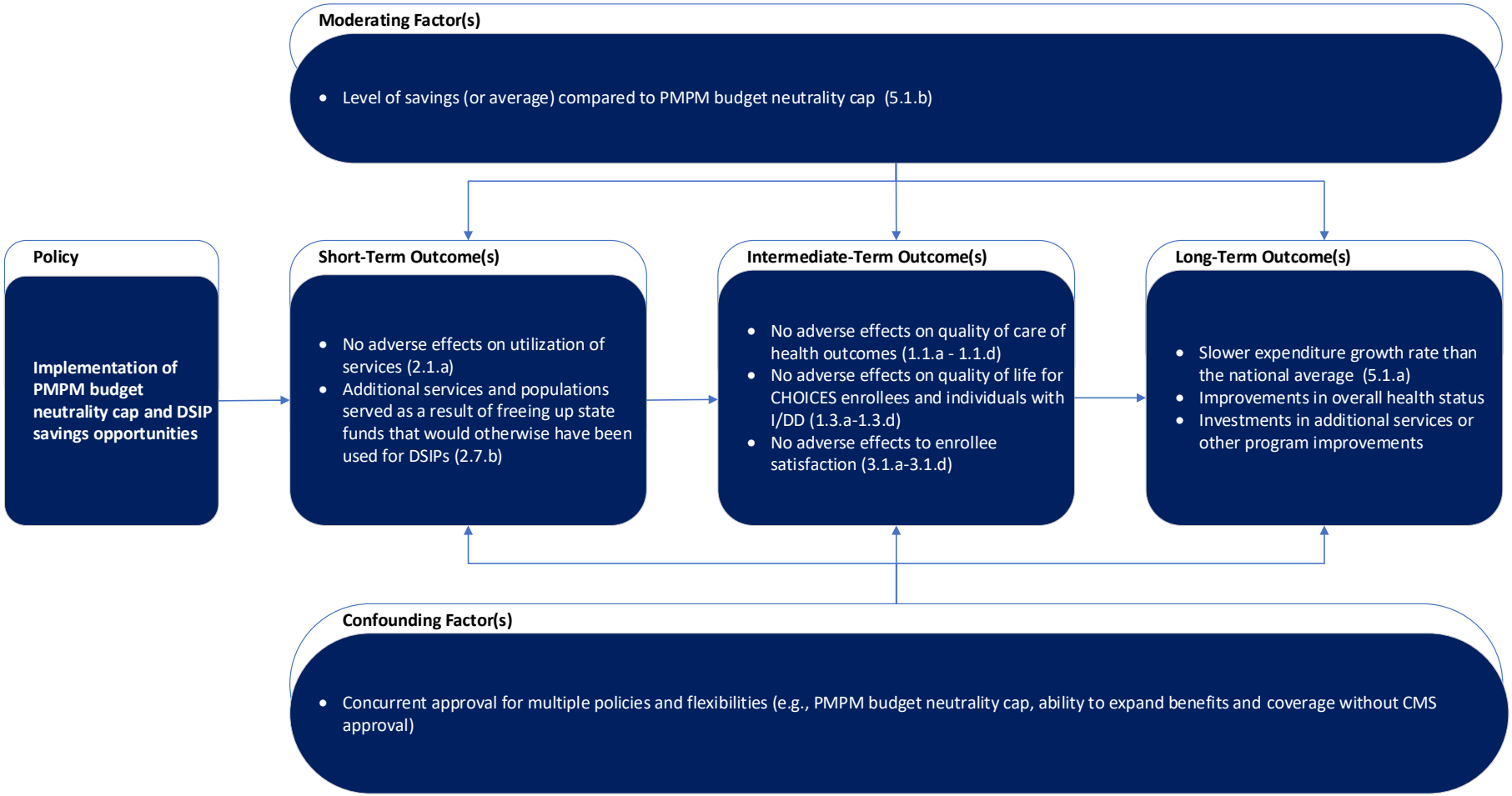
TennCare III Logic Models, included in **Figures 8 and 9** focus on the new, key policies and flexibilities approved as part of the TennCare III demonstration: DSIP savings opportunities and suspension of eligibility for State or Local Medicaid fraud conviction.

Logic Models are not provided for policies that have been in effect since before the approval of TennCare III (e.g., broader managed care programs, CHOICES program, I/DD programs, Katie Beckett/Medicaid Diversion Program).

For each Logic Model, RQs associated with the outcomes, moderating factors, and/or confounding factors are included in parentheses.

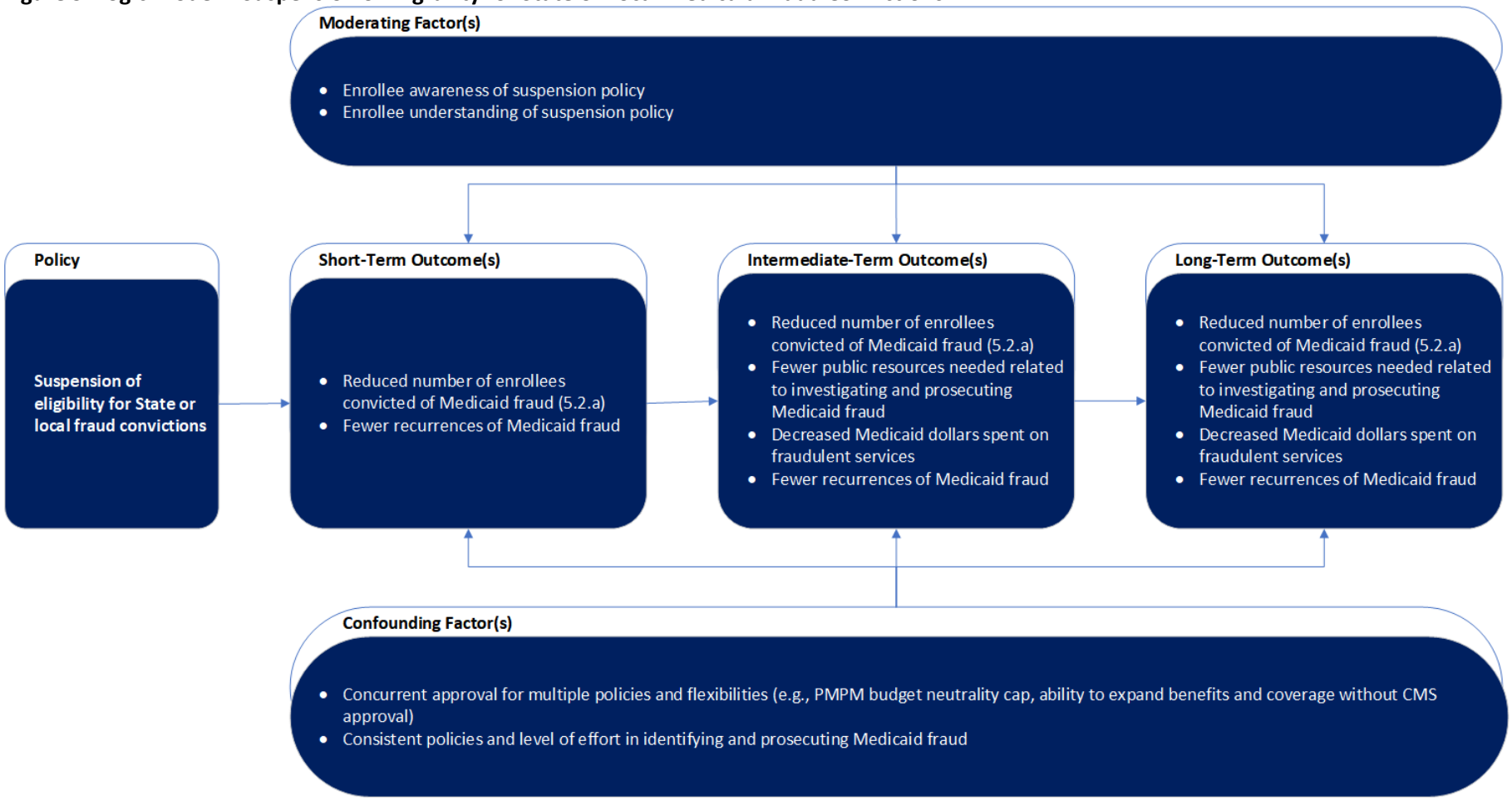
The Logic Model in **Figure 8** illustrates the expected short-term, intermediate, and long-term outcomes for implementation of the DSIP savings opportunities.

Figure 8. Logic Model – Implementation of DSIP Savings Opportunities



The Logic Model in **Figure 9** illustrates the expected short-term, intermediate, and long-term outcomes for the suspension of eligibility for State or Local Medicaid fraud convictions.

Figure 9. Logic Model – Suspension of Eligibility for State or Local Medicaid Fraud Convictions



C. Methodology

This section provides details on the proposed methodology for the TennCare III Evaluation Design, including anticipated data sources, comparison groups, analytic methods, and evaluation reporting periods. The Evaluation Design uses a variety of measures that will track the quality of care, health outcomes, access to care, enrollee satisfaction, and cost-effectiveness of the TennCare program.

Section C.1 summarizes the types of data that the independent evaluator will use.

Sections C.2 and C.3 include the qualitative and quantitative data sources that this Evaluation Design plans to employ, provide a brief description of each, and describe the demonstration topics that the sources will be used to evaluate.

Section C.4 describes TennCare's anticipated target and comparison groups. The TennCare III demonstration is program-wide and thus places all TennCare enrollees in the intervention group for most RQs. As a result, in-state comparison groups are largely infeasible. When possible, the independent evaluator will utilize out-of-state comparison groups for RQs where data can be utilized for comparable states.

Section C.5 outlines TennCare's proposed analytic methods for the Evaluation. The independent evaluator will use a mixed-methods approach to answer the RQs in this Evaluation.

Section C.6 includes analytic tables that detail the evaluation approach for each goal. The analytic tables outline the planned RQs, outcome measures, related data specifications, data sources, comparison groups, analytic approaches, and reporting schedules for each hypothesis.

1. Data Sources

The independent evaluator will compile data for the Evaluation from a range of quantitative and qualitative data sources including national surveys, Tennessee-specific surveys, national claims databases, and state-level claims, administrative, and enrollment data. These data sources are described in further detail in Sections C.2 and C.3.

Figure 10 outlines the data sources anticipated to be used to evaluate each demonstration goal. The "X" indicates the relevant data sources corresponding to each goal.

Figure 10. Data Sources by Demonstration Goal

Data Source	Goal 1: Quality of Care and Health Outcomes	Goal 2: Access	Goal 3: Satisfaction	Goal 4: HCBS	Goal 5: Expenditures
External Data Sources					
1. National Committee for Quality Assurance (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS®)	X	X			

Data Source	Goal 1: Quality of Care and Health Outcomes	Goal 2: Access	Goal 3: Satisfaction	Goal 4: HCBS	Goal 5: Expenditures
2. National Core Indicators - Aging and Disability™ (NCI-AD) Survey	X		X		
3. NCI Child Family Survey	X		X	X	
4. Council on Quality and Leadership Personal Outcome Measures Survey	X		X	X	
5. Integrated Public Use Microdata Series (IPUMS) American Community Surveys (ACS)		X			
6. Behavioral Risk Factor Surveillance System (BRFSS)		X			
7. Medicaid Budget and Expenditure System (MBES)					X
Internal Data Sources					
1. Early and Periodic Screening, Diagnostic and Treatment (EPSDT) Data	X				
2. TennCare Claims and Encounter Data	X	X		X	X
3. Pharmacy Claims Data	X	X			X
4. TennCare Dental Benefit Manager (DBM) Claims Data		X			
5. CHOICES and I/DD Program Claims and Encounter Data				X	
6. Tennessee Department of Health Vital Statistics Records (2017-2030)	X				
7. TennCare Provider Enrollment Data	X				
8. State Administrative Data		X			X
9. TennCare MCO Population Health Data		X			
10. Tennessee Uncompensated Care Data		X			
11. TennCare Eligibility and Enrollment Data		X		X	
12. Beneficiary Satisfaction Survey of TennCare Recipients			X		
13. TennCare Individual Employment Data Survey (EDS)				X	
14. TennCare Expenditure Data					X
15. State and Local Law					X

Data Source	Goal 1: Quality of Care and Health Outcomes	Goal 2: Access	Goal 3: Satisfaction	Goal 4: HCBS	Goal 5: Expenditures
Enforcement Agency Data					
16. MCO Interviews		X			
17. TennCare Enrollee Surveys and Focus Groups		X		X	
18. TennCare Medicaid Rules		X			
19. TennCare Benefit Packages		X			
20. Key Informant Interviews and Document Reviews	X	X	X	X	X

2. External Data Source Descriptions

TennCare proposes the use of several external data sources, all of which offer quantitative data. For each of the national surveys, the independent evaluator will consult the survey's technical documentation to ensure effective use of the survey data. If necessary, the independent evaluator may use sample weighting or other sample selection techniques, further outlined in Section C.5.

National Committee for Quality Assurance (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS®)

The NCQA Quality Compass Data for Medicaid includes HEDIS®, a national data set that measures the quality of care received by Medicaid enrollees. NCQA provides annual national and regional standards that states can use to benchmark their performance on quality and health outcomes through its Quality Compass publication. TennCare's contracted MCOs are required to complete all NCQA HEDIS® measures relevant to Medicaid and report results on an annual basis to TennCare. Each MCO must contract with a NCQA-certified auditor to validate MCO processes.

It is intended for the independent evaluator to use a range of HEDIS® measures to evaluate the impact of the demonstration on overall enrollee quality of care, health outcomes, and service utilization. Many of the HEDIS® measures included in the Evaluation align with CMS' 2021 Adult and Child Core Sets.

National Core Indicators - Aging and Disability™ (NCI-AD) Survey

The NCI-AD Survey is jointly administered by Advancing States, Human Services Research Institute (HSRI), and participating states, and tracks the performance of State Medicaid, aging, and disability agencies. The Survey measures various service planning, community inclusion, safety, and other outcomes of services provided to individuals in participating states. It is intended for the independent evaluator to use NCI-AD Survey results to evaluate MLTSS quality outcomes and satisfaction for the CHOICES population.

Tennessee has participated in the NCI-AD Survey since its launch in measurement year (MY) 2015-2016. In MY 2015-2016, participation results for Tennessee were reported for the general CHOICES population, and not separated by HCBS and NF populations.[8] Therefore, this Evaluation Design proposes to use NCI-AD Survey data beginning in MY 2016-2017, when participation results were separated for the CHOICES HCBS and CHOICES NF populations. NCI-AD Survey data is not available for MY 2020-2021, as the COVID-19 pandemic

[8] NCI-AD 2015-2016 National Results, https://nci-ad.org/upload/reports/NCI-AD_2015-2016_National_Report_FINAL.pdf

prevented in-person interviews, but data collection is resuming for MY 2021-2022.

Section C.6 includes potential NCI-AD measures that the independent evaluator will evaluate.

National Core Indicators™ (NCI) Child Family Survey

Starting in 2022, Tennessee will begin utilizing the NCI Child Family Survey, a national Survey tool conducted by the same entities as NCI and NCI-AD, for the Katie Beckett program. This data will be compiled on an annual basis and is intended to be used by the independent evaluator to evaluate the impact of the Katie Beckett/Medicaid Diversion program on quality outcomes, care access, and satisfaction for eligible children.

Section C.6 includes potential NCI Child Family measures that the independent evaluator will evaluate.

The Council on Quality and Leadership (CQL) Personal Outcome Measures® (POMs) Survey

The CQL POMs are used to identify people's quality of life outcomes, plan supports, and collect information and data about individual outcomes. The survey gathers information about outcomes in the following factors: My Human Security, My Community, My Relationships, My Choices, and My Goals. The data is intended to be used by the independent evaluator to evaluate quality outcomes and satisfaction of individuals with I/DD.

Section C.6 includes potential CQL POMs measures that the independent evaluator will evaluate.

Integrated Public Use Microdata Series (IPUMS) American Community Surveys (ACS)

The U.S. Census Bureau and U.S. Department of Commerce jointly sponsor ACS, a national annual survey that provides key demographic, insurance, and other socioeconomic variables on the total U.S. population. It is intended for the independent evaluator to use ACS data, including demographic information, employment, disability, income data and Medicaid participation to identify comparable states for comparison for all RQs for which an out-of-state comparison is indicated, and, more specifically, to evaluate whether Medicaid eligible people in Tennessee subject to the retroactive eligibility waiver enroll in Medicaid at the same rates as eligible people in other states who have access to retroactive eligibility.

Behavioral Risk Factor Surveillance System (BRFSS)

Since 1984, the Centers for Disease Control (CDC) and state health departments have jointly operated BRFSS, a nationwide annual survey that gathers large samples of data on health status, health risk behaviors, access to health care, and utilization of preventive health services. Throughout the year, BRFSS interviewers conduct telephone surveys of more than 400,000 adults in all 50 states, the District of Columbia, and three U.S. territories. The contracted interviewers and in-house CDC interviewers conduct the survey using Random Digit Dialing (RDD) techniques on landlines and cell phones.[9]

Medicaid Budget and Expenditure System (MBES)

Through MBES, CMS tracks budgeted and actual State expenditures for each fiscal period and actual expenditures for each quarter. CMS reports on this data in a Financial Management Report every fiscal year. It is intended for the independent evaluator to use this data to evaluate other State Medicaid expenditure growth rates.

[9] Behavioral Risk Factor Surveillance System Frequently Asked Questions, January 2018, https://www.cdc.gov/brfss/about/brfss_faq.htm

Potential Future Data Source: Transformed Medicaid Statistical Information System (T-MSIS)
The State will continue to explore the potential use of T-MSIS data for out-of-state compassion group analyses. However, at this time, the data is not yet available and the independent evaluator will leverage the alternative data sources and analytic methods outlined in this section for the evaluation.

3. Internal Data Source Descriptions

TennCare proposes the use of several internal data sources that will offer both quantitative and qualitative data.

Internal – Quantitative

TennCare's proposed internal, quantitative data sources include a range of Tennessee-specific claims and encounter data, enrollment data, administrative data, and other data sets collected and maintained by the State or its contractors.

Early and Periodic Screening, Diagnostic and Treatment (EPSDT) Data
On an annual basis, states are required to gather EPSDT data and submit Form CMS-416 to CMS, which helps assess the effectiveness of EPSDT services, including child health screening services, corrective treatment referrals, and dental services. It is intended that the independent evaluator will use EPSDT data to evaluate any changes in EPSDT service utilization among children enrolled in TennCare.

TennCare Claims and Encounter Data
TennCare maintains a database of claims and encounter data that will provide insights on health care utilization patterns of all TennCare enrollees. It is intended for the independent evaluator to use this database to extract data on enrollee utilization of specific services and provider types and other measures of care access and expenditures.

Pharmacy Claims Data

TennCare contracts with OptumRx to gather and maintain pharmacy claims data. It is intended for the independent evaluator to use pharmacy claims to evaluate opioid use, and enrollee utilization of outpatient prescription drugs.

Dental Benefit Manager (DBM) Claims Data

DentaQuest, TennCare's DBM, gathers and maintains dental claims data. It is intended for the independent evaluator to use DBM claims data to evaluate participant engagement in dental services among children, adolescents, and pregnant women.

CHOICES *and I/DD Program Claims and Encounter Data*

It is intended for the independent evaluator to use claims and encounter data to evaluate access to LTSS for CHOICES enrollees and individuals with I/DD, diversion rates from institutional to HCBS care, service costs associated with LTSS, and other measures. LTSS service costs refer to the amounts that TennCare/MCOs pay LTSS service providers.

Tennessee Department of Health Vital Statistics Records
The Tennessee Department of Health Office of Vital Records and Statistics collects and maintains a database of vital statistics, including resident live births. It is intended for the independent evaluator to use the Office's

birth statistics to evaluate the effect of TennCare's opioid strategy on neonatal abstinence syndrome live births.

TennCare Provider Enrollment Data

TennCare collects data on Buprenorphine Enhanced Supportive Medication-Assisted Recovery and Treatment (BESMART) providers enrolled in MCO networks. It is intended for the independent evaluator to use this data to evaluate access to MAT.

State Administrative Data

It is intended for the independent evaluator to use State administrative data to support the evaluation of several measures, including the number and percentage of children adopted from state custody.

TennCare MCO Population Health Data

Since 2020, TennCare has gathered data on non-medical needs affecting enrollees' health from its MCOs through a Semi-Annual MCO Population Health Report. It is intended for the independent evaluator to use the report to evaluate MCO population health efforts, including screenings and referrals to resources. While TennCare has collected the report since 2020, data validity limitations exist for early Population Health Reports; as a result, the first year of data that the independent evaluator would consider for evaluation is CY 2022.

Tennessee Uncompensated Care (UC) Data

UC cost data will be compiled through yearly DSH audits and non-DSH Certified Public Expenditure (CPE) audits. It is intended for the independent evaluator to use this data to measure UC costs associated with eligible Tennessee providers.

TennCare Eligibility and Enrollment Data

It is intended for the independent evaluator to use TennCare eligibility and enrollment data to evaluate the impact that Katie Beckett program premiums and retroactive eligibility waiver have on enrollee access to care, as well as the impact of Katie Beckett Part B on Medicaid diversion for eligible children. This data will also be used to evaluate insurance coverage changes for Katie Beckett program enrollees and enrollees who are subject to the retroactive eligibility waiver.

In addition, it is anticipated that the independent evaluator will use PCMH enrollment data, collected on an annual basis by TennCare, to evaluate enrollee access to comprehensive primary care services.

Beneficiary Satisfaction Survey

Every year since the inception of the TennCare demonstration in 1994, the State has conducted an annual survey of beneficiary satisfaction. This survey was a condition of the original TennCare demonstration and was approved by CMS. The Boyd Center for Business and Economic Research at the University of Tennessee (UT) conducts this beneficiary satisfaction survey annually on behalf of the State. UT surveys Tennessee residents to measure their insurance status, medical service utilization, and level of satisfaction with the TennCare program. The survey has a target sample size of 5,000 households, which enables UT to obtain accurate estimates for subgroups.[10] It is intended for the independent evaluator to use beneficiary

[10] The Impact of TennCare: A Survey of Recipients, October 2019, https://haslam.utk.edu/whitepapers/boyd-center-business-and-economic-research/impact-tenncare-survey-recipients-2019

satisfaction survey data to measure enrollee satisfaction with health care.

TennCare Individual Employment Data Survey (EDS)[11]

The TennCare Individual EDS is administered every calendar year and provides TennCare information on people 62 years of age and under who receive LTSS and are employed or are interested in becoming employed. The survey questions are typically administered by MCO Care Coordinators, Support Coordinators, Case Managers, or Independent Support Coordinators during person-centered planning meetings.[12] Individual EDS data was used to evaluate employment for working age adults with I/DD as part of the TennCare II Evaluation and is intended to be used for the same purpose as part of this Evaluation.

TennCare Expenditure Data

TennCare maintains a database of State Medicaid expenditures, which will be used to evaluate program expenditures throughout the demonstration period.

State and Local Law Enforcement Agency Data

On a quarterly basis, TennCare receives data on the total number of Medicaid fraud convictions from State and Local law enforcement agencies. It is intended for the independent evaluator to use this data to evaluate the impact that suspending eligibility for TennCare enrollees convicted of Medicaid fraud in State or Local courts has on the number of fraud incidents.

Internal – Qualitative

MCO interviews, enrollee surveys, and enrollee focus groups may be conducted to gather qualitative data. Qualitative analysis will provide useful context for the quantitative analyses and will enable the independent evaluator to explore certain trends and outliers in the data.

MCO Interviews

The independent evaluator will conduct interviews with MCOs to evaluate MCO efforts to address non-medical needs affecting enrollees' health. Tennessee will identify MCO interview participants based on existing contacts at each MCO. During these interviews, the independent evaluator will ask questions about strategies to address enrollee access to transportation, housing, food, and other resources that may impact enrollee health.

TennCare Enrollee Surveys and Focus Groups

The independent evaluator will conduct enrollee surveys and focus groups. Enrollee surveys and focus groups are particularly useful where data is not otherwise available on questions of interest.

TennCare Enrollee Surveys

Enrollee surveys will be used to evaluate reported barriers to timely renewal and reported medical debt for enrollees subject to the retroactive eligibility waiver.

Surveys will be distributed via mail and completed using an online form. The enrollee survey

[11] Individual Employment Data Survey, 2021, https://www.tn.gov/content/dam/tn/tenncare/documents/2020EmploymentDataSurvey1.1.2020.pdf

[12] Individual Employment Data Survey, 2021, https://www.tn.gov/content/dam/tn/tenncare/documents/2020EmploymentDataSurvey1.1.2020.pdf

participant selection process will use TennCare enrollment data and member lists. For any internal survey data collection, as feasible given sample size constraints, the independent evaluator will use probability sampling methods to select survey participants. This process will reduce selection bias and strengthen representation of the relevant enrollee subgroups.

The independent evaluator will use weighting methods on enrollee survey data to adjust for non-response and sample design. The independent evaluator will also survey enrollees who are not subject to the retroactive eligibility waiver to serve as a comparison group for the enrollees who are subject to the retroactive eligibility waiver.

Figure 11 outlines the approach, including timeframe, topics, and sampling strategy for the retroactive eligibility enrollee survey. Timeframes and sample sizes will be updated as needed in the methodology section of the evaluation reports.

Figure 11. Summary of TennCare Retroactive Eligibility Enrollee Survey Design

Area	TennCare Retroactive Eligibility Enrollee Survey
Individuals Surveyed	• TennCare enrollees subject to the retroactive eligibility waiver • Comparison group of TennCare enrollees not subject to the retroactive eligibility waiver
Timeframe	2023, 2025, 2027, 2029
Topics	• Barriers to timely enrollment • Presence of medical debt
Mode of Administration	Online survey; distributed as a QR code via physical mail

Sampling Strategy	• Random
	• Sampling universe:
	  ○ TennCare enrollees subject to the retroactive eligibility waiver
	  ○ Comparison group of TennCare enrollees not subject to the retroactive eligibility waiver

Estimated sample size	TennCare enrollees subject to the retroactive eligibility waiver: sample size of 385 Comparison group: sample size to be determined based upon comparison group characteristics
Statistical power assumptions	Assuming a potentially eligible population of approximately 50,000 beneficiaries subject to the retroactive eligibility waiver that enroll or re-enroll in a given year, this sample size will allow for estimating population metrics with a 95% confidence level with a margin of error of +/- 5.0%.

TennCare Focus Groups

The independent evaluator will use focus groups to evaluate reasons for disenrollment from Part A of the Katie Beckett Program, sources of insurance after disenrollment, and changes in health status after disenrollment. Focus groups will be critical when evaluating the Katie Beckett Program as this group has a smaller population and attempting to gather information through surveys would not achieve statistical conclusions. The independent evaluator will develop focus group questions closer to the time of evaluation. The focus groups will use a standardized questionnaire and independent

facilitators. Focus groups may last 30-90 minutes, depending on the number of questions, to ensure that each topic is sufficiently addressed and discussed among participants.

Figure 12 summarizes the planned approach for focus groups.

Figure 12. Summary of Focus Groups

Focus Group	Potential Topics and Insights	Timeframe
Beneficiaries in the Katie Beckett Program that were suspended from the program due to non-payment of premiums or voluntarily separated from the program	Reasons for disenrollment from Part A of the Katie Beckett Program, sources of insurance after disenrollment, and changes in health status after disenrollment.	Each interim evaluation report year

TennCare Medicaid Rules

The flexibilities afforded under TennCare III allow the State to add new benefits and coverage without prior CMS approval. In the case of amended Medicaid benefits and/or coverage, TennCare will alter Medicaid Rules as necessary and the independent evaluator will report on any applicable changes to the Medicaid rules in the Evaluation Report(s).

Note: TennCare is not authorized to make reductions to benefits or coverage without prior CMS approval.

TennCare Benefit Packages

TennCare provides a variety of benefit packages that vary based on eligibility group. As noted above, TennCare may add to these benefits without prior CMS approval. TennCare will update the benefit packages to reflect any additions to benefits and/or coverage. The independent evaluator will report on any applicable changes to the benefit packages in the Evaluation Report(s).

Key Informant Interviews and Document Reviews

In addition to the data sources named above, the independent evaluator will incorporate key informant interviews and document reviews into the evaluation to provide insights on the impact of the demonstration. The independent evaluator will conduct semi-structured interviews with key stakeholders, including TennCare staff, to gain insights as to the real-world effects of the demonstration and its impact on beneficiaries. The independent evaluator will also review documents such as TennCare's quarterly monitoring reports and other relevant publications to gain insight into changes in the delivery system or other descriptions of context related to programs and policies. The key informant interviews and document reviews will primarily serve as a supplemental data source to bolster and contextualize quantitative metric findings across goals, hypotheses, and research questions.

4. Target and Comparison Populations

Target Populations

The target population for this analysis is all beneficiaries covered by TennCare, or where applicable, the TennCare member subgroup specific to the RQ, such as:

- *CHOICES:* The CHOICES program covers older adults and adults with physical disabilities. To qualify for CHOICES, beneficiaries must need the level of care provided in a NF and qualify for Medicaid LTSS.
- *Programs for Individuals with I/DD:* Programs for individuals with I/DD include ECF CHOICES, 1915(c) waivers, and ICF/IID services. Beneficiaries must meet the definition of intellectual disability or

developmental disability.

- *Katie Beckett/Medicaid Diversion:* The Katie Beckett program covers children with disabilities or complex needs through age 18 with disabilities and/or complex medical needs who are not otherwise Medicaid eligible due to their parents' income or assets.

Comparison Populations

Comparison populations are used in program evaluation and impact assessment to serve as a counterfactual group from the intervention group where the intervention is not applied. The use of a counterfactual group supports a quasi-experimental study in circumstances where an experimental design (e.g., randomized control trial) would be unethical or infeasible.

During the development of the Evaluation Design, both in-state and out-of-state comparison groups were considered. There are several aspects of the demonstration that render in-state comparison groups largely infeasible for this Evaluation Design:

1. Many of the demonstration components impact the entire TennCare enrollee population. In these cases, all in-state enrollee populations must be considered part of the intervention group.
2. For the components that target specific subgroup, such as the Katie Beckett program, the unique characteristics of the target population limit the availability of appropriate in-state comparison groups.
3. None of the new demonstration components involve random assignment or staggered implementation.
4. Tennessee does not actively maintain an all-payer claims database from which to identify a comparable in-state low-income non-Medicaid population.

For these reasons, when using comparison groups, the Evaluation Design plans to use either beneficiaries with similar characteristics from other states (selected using methodology described below) or national/regional benchmarks as the potential comparison group for quasi-experimental analyses, depending on the RQ.

Out-of-State Comparison Groups

To select the out-of-state comparison groups, the independent evaluator will first select states similar to Tennessee on relevant characteristics, such as overall demographics and Medicaid policies. The independent evaluator will use data sources such as ACS or BRFSS to find states similar to Tennessee on key state characteristics, such as percent unemployed, Medicaid eligibility Federal Poverty Level cut-off points, percent uninsured, race composition, percent Medicaid enrollees covered by MCOs, and health status on key indicators. Comparison states and selection criteria may differ depending on the RQ (e.g., for RQs regarding the retroactive eligibility waiver, comparison states will provide retroactive coverage to serve as an appropriate counterfactual).

Specifically, to identify similar states, the independent evaluator will compute a similarity score that is the inverse of the Euclidean distance between Tennessee and the potential comparison states. The independent evaluator will identify the relevant covariates, such as those listed above, compute the Euclidean distance with each covariate treated as a dimension between Tennessee and the other states, and select the comparison State with the lowest distance metric relative to Tennessee.[13]

[13] See Stuart, E. A. (2010). Matching methods for causal inference: A review and a look forward. *Statistical science: a review journal of the Institute of Mathematical Statistics*, *25*(1), 1.

As part of the Interim and Summative Evaluation Reports, the independent evaluator will follow the methodology outlined to determine the appropriate states to use as comparisons, using the data sources and variables in **Figure 13**. The independent evaluator may choose to vary the final states selected by research question and may choose to add or otherwise change the set of variables included in the Euclidian matching model to reflect any updated, state-specific policy changes.

Figure 13. Summary of State Characteristics and Variables for Euclidian Matching Model to Select Comparison States

Characteristic	Data Source	Variable Name
Population Estimate	ACS	Population Estimate, July 1, 2021
Medicaid expansion status	KFF[14]	N/A
Percent FPL Limit (Parents, as of January 1, 2022)	KFF	N/A
Min Wage	DOL[15]	N/A
Percent Urban Population	BRFSS	_URBSTAT
Percent Medicaid Coverage	BRFSS	HLTHCVR1
Marketplace Type	KFF	N/A
Demographics	ACS	S2502_C01_002E through S2502_C01_010E
Unemployment Rate	BRFSS	EMPLOY1
Uninsured Pct of Population	ACS	DP03_0097PE, DP03_0098PE, DP03_0099PE
Percent with cash public assistance income	ACS	DP03_0073PE
Percent of Enrollees with Disabilities	KFF	N/A
MLTSS in place	KFF	N/A
Percent of enrollees in MLTSS	KFF	N/A
Percent using cigarettes	BRFSS	SMOKDAY2
Percent obese	BRFSS	_BMI5CAT
Percent under 100% FPL	KFF	N/A

Where complete and accurate beneficiary-level data are available, the independent evaluator will select the comparison group of similar Medicaid enrollees from the selected comparison state(s). To improve the validity of the difference-in-differences (DiD) analyses, discussed further below, and support the use of an out-of-state comparison group where Medicaid populations may differ in characteristics, the independent evaluator will consider the use of propensity score matching to select the comparison group. Specifically, the independent evaluator will match beneficiaries in the intervention group with beneficiaries from the selected comparison state(s).

National/Regional Benchmarks

For data sets where beneficiary-level data are not available, state-level aggregate measures or national/regional benchmarks may be used as a comparison. These benchmarks can serve as a comparison in the pre- and post-intervention periods, supporting a DiD evaluation. The independent evaluator will use the method described under Out-of-State Comparison Groups above to select appropriate states or regions to serve as comparison benchmarks. When aggregate measures or national/regional benchmarks are used, the independent evaluator will identify the necessary covariates to include in the model to control for differences

[14] Kaiser Family Foundation (2022). Various indicators, "State Health Facts." Accessed August 17, 2022 from https://www.kff.org/statedata/.

[15] Paycor (2022), based on Department of Labor data. "Minimum Wage by State and 2023 Increases." Accessed August 17, 2022 from https://www.paycor.com/resource-center/articles/minimum-wage-by-state/.

between Tennessee and the selected comparison benchmarks. The independent evaluator will use both relevant theory/research and data-driven techniques to inform the selection of the relevant covariates.

5. Analytic Methods

The independent evaluator will use a mixed-methods approach to answer the RQs in this Evaluation. To assess program impact, the Evaluation Design uses a quasi-experimental, quantitative methodology where feasible to allow for causal interpretation of results. The independent evaluator will also use qualitative analyses to support an understanding of stakeholders' perspectives and experiences on implementation and outcomes. The quantitative and qualitative analyses will complement each other and present a comprehensive assessment of the TennCare III implementation, impact, and variation among subgroups. The independent evaluator will use a convergent mixed methods approach to incorporating qualitative and quantitative methods. In a convergent approach, qualitative and quantitative data are collected in a similar timeframe, and each type of data may inform the collection, analysis, and interpretation of the other in an iterative fashion. For example, focus groups with Katie Beckett enrollees may provide contextual information to use when interpreting Katie Beckett eligibility and enrollment data, and the analysis of the Katie Beckett eligibility and enrollment data may inform the development of interview guides for focus groups. The independent evaluator should collect and analyze both quantitative and qualitative data throughout the evaluation period.

The following analytic methods will be considered for this Evaluation.

Difference-in-Differences

The Evaluation Design uses a quasi-experimental, quantitative design to estimate the causal impact of the TennCare III implementation and policy changes wherever possible. Specifically, for RQs where there are pre-intervention data and a valid comparison group identified, the independent evaluator will use DiD. DiD is a regression technique that measures the impact of an intervention by comparing changes in outcomes for the target population to changes in outcomes for a comparison group. Using DiD, the impact of TennCare III can be isolated as the pre-post difference in an outcome for the intervention group minus the pre-post difference for the comparison group (see methodology described above for comparison group selection).

The identifying assumption for DiD requires "parallel trends," which specifies that the change in the intervention group would have been the same as the change in the comparison group if the intervention (i.e., TennCare III) had not been applied. Violations of this assumption (e.g., the outcome of interest in the comparison state is affected by a separate policy that changes the trend from baseline) will limit the validity of any causal inference from a DiD methodology. Out-of-state comparison groups will be selected with the "parallel trends" criterion in mind, and the independent evaluator will conduct visual trend analysis and other statistical testing to ensure the assumption holds during the baseline period for the selected comparison states.

The independent evaluator will use standard power calculations to assess the appropriate sample size for model specifications. The DiD regression models will include beneficiary and geographic-level covariates to control for underlying differences; the covariates will include demographic characteristics, health status, regional and location data, and other variables as relevant and available. Additionally, as appropriate, the independent evaluator will apply sampling weights and weighting techniques to any survey sample data sources used. Unless otherwise specified, the DiD analysis will use a baseline period of 2017-2019 and an intervention period of 2021 forward.

For hypotheses and research questions for policy components that remain unchanged between TennCare II and TennCare III (e.g., CHOICES), it is less likely that a significant change in utilization or other outcomes will be observed between the two demonstrations. Ideally, in these scenarios, the independent evaluator would be able to use pre-period data to address questions about impacts or changes; however, for policies that have been longstanding features of the TennCare Demonstration, the ability to use or access pre-period data is limited or infeasible. In those cases, the independent evaluator can use DiD (or pre-test/post-test), but the results must be specifically interpreted with limited ability for causal inference. In these cases, the addressed policy component's intervention is not being tested due to the absence of pre-period (pre-TennCare) data; instead, the results should be interpreted as attributed to the change between TennCare II and TennCare III. Additionally, any features of the TennCare Demonstration that pre-dates the approval of TennCare III have been assessed in CMS-approved evaluations in earlier Demonstration periods.

Interrupted Time Series

Where valid in-state and out-of-state comparison groups are unavailable due to data limitations but extended pre-intervention data are available, the independent evaluator will use an interrupted time series (ITS) design. ITS estimates the impact of an intervention based on the pre-intervention and post-intervention period, using a longitudinal measure of the outcome of interest. ITS requires observations on the target population taken at equal intervals over a time period during which the intervention is implemented (the "interruption"). By repeatedly observing the measure before and after the intervention, the independent evaluator can assess whether the level or trend of the outcome has shifted. If there are sufficient pre-intervention observations and adequate statistical power, ITS may support causal interpretation.

Due to the long intervention period expected for the demonstration (i.e., 10 years) and the balanced observation requirement, utilizing a formal ITS design may not be feasible for many RQs. Many measures in available data sets may not have been collected for the entire pre-intervention period, or certain outcome measures may be affected by other events (e.g., separate policy change or recession), rendering any conclusions invalid. Like DiD, it is necessary to conduct visual trend analysis on the pre-intervention period to ensure linearity of the trends and the absence of seasonal effects. Additionally, using regression analysis with relevant covariates can strengthen the ITS design by controlling for other potential confounding external factors; the covariates should include demographic characteristics, health status, regional and location data, and other variables as relevant and available.

One-Group Pretest-Posttest

In many cases, there are insufficient data points before the implementation of TennCare III to support an ITS design, which requires balanced data points surrounding the intervention period. For these questions, the independent evaluator will compare rates/measures calculated before and after the implementation of TennCare III to assess changes in a one-group pretest-posttest design. This design does not permit a causal interpretation; however, the independent evaluator can use this analysis to estimate trends in the outcome of interest following the implementation of the intervention. The evaluator will use regression techniques to control for changes in enrollee characteristics over time to improve the estimation of the trend in the measured outcome.

Comparison of Means

In instances where a comparison group or national/regional benchmark are available for the selected measure, but pre-intervention data are limited or unavailable, the Evaluation Design incorporates a

comparison of means (i.e., post-test only with non-equivalent comparison group). This design estimates changes in the outcome of interest for the intervention group against the comparison group over time. Where applicable, the independent evaluator will incorporate regression techniques to control for observable characteristics and potential confounding variables to support an improved comparison. Additionally, the independent evaluator will leverage statistical tests to test for the significance of findings (e.g., Chi-squared tests). However, because this analysis does not control for pre-intervention trends that could continue during the intervention period, the conclusions will not support causal inference and will be limited to observational trends regarding the outcomes of interest.

Descriptive Analyses and One-Group Posttest-Only

For measures without pre-intervention data, the Evaluation Design is limited to summary statistics and observational (non-causal) inference on trends from the baseline period. For RQs assessing beneficiary characteristics, service utilization, or other descriptive variables, the independent evaluator will calculate standard summary statistics (e.g., total, median, mean, etc.) to report findings. Where appropriate, the independent evaluator will use statistical tests (e.g., Chi-Squared test) to assess the statistical significance of findings and differences between subgroups.

The independent evaluator will use a one-group posttest-only design to analyze measures without pre-intervention data or a comparison group over time. This analysis will describe change in the outcome of interest for the target population from baseline over time, but the assessment will be limited by the lack of pre-intervention data. Where appropriate, the evaluator will use regression techniques to control for changes in enrollee characteristics over time to improve the estimation of the trend in the measured outcome.

Qualitative Analysis

The independent evaluator will collect qualitative data through methods such as focus groups and stakeholder interviews. The qualitative data will be categorized and coded systematically using a standard qualitative methodology or software. The independent evaluator will use thematic analysis, which is a systematic and iterative data coding and analysis process that will allow the independent evaluator to identify themes or patterns within the responses.

Subgroup Analysis

To supplement the recommended methodologies, the independent evaluator will conduct subgroup analysis that examines the findings by population subsets where appropriate. The independent evaluator will use DiD and ITS analyses to estimate the average causal impact of the TennCare III implementation; however, this impact may vary depending on beneficiary subgroups (e.g., eligibility category, income level, duration of enrollment, rural/urban regions, etc.). Subgroup analysis allows further exploration of the potential impact by segmenting the target population to identify differences in impact. The independent evaluator will determine the number and type of subgroup analyses based on the demonstration goals, the RQs, and data and sample size limitations. Additionally, results of descriptive analyses should inform the subgroups considered.

The ability to conduct subgroup analysis may be limited by statistical and data considerations, such as sample size/power, sample variance, and available data variables. The independent evaluator will balance the potential insights and benefit of subgroup analysis against the potential statistical limitations to develop a precise and accurate analysis. When applying subgroup analysis to RQs where comparison groups are used, the independent evaluator will test whether subgroups of TennCare III beneficiaries and the comparison group are adequately balanced across key characteristics; if needed, the independent evaluator will construct

subgroup-specific comparison groups to ensure balance in observable characteristics.

6. Analytic Tables

Figures 14-18 outline the hypotheses, RQs, outcome measures, related data specifications, data sources and timeframes, comparison groups, analytic approaches, and reporting schedules for each demonstration goal.

Figure 14. Analytic Table – Goal 1: Provide high-quality care to enrollees that will improve health outcomes

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Hypothesis 1.1 – Following implementation of the TennCare III demonstration, quality of care and health outcomes for TennCare enrollees will maintain or improve.						
Primary RQ 1.1.a: Has the implementation of TennCare III maintained or improved physical health outcomes for TennCare enrollees?	- Controlling High Blood Pressure	- Numerator: number of enrollees 18–85 years of age who had a diagnosis of hypertension and had adequately controlled blood pressure (<140/90 mm Hg) - Denominator: the eligible population	- NCQA HEDIS® (2017-2030)	- National / regional benchmarks	- Difference-in-differences - Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%)	- Numerator: number of enrollees 18–75 years of age with diabetes (type 1 and type 2) who had HbA1c poor control (>9.0%) - Denominator: the eligible population				

Primary RQ 1.1.b: Has the implementation of TennCare III maintained or increased the utilization rates of preventive or wellness services for TennCare enrollees?	- Cervical Cancer Screening	- Numerator: number of female enrollees 21–64 years of age who were screened for cervical cancer using any of the following criteria:
		  - Female enrollees 21–64 years of age who had cervical cytology performed within the last 3 years
		  - Female enrollees 30–64 years of age who had cervical high-risk human papillomavirus (hrHPV) testing performed within the last 5 years
		  - Female enrollees 30–64 years of age who had cervical cytology/high-risk human papillomavirus (hrHPV) cotesting within the last 5 years
		- Denominator: the eligible female population
			- NCQA HEDIS® (2017-2030)	- National / regional benchmarks	- Difference-in-differences
					- Descriptive analysis
						- First Interim Evaluation (2023)
						- Second Interim Evaluation (2026)
						- Third Interim Evaluation (2029)
						- Summative Evaluation (2032)

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
	- Well-Child Visits in the First 30 Months of Life, First 15 Months[16]	Rate 1 – Well-Child Visits in the First 15 Months - Numerator: number of enrollees with six or more well-child visits with a PCP on different dates of service on or before the 15-month birthday - Denominator: The Rate 1-eligible population Rate 2 - Well-Child Visits for Age 15 Months–30 Months - Numerator: number of enrollees with two or more well-child visits with a PCP on different dates of service between the child's 15-month birthday plus 1 day and the 30-month birthday - Denominator: The Rate 2-eligible population				
	- Child and Adolescent Well-Care Visits	- Numerator: number of enrollees ages 3-21 with one or more well-care visits during the MY - Denominator: the eligible population				
	- Childhood Immunization Status, Combo 10	- Numerators: number of enrollees 2 years of age who had four diphtheria, tetanus, and acellular pertussis (DTaP); three polio (IPV); one measles, mumps, and rubella (MMR); three haemophilus influenza type B (HiB); three hepatitis B (HepB), one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis A (HepA); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday - Denominator: the eligible population				

[16] As of 2020, Well-Child Visits in the First 30 Months of Life contains two rates.

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Primary RQ 1.1.c: Has the implementation of TennCare III maintained or increased the utilization rates of EPSDT services for TennCare enrollees?	- EPSDT Screening ratio	- Numerator: total EPSDT screenings received by eligible enrollees, by age group - Denominator: total expected number of screenings, by age group	- EPSDT Data (2017-2030) - Annual National EPSDT Data (2017 – 2030)	- National / regional benchmarks	- Difference-in-differences - Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- EPSDT Participant ratio	- Numerator: total eligible enrollees receiving at least one initial or periodic screening - Denominator: total eligible enrollees who should receive at least one initial or periodic screening				
Primary RQ 1.1.d: Has the implementation of TennCare III maintained or improved the management of BH conditions for TennCare enrollees?	- Follow-Up after Hospitalization for Mental Illness (Adults)	- Numerator: number of enrollees 18 and older who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a MH provider within 30 days after discharge - Denominator: the eligible population	- NCQA HEDIS® (2017-2030)	- National / regional benchmarks	- Difference-in-differences - Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Follow-up after Hospitalization for Mental Illness (Children)	- Numerator: number of enrollees ages 6 to 18 older who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a MH provider within 30 days after discharge - Denominator: the eligible population				
Hypothesis 1.2 – Following implementation of the TennCare III demonstration, opioid misuse will maintain or decrease among TennCare enrollees, access to MAT will maintain or increase, and health outcomes associated with opioid misuse will maintain or improve.						
Primary RQ 1.2.a: Has the implementation of TennCare III maintained or decreased opioid use among TennCare enrollees (i.e., first-time, acute, and chronic opioid users)?	- Number of Opioid Users – First Time	- Number of unique enrollees receiving an opioid prescription for the first time, annually	- Pharmacy Claims Data (2017-2030)	- Not applicable	- One-group pretest-posttest	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Number of Opioid Users – Acute	- Number of unique enrollees that have received less than a 90-day quantity of prescribed opioids in the 180 days period immediately preceding the opioid's prescription day, annually				
	- Number of Opioid Users - Chronic	- Number of unique enrollees that have received more than a 90-day quantity of prescribed opioids in the 180 days period				

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
		immediately preceding the opioid's prescription day, annually				
	- Number of Opioid Prescriptions per 1,000 Members	- Numerator: total number of opioids prescriptions in a MY x 1,000 - Denominator: total number of unique enrollees in the same year				
	- Days' Supply of Opioid Prescriptions	- Average days' supply of opioid prescriptions to enrollees annually				
Primary RQ 1.2.b: Has the implementation of TennCare III maintained or decreased the number of Neonatal Abstinence Syndrome live births?	- Neonatal Abstinence Syndrome Live Births	- Total annual number of live births associated with neonatal abstinence syndrome	- TennCare Claims and Encounter Data (2017-2030) - Tennessee Department of Health Vital Statistics Records (2017-2030)	- Not applicable	- Interrupted time series	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 1.2.c: Has the implementation of TennCare III maintained or improved the rate of OUD treatment for TennCare enrollees?	- Use of Pharmacotherapy for OUD	- Numerator: number of enrollees ages 18 to 64 with an OUD who filled a prescription for or were administered or dispensed an FDA-approved medication for the disorder during the MY - Denominator: number of enrollees with at least one encounter with a diagnosis of opioid abuse, dependence, or remission (primary or other) at any time during the MY	- NCQA HEDIS® (2022-2030)	- National/regional benchmarks	- Difference-in-differences - Descriptive analysis	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 1.2.d: Has the implementation of TennCare III maintained or improved access to MAT?	- Total number of unique providers in BESMART program	- Total number of unique providers in BESMART program across all MCOs	- TennCare Provider Enrollment Data (2019-2030) - TennCare Claims and Encounter Data (2019-2030)	- Not applicable	- One-group pretest-posttest	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Total number of unique TennCare enrollees served in BESMART program	- Total number of unique TennCare enrollees served in BESMART program				

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Hypothesis 1.3 – Following implementation of the TennCare III demonstration, quality outcomes and quality of life for TennCare CHOICES and individuals with I/DD will maintain or improve.						
Primary RQ 1.3.a: Has the implementation of TennCare III maintained or improved quality outcomes for CHOICES enrollees?	- Percentage of people who know how to manage their chronic conditions	- Numerator: number of people who reported they know how to manage their chronic conditions (Response Options: Yes, In-Between/Some Conditions, No, Don't Know, Unclear/Refused/No Response) - Denominator: total number of respondents	- NCI-AD Survey (MY 2016-2030)	- Not applicable	- One-group pretest-posttest	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Percentage of people whose health was described as having gotten better compared to 12 months ago	- Numerator: number of people whose health was described as having gotten better compared to 12 months ago (Response Options: Much Worse, Somewhat Worse, About the Same, Somewhat Better, Much Better, Don't Know, Unclear/Refused/No Response) - Denominator: total number of respondents				
Primary RQ 1.3.b: Has the implementation of TennCare III maintained or improved quality of life for CHOICES enrollees?	- Percentage of people who feel in control of their life	- Numerator: number of people who feel in control of their life (Response Options: Less, About the Same, More, Don't Know, Unclear/Refused/No Response) - Denominator: total number of respondents				
	- Percentage of people who feel the services they receive help them live the life they want	- Numerator: number of people who reported they feel that the services they receive help them live the life they want (Response Options: No, Yes, Don't Know, Unclear/Refused/No Response) - Denominator: total number of respondents				
Primary RQ 1.3.c: Has the implementation of TennCare III maintained or improved quality outcomes for individuals with I/DD?	- Percentage of people who report they have the best possible health (POM 3)	- Numerator: number of respondents who have the best possible health, as individually defined by that person - Denominator: total number of survey respondents who provided valid answers to the survey question	- CQL POMs Survey (MY 2025-2030)	- Respondents to CQL POMs Survey in other states	- Descriptive analysis followed by difference-in-differences in later years	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Percentage of people who report living in integrated environments (POM 9)	- Numerator: number of respondents who use the same environments as people without disabilities - Denominator: total number of survey				

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
		respondents who provided valid answers to the survey question				
	- Percentage of people who report they are respected (POM 7)	- Numerator: number of respondents who are treated with respect by people in their lives - Denominator: total number of survey respondents who provided valid answers to the survey question				
Primary RQ 1.3.d: Has the implementation of TennCare III maintained or improved quality of life for individuals with I/DD?	- Percentage of people who report they choose where and with whom they live (POM 17)	- Numerator: number of respondents who choose where they live and who they live with - Denominator: total number of survey respondents who provided valid answers to the survey question				
	- Percentage of people who report they choose where they work (POM 18)	- Numerator: number of respondents who choose where they work or what they do during the day - Denominator: total number of survey respondents who provided valid answers to the survey question				
	- Percentage of people who report having friends (POM 13)	- Numerator: number of respondents who have friends and are satisfied with the number and amount of contact with friends - Denominator: total number of survey respondents who provided valid answers to the survey question				
	- Percentage of people who report they exercise their rights (POM 5)	- Numerator: number of respondents who exercise their human, civil, and other rights - Denominator: total number of survey respondents who provided valid answers to the survey question				
	- Percentage of people who report they use their environments (POM 8)	- Numerator: number of respondents who are not limited by physical or environmental barriers at home, work, or in the community - Denominator: total number of survey respondents who provided valid answers to				

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
		the survey question				
Hypothesis 1.4 – Following enrollment in the Katie Beckett program, quality of life, family outcomes, and health outcomes will maintain or improve for children eligible for Parts A and B of the Katie Beckett program.						
Primary RQ 1.4.a: Has enrollment in the Katie Beckett program maintained or improved quality of life for eligible children?	- Percentage of family respondents who feel that services and supports have made a positive difference in the life of their child	- Numerator: number of family respondents who reported that services and supports have made a positive difference in the life of their child (Response Options: Yes, No) - Denominator: total number of family respondents	- NCI Child Family Survey (MY 2022-2030)	- Not applicable	- One-group posttest-only	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Percentage of family respondents who report that services and supports are helping their child to live a good life	- Numerator: number of family respondents who reported that services and supports are helping their child to live a good life (Response Options: Yes, No) - Denominator: total number of family respondents				
Primary RQ 1.4.b: Has enrollment in the Katie Beckett program maintained or improved health and family outcomes for eligible children?	- Percentage of family respondents who report that services and supports have reduced their family's out-of-pocket expenses for their child's care	- Numerator: number of family respondents who reported that that services and supports have reduced their family's out-of-pocket expenses for their child's care (Response Options: Yes, No) - Denominator: total number of family respondents	- NCI Child Family Survey (MY 2022-2030)	- Not applicable	- One-group posttest-only	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Percentage of family respondents who report family supports have improved their ability to care for their child	- Numerator: number of family respondents who reported that family supports have improved their ability to care for their child (Response Options: Yes, No) - Denominator: total number of family respondents				

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Hypothesis 1.5 –Following implementation of the TennCare III demonstration, costs associated with treating conditions related to diapers for children under age 2 will decrease, as will the rates of those conditions.						
Primary RQ 1.5.a: Has the implementation of TennCare IIII decreased the costs associated with the treatment of diaper rash/diaper dermatitis, as well as the rates of those conditions, in children under age 2?	- Monthly costs associated with treatment of diaper rash/diaper dermatitis in children under age 2 - Monthly rates of diaper rash/diaper dermatitis in children under age 2	- Comparison of relevant costs during the period prior to the implementation of the diaper benefit with costs following the implementation of the diaper benefit - Comparison of rates of diaper rash/diaper dermatitis during the period prior to the implementation of the diaper benefit with rates following the implementation of the diaper benefit	- TennCare Encounter and Claims Data (2019-2030)	- Not applicable	- Interrupted time series design	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 1.5.b: Has the implementation of TennCare IIII decreased the costs associated with the treatment of UTIs, as well as the rates of UTIs, in children under age 2?	- Monthly costs associated with treatment of UTIs in children under age 2 - Monthly rates of UTIs in children under age 2	- Comparison of relevant costs during the period prior to the implementation of the diaper benefit with costs following the implementation of the diaper benefit - Comparison of UTI rates during the period prior to the implementation of the diaper benefit with UTI rates following the implementation of the diaper benefit	- TennCare Encounter and Claims Data (2019-2030)	- Not applicable	- Interrupted time series design	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)

Figure 15. Analytic Table – Goal 2: Ensure enrollee access to health care, including safety net providers

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Hypothesis 2.1 – Following implementation of the TennCare III demonstration, enrollee utilization of services will maintain or improve.						
Primary RQ 2.1.a: Has the implementation of TennCare III maintained or improved enrollee utilization of services?[17] • Primary care visits • Inpatient visits • BH visits • Prescription drugs	See subsidiary questions below.	See subsidiary questions below.	See subsidiary questions below.	See subsidiary questions below.	See subsidiary questions below.	See subsidiary questions below.

[17] The independent evaluator will examine whether observed changes in service utilization measures suggest that the volume and mix of services utilized is shifting in the direction of lower cost types of care, when clinically appropriate (e.g., if increased primary care visits are observed, if there is an association between primary care visit rates and emergency department visit and inpatient visit rates). The independent evaluator will interpret the service utilization measures in the context of other measures in the Evaluation (e.g., health outcome measures).

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Subsidiary RQ 2.1.a.i: Has the implementation of TennCare III maintained or improved utilization of primary care?	- Adults' Access to Preventive / Ambulatory Health Services	- Numerator: number of members 20 years and older who had one or more ambulatory or preventive care visit during the measurement year - Denominator: the eligible population	- NCQA HEDIS® (2017-2030)	- National/regional benchmarks	- Difference-in-differences - Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Subsidiary RQ 2.1.a.ii: Has the implementation of TennCare III maintained or improved utilization of inpatient care?	- Total Inpatient – Inpatient Discharges per 1,000 Member Months	- Numerator: number of acute inpatient discharges during the measurement year x 1,000 - Denominator: total number of unique enrollees in the same year	- NCQA HEDIS® (2017-2030)	- National/regional benchmarks	- One group pretest-posttest - Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Subsidiary RQ 2.1.a.iii: Has the implementation of TennCare III maintained or improved utilization of BH treatment?	- Mental Health Utilization – Services per 1,000 Member Months	- Numerator: number of members receiving any mental health service (including inpatient, intensive outpatient or partial hospitalization, outpatient, and emergency department) during the measurement year x 1,000 - Denominator: total number of unique enrollees in the same year	- NCQA HEDIS® (2017-2030)	- National/regional benchmarks	- One group pretest-posttest - Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Subsidiary RQ 2.1.a.iv: Has the implementation of TennCare III maintained or improved utilization of outpatient prescription drugs?	- Per member per month number of outpatient prescriptions for members utilizing prescription services	- Numerator: Total number of outpatient prescriptions for members utilizing prescription services - Denominator: Member months	- Pharmacy Claims Data (2017-2030)	- Not applicable	- Interrupted time series	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Per member per month number of outpatient prescriptions filled per month	- Numerator: Total number of outpatient prescriptions filled per month - Denominator: Member months				

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Hypothesis 2.2 – Following implementation of the TennCare III demonstration, access to comprehensive primary care will maintain or increase.						
Primary RQ 2.2.a: Has the implementation of TennCare III maintained or increased the number and proportion of TennCare enrollees cared for through the PCMH model?	- Total number of unique TennCare enrollees in PCMHs	- Total number of unique TennCare enrollees in PCMHs	- TennCare PCMH Enrollment Data (2017-2030)	- Not applicable	- One-group pretest-posttest	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Proportion of TennCare enrollees in a PCMH	- Numerator: number of unique enrollees receiving PCMH care - Denominator: total number of enrollees				
Hypothesis 2.3 – Following implementation of the TennCare III demonstration, member engagement in prenatal and postpartum care will maintain or increase.						
Primary RQ 2.3.a: Has the implementation of TennCare III maintained or increased member engagement in prenatal care?	- Timeliness of Prenatal Care	- Percentage of deliveries that received a prenatal care visit in the first trimester, on or before the enrollment start date or within 42 days of enrollment in the organization[18]	- NCQA HEDIS® (2017-2030)	- National / regional benchmarks	- Difference-in-differences - Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 2.3.b: Has the implementation of TennCare III maintained or increased member engagement in postpartum care?	- Postpartum Care	- Percentage of deliveries that had a postpartum visit on or between 7 and 84 days after delivery[19]	- TennCare Enrollee Data (2017-2030) - TennCare Claims Data (2017-2030)	- Not applicable	- One-group pretest-posttest	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Contraceptive Care Postpartum: Women Ages 15-20	**Rate 1** - Numerator: number of women ages 15-20 who had a live birth and were provided a most effective or moderately effective method of contraception within 3 and 60 days of delivery - Denominator: number of women ages 15-20 who had a live birth in the measurement year **Rate 2** - Numerator: number of women ages 15-20 who had a live birth and were provided a				

[18] The independent evaluator will adhere to the detailed HEDIS® specifications for this measure.
[19] The independent evaluator will adhere to the detailed HEDIS® specifications for this measure.

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
		long-acting reversible method of contraception (LARC) within 3 and 60 days of delivery				
	- Contraceptive Care Postpartum: Women Ages 21-44	**Rate 1** - Numerator: number of women ages 21-44 who had a live birth and were provided a most effective or moderately effective method of contraception within 3 and 60 days of delivery - Denominator: number of women ages 21-44 who had a live birth in the measurement year **Rate 2** - Numerator: number of women ages 21-44 who had a live birth and were provided a long-acting reversible method of contraception (LARC) within 3 and 60 days of delivery				- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Screening for Postpartum Depression and Follow-Up Plan: Ages 18 and older	- Numerator: Number of enrollees, ages 18 and older, screened for postpartum depression on the date of the encounter or up to 14 days prior to the date of the encounter using an age-appropriate standardized tool AND if positive, a follow up plan is documented on the date of the eligible encounter - Denominator: number of enrollees aged 18 years and older at the beginning of the measurement period with at least one eligible encounter during the measurement period				- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Subsidiary RQ 2.3.b.i: Has the implementation of TennCare III increased the months of continuous coverage for postpartum women?	- Months of continuous coverage	- Numerator: number of postpartum women continuously enrolled in TennCare for 12 months after delivery - Denominator: total number of individuals in TennCare that gave birth in the corresponding year	- TennCare Eligibility and Enrollment Data (2019-2030)	- Not applicable	- One-group pretest-posttest	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Subsidiary RQ 2.3.b.ii: Has the implementation of TennCare III increased the use of lactation consultation services among postpartum women?	- Lactation consultation utilization	- Numerator: number of deliveries in which lactation consultation occurred in the 12 months after delivery - Denominator: total number of individuals in TennCare that gave birth in the corresponding year	- TennCare Claims and Encounter Data (2019-2030)	- Not applicable	- Interrupted time series design	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Hypothesis 2.4 – Following implementation of the TennCare III demonstration, MCOs will encourage and/or facilitate the identification of non-medical needs affecting enrollees' health and the referral of enrollees to resources.						

Primary RQ 2.4.a: What strategies did the MCOs implement to address non-medical needs affecting enrollees' health?	- MCOs' strategies related to non-medical needs affecting enrollees' health, such as:
	  - Food insecurity
	  - Transportation
	  - Housing instability
	- Other domains of non-medical needs affecting enrollees' health
		- Not applicable	- MCO Interviews (2023, 2026, 2029)	- Not applicable	- Qualitative analysis	- First Interim Evaluation (2023)
						- Second Interim Evaluation (2026)
						- Third Interim Evaluation (2029)
						- Summative Evaluation (2032)

Primary RQ 2.4.b: Has the percentage of enrollees screened for non-medical needs affecting enrollees' health increased following the implementation of TennCare III?	- Percentage of members that were screened by the MCO for social determinants of health during the reporting period	- Numerator: number of enrollees that were screened by the MCO for social determinants of health, during the reporting period - Denominator: all unique enrollees	- MCO Population Health Data (2022-2030)	- Not applicable	- One-group posttest-only	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Primary RQ 2.4.c: Has the percentage of enrollees referred to resources to address non-medical needs affecting enrollees' health increased following the implementation of TennCare III?	- Percentage of members that were referred to source(s) to address the social determinants of health screened for	- Numerator: number of members that were referred to source(s) to address the social determinants of health screened for; includes referrals made by the MCO but not referrals made by the provider - Denominator: all unique members that were screened by the MCO for social determinants of health, with an identified social determinant of health need, during the reporting period	- MCO Population Health Data (2022-2030)	- Not applicable	- One-group posttest-only	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Hypothesis 2.5 – Following implementation of the TennCare III demonstration, participant engagement in dental services for eligible TennCare III enrollees will maintain or increase.						
Primary RQ 2.5.a: Has participant engagement in dental services for TennCare children and adolescents maintained or increased following implementation of TennCare III?	- Partial Enrollment Adjusted Ratio (PEAR)	- Numerator: sum of the full-time equivalent (FTE) for qualifying eligibles with 1 or more qualifying services in the MY - Denominator: sum of FTE for all qualifying eligible - FTE equals the number of days eligible divided by 365.25	- DBM Claims Data (2017-2030)	- Not applicable	- Interrupted time series	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- DBM dental sealant rate	- Numerator: number of unduplicated enrollees receiving qualifying dental sealant service in the MY on at least one of the following teeth: 2, 3, 14, 15, 18, 19, 30, 31 - Denominator: number of unduplicated sealant-eligible population	- DBM Claims Data (2017-2030)	- Not applicable	- Interrupted time series	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- DBM silver diamine fluoride (SDF) rate	- Numerator: number of unduplicated enrollees receiving qualifying SDF service in the MY on a primary or permanent tooth - Denominator: number of unduplicated eligible population	- DBM Claims Data (2017-2030)	- Not applicable	- Interrupted time series	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Primary RQ 2.5.b: Has participant engagement in dental services for pregnant TennCare enrollees maintained or increased following implementation of TennCare III?	- Number of pregnant TennCare enrollees over 21 utilizing dental services during the perinatal period	- Number of pregnant TennCare enrollees over 21 utilizing dental services during the perinatal period	- DBM Claims Data (2022-2030)	- Not applicable	- One-group posttest-only	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 2.5.c: Has participant engagement in dental services for postpartum TennCare enrollees increased following implementation of TennCare III?	- Number of postpartum TennCare enrollees over 21 utilizing dental services during the 12 months after delivery	- Number of postpartum TennCare enrollees over 21 utilizing dental services during the 12 months after delivery	- DBM Claims Data (2022-2030)	- Not applicable	- One-group posttest-only	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 2.5.d: Has participant engagement in dental services for adult TennCare enrollees increased following implementation of TennCare III?	- Number of TennCare enrollees over 21 utilizing dental services	- Number of postpartum TennCare enrollees over 21 utilizing dental services	- DBM Claims Data (2022-2030)	- Not applicable	- One-group posttest-only	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Hypothesis 2.6 – Under TennCare III, enrollees will receive Medicaid benefits in excess of those available under the Medicaid State Plan.						
Primary RQ 2.6.a: What benefits did TennCare enrollees receive that were in excess of the benefits authorized under the Medicaid State Plan following implementation of TennCare III?	- Description of benefits and coverage in excess of benefits under Medicaid State Plan	- Not applicable	- TennCare Medicaid Rules (2022-2030) - TennCare Benefit Packages (2022-2030)	- Not applicable	- Qualitative analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Hypothesis 2.7 – DSIPs will continue to provide important services to Tennesseans and expand the provision of health-related services.						
Primary RQ 2.7.a: What is the amount expended on DSIPs under the demonstration?	- DSIP expenditures	- Not applicable	- State Administrative Data (2022-2030)	- Not applicable	- Descriptive analysis	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Primary RQ 2.7.b: What additional services and populations served have occurred as a result of freeing up state funds that would otherwise have been used for DSIPs?	- Description of additional services and populations served as a result of freeing up state funds that would otherwise have been used for DSIPs	- Not applicable	- TennCare Medicaid Rules (2022-2030) - TennCare Benefit Packages (2022-2030)	- Not applicable	- Qualitative analysis	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 2.7.c: How much has the State invested in other health-related programs as a result of freeing up state funds that would otherwise have been used for DSIPs?	- Amount of dollars invested in other health-related programs as a result of freeing up state funds that would otherwise have been used for DSIPs	- Dollars associated with additional services, programs, and populations served as a result of freeing up state funds that would otherwise have been used for DSIPs	- State Administrative Data (2023-2030)	- Not applicable	- Descriptive analysis	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Hypothesis 2.8 – Following implementation of the TennCare III demonstration, TennCare's UC pools will maintain or increase TennCare enrollee access to eligible safety net providers.						
Primary RQ 2.8.a: Have TennCare's UC pools maintained or increased access to care for TennCare enrollees served by eligible safety net providers?	- Number of TennCare enrollees receiving services from providers receiving UC pool funding	- Number of TennCare enrollees receiving services from providers receiving UC pool funding	- Tennessee Uncompensated Care Data (2017-2030)	- Not applicable	- One-group pretest-posttest	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 2.8.b: How has the implementation of TennCare III impacted UC costs?	- Amount of TennCare UC costs[20]	- Sum of total Medicaid UC costs and total uninsured UC costs for DSH and non-DSH CPE hospitals	- Tennessee Uncompensated Care Data (2017-2030)	- Not applicable	- One-group pretest-posttest	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)

[20] Since the exact total of TennCare uncompensated costs and claims is currently unavailable in State data sources, the independent evaluator will need to approximate the uncompensated costs using the DSH audit and non-DSH CPE audit data.

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Hypothesis 2.9 – The retroactive eligibility waiver will not significantly impact the likelihood of enrollment, health status of enrollees, or have an adverse financial impact.						
Primary RQ 2.9.a: Do Medicaid-eligible individuals in Tennessee subject to the retroactive eligibility waiver enroll in Medicaid at the same rates as eligible individuals in other states who have access to retroactive eligibility?	- Percentage of Medicaid enrollees by eligibility group out of estimated eligible Medicaid recipients	- Numerator: total number of Medicaid enrollees subject to the retroactive eligibility waiver - Denominator: estimated number of Medicaid-eligible individuals that would be subject to the retroactive eligibility waiver	- TennCare Eligibility and Enrollment Data (2017-2030) - Integrated Public Use Microdata Series American Community Survey (2017-2030)	- Similar adults in other states that provide retroactive coverage	- Difference-in-differences	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 2.9.b: Does the retroactive eligibility waiver significantly impact likelihood of enrollment continuity for enrollees?	- Percentage of Medicaid enrollees subject to the retroactive eligibility waiver that complete the redetermination process	- Numerator: total number of Medicaid enrollees subject to retroactive eligibility waiver that complete redetermination process - Denominator: total number of Medicaid enrollees subject to retroactive eligibility waiver	- TennCare Eligibility and Enrollment Data (2022-2030)	- Not applicable	- One-group posttest-only	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 2.9.c: Do the health outcomes of enrollees subject to the retroactive eligibility waiver differ from those of enrollees in other states who have access to retroactive eligibility?	- Reported excellent or very good health status; healthy days	- BRFSS variables: GENHLTH, MENTHLTH, PHYSHLT, POORHLTH	- Behavioral Risk Factor Surveillance System (BRFSS) (2017-2030)	- Similar adults in other states that provide retroactive coverage	- Difference-in-differences	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 2.9.d: What are common barriers to timely renewal for enrollees subject to the retroactive eligibility waiver?	- Reported barriers to timely renewal	- Not applicable	- TennCare Enrollee Survey (2023, 2025, 2027, 2029)	- Not applicable	- Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Primary RQ 2.9.e: Do Medicaid eligible individuals in Tennessee subject to the waiver of retroactive eligibility experience greater 'medical debt' relative to members in the program who are exempt from the waiver?	- Whether enrollee reports medical debt - If yes, amount of medical debt reported	- Not applicable	- TennCare Enrollee Survey (2025, 2027, 2029) – one survey for enrollees subject to retroactive eligibility waiver and one survey for comparison group	- Control group of similar adults not subject to the retroactive eligibility waiver	- Comparison of means	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 2.9.f: Are Medicaid eligible individuals in need of acute care able to enroll in TennCare quickly?	- Number of individuals presenting at hospitals presumptively determined eligible for and enrolled in Medicaid	- Not applicable	- TennCare Eligibility and Enrollment Data (2022-2030)	- Not applicable	- Descriptive analysis	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Hypothesis 2.10 – Rates of adoption for children in state custody will increase when Medicaid coverage is available for all children.						
Primary RQ 2.10.a: Has the implementation of TennCare III (and resulting extension of TennCare coverage to children adopted from state custody) increased the number and percentage of children adopted from state custody?	- Number of children adopted from state custody - Percentage of children adopted from state custody	- Not applicable	- State Administrative Data (2017-2030)	- Not applicable	- One-group pretest-posttest	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)

Figure 16. Analytic Table – Goal 3: Ensure enrollees' satisfaction with services

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Hypothesis 3.1 – Following implementation of the TennCare III demonstration, TennCare enrollee satisfaction with health care services will maintain or improve.						
Primary RQ 3.1.a: Has the implementation of TennCare III maintained or improved TennCare enrollee satisfaction with overall health care?	- Percent of Respondents Indicating Satisfaction with TennCare	- Numerator: number of respondents indicating they are "very satisfied" or "somewhat satisfied" with the TennCare program - Denominator: total number of survey respondents	- Beneficiary Satisfaction Survey (2011-2030)	- Not applicable	- Interrupted time series	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 3.1.b: Has the implementation of TennCare III maintained or improved CHOICES enrollee satisfaction?	- Percentage of people whose paid support staff do things the way they want them done	- Numerator: number of respondents who reported paid support staff do things the way they want them done (Response Options: No/Never/Rarely, Some/Usually, Yes/Always/Almost Always, Don't Know, Unclear/Refused/No Response) - Denominator: total number of respondents	- NCI-AD Survey (MY 2016-2030)	- Not applicable	- One-group pretest-posttest	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Percentage of people whose long-term care services meet all their current needs and goals	- Numerator: number of respondents who reported long-term care services meet all their current needs and goals (Response Options: No/Not at All, Some Needs and Goals, Yes/Completely/All Needs and Goals, Don't Know, Unclear/Refused/No Response) - Denominator: total number of respondents				
Primary RQ 3.1.c: Has the implementation of TennCare III maintained or improved satisfaction of individuals with I/DD?	- Percentage of people who report they realized personal goals (POM 21)	- Numerator: number of respondents who accomplish goals significant to them - Denominator: total number of survey respondents who provided valid answers to the survey question	- CQL POMs Survey (MY 2025-2030)	- Respondents to CQL POMs Survey in other states	- Descriptive analysis followed by difference-in-differences in later years	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Percentage of people who report they participate in the life of the community (POM 11)	- Numerator: number of respondents who participate in the life of the community, with the type and frequency of participation they prefer - Denominator: total number of survey respondents who provided valid answers to				

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
		the survey question				
Primary RQ 3.1.d: Are parents of children enrolled in the Katie Beckett program satisfied with the services provided through the program?	- Percentage of family respondents who report being satisfied overall with the services and supports their family currently receives	- Numerator: number of family respondents who reported being satisfied overall with the services and supports their family currently receives (Response Options: Always, Usually, Sometimes, Seldom or Never) - Denominator: total number of family respondents	- NCI Child Family Survey (MY 2022-2030)	- Not applicable	- One-group posttest-only	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)

Figure 17. Analytic Table – Goal 4: Provide enrollees with appropriate and cost-effective HCBS within acceptable budgetary parameters

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Hypothesis 4.1 – Following implementation of the TennCare III demonstration, the proportion of individuals who receive HCBS rather than NF care will maintain or increase.						
Primary RQ 4.1.a: Has the implementation of TennCare III maintained or increased the number and percentage of CHOICES enrollees actively receiving HCBS?	- Number and percentage of CHOICES enrollees actively receiving HCBS at a point-in-time, by benefit group	- Numerator: number of CHOICES enrollees actively receiving HCBS at the end of each demonstration month - Denominator: total number of CHOICES enrollees at the end of each demonstration month	- TennCare Claims and Encounter Data (2017-2030)	- Not applicable	- Interrupted time series	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Aggregate number and percentage of CHOICES enrollees actively receiving HCBS, by benefit group	- Numerator: unduplicated number of CHOICES enrollees receiving HCBS over a 1-month period - Denominator: unduplicated number of CHOICES enrollees over the same 1-month period				
	- Number and percentage of CHOICES enrollees actively receiving NF services at a point-in-time, by benefit group	- Numerator: number of CHOICES enrollees actively receiving NF at the end of each demonstration month - Denominator: total number of CHOICES enrollees at the end of each demonstration month				
	- Aggregate number and percentage of CHOICES enrollees actively	- Numerator: unduplicated number of CHOICES enrollees receiving NF over a 1-month period - Denominator: unduplicated number of				

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
	receiving NF services, by benefit group	CHOICES enrollees over the same 1-month period				
Primary RQ 4.1.b: Has the implementation of TennCare III maintained or increased the ratio of HCBS to NF service costs for CHOICES enrollees?	- Monthly HCBS service costs for CHOICES enrollees	- Based on encounters and not cap payments	- TennCare Claims and Encounter Data (2017-2030)	- Not applicable	- Interrupted time series	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- HCBS service costs for CHOICES enrollees as a percentage of total long-term care service costs	- Numerator: total monthly HCBS service costs for CHOICES enrollees - Denominator: total monthly LTSS service costs (HCBS and NF) for CHOICES enrollees				
	- Monthly NF service costs for CHOICES enrollees	- Based on encounters and not cap payments				
	- NF service costs for CHOICES enrollees as a percentage of total long-term care service costs	- Numerator: total monthly NF service costs for CHOICES enrollees - Denominator: total monthly LTSS service costs (HCBS and NF) for CHOICES enrollees				
Primary RQ 4.1.c: Has the implementation of TennCare III maintained or decreased the average LTSS costs per CHOICES enrollee?	- Average monthly HCBS service costs per CHOICES enrollee	- Based on encounters and not cap payments	- TennCare Claims and Encounter Data (2017-2030)	- Not applicable	- Interrupted time series	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Average monthly NF service costs per CHOICES enrollee	- Based on encounters and not cap payments				
Primary RQ 4.1.d: Has the implementation of TennCare III maintained or increased the number and percentage of individuals with I/DD actively receiving HCBS?	- Number and percentage of individuals with I/DD actively receiving HCBS at a point-in-time, by benefit group	- Numerator: number of individuals with I/DD actively receiving HCBS at the end of each demonstration month - Denominator: total number of individuals with I/DD at the end of each demonstration month	- TennCare Claims and Encounter Data (2017-2030)	- Not applicable	- Interrupted time series	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Aggregate number and percentage of individuals with I/DD	- Numerator: unduplicated number of individuals with I/DD receiving HCBS over a 1-month period - Denominator: unduplicated number of				

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
	actively receiving HCBS, by benefit group	individuals with I/DD over the same 1-month period				
Primary RQ 4.1.e: Has the implementation of TennCare III maintained or increased the ratio of HCBS to ICF/IID service costs for individuals with I/DD?	- Monthly HCBS service costs for individuals with I/DD	- Based on encounters and fee-for-service expenditures, not capitation payments	- TennCare Claims and Encounter Data (2017-2030)	- Not applicable	- Interrupted time series	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- HCBS service costs for individuals with I/DD as a percentage of total long-term care service costs	- Numerator: total HCBS service costs for individuals with I/DD monthly - Denominator: total LTSS service costs (HCBS and ICF/IID) for individuals with I/DD monthly - Based on encounters and fee-for-service expenditures, not capitation payments				
	- Monthly ICF/IID service costs	- Based on encounters and fee-for-service expenditures, not capitation payments				
	- ICF/IID service costs as percentage of total LTSS service costs for individuals with I/DD	- Numerator: total ICF/IID service costs for individuals with I/DD monthly - Denominator: total LTSS service costs (HCBS and ICF/IID) for individuals with I/DD monthly - Based on encounters and fee-for-service expenditures, not capitation payments				
Primary RQ 4.1.f: Has implementation of the TennCare III demonstration maintained or decreased the average LTSS costs per individual with I/DD?	- Average HCBS service costs per individual with I/DD	- Based on encounters and fee-for-service expenditures, not capitation payments	- TennCare Claims and Encounter Data (2017-2030)	- Not applicable	- Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Average ICF/IID service costs per individual with I/DD	- Based on encounters and fee-for-service expenditures, not capitation payments				
Primary RQ 4.1.g: Has the implementation of TennCare III maintained or increased the level of institutional transition and diversion for CHOICES enrollees?	- Institutional diversion – CHOICES enrollees who meet NF level of care but access HCBS as an alternative	- Numerator: Number of CHOICES enrollees annually who meet level of care for NF but access HCBS for a minimum of 90 days - Denominator: total number of unique CHOICES enrollees annually	- TennCare Claims and Encounter Data (2017-2030)	- Not applicable	- One group pretest-posttest	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation
	- Institutional transition – number of CHOICES	- Number of CHOICES enrollees who use transition services to move from NFs to	- TennCare Claims and Encounter Data	- Not applicable	- Interrupted time series	

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
	enrollees who transition from NFs to HCBS monthly	HCBS monthly	(2017-2030)			(2032)
	- Diversion – NF diversion rate	- Numerator: number of individuals applying for NF care but diverted to HCBS monthly - Denominator: total number of individuals applying to NF care monthly	- TennCare Claims and Encounter Data (2012030)	- Not applicable	- Interrupted time series	
	- Diversion – average CHOICES enrollee length of stay in HCBS monthly	- Numerator: total length of stay in HCBS for all unique CHOICES enrollees monthly - Denominator: total number of unique CHOICES enrollees monthly	- TennCare Claims and Encounter Data (2012030)	- Not applicable	- Interrupted time series	
	- Diversion – percent of new LTSS recipients admitted to NFs monthly	- Numerator: number of new LTSS recipients in CHOICES admitted to NFs monthly - Denominator: number of new LTSS recipients in CHOICES				
Hypothesis 4.2 – Following implementation of the TennCare III demonstration, participation levels in integrated employment for individuals with I/DD will maintain or increase.						
Primary RQ 4.2.a: Has the implementation of TennCare III maintained or increased the number of individuals with I/DD that participate in integrated employment and earn at or above the minimum wage?	- Number of working age adults with I/DD enrolled in HCBS programs who are employed in an integrated setting earning at or above the minimum wage	- Number of working age adults with I/DD enrolled in HCBS programs who are employed in an integrated setting earning at or above the minimum wage	- TennCare Individual Employment Data Survey (2017-2030)	- Not applicable	- One-group pretest-posttest	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Percentage of working age adults with I/DD enrolled in HCBS programs who are employed in an integrated setting earning at or above the minimum wage	- Numerator: number of individuals (22-62) with I/DD enrolled in HCBS programs who are employed in an integrated setting earning at or above the minimum wage as reported in the Individual EDS annually - Denominator: Total number of individuals with I/DD enrolled in HCBS programs annually				

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Hypothesis 4.3 – The integration of existing HCBS waivers into managed care will maintain or improve the ability for individuals with I/DD to choose services.						
Primary RQ 4.3.a: Has the integration of existing HCBS waivers into managed care maintained or improved the ability for individuals with I/DD to choose services?	- Percentage of people who report choosing services	- Numerator: number of respondents who choose the services/supports they receive, their provider organizations, and their direct support professionals/staff - Denominator: total number of survey respondents who provided valid answers to the survey question	- CQL POMs Survey (MY 2025-2030)	- Respondents to CQL POMs Survey in other states	- Descriptive analysis followed by difference-in-differences in later years	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Hypothesis 4.4 – Following enrollment in the Katie Beckett program, access to care for children eligible for Parts A and B of the Katie Beckett program will maintain or improve.						
Primary RQ 4.4.a: Has enrollment in the Katie Beckett program maintained or improved access to care for eligible children?	- Percentage of family respondents who report they are able to contact their child's case manager when they want	- Numerator: number of family respondents who report they are able to contact their child's case manager when they want (Response Options: Always, Usually, Sometimes, Seldom or Never) - Denominator: total number of respondents	- NCI Child Family Survey (MY 2022-2030)	- Not applicable	- One-group posttest-only	- Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Percentage of family respondents who report that their child has the special equipment or accommodations that s/he needs	- Numerator: number of family respondents who reported that their child has the special equipment or accommodations that s/he needs (Response Options: Always, Usually, Sometimes, Seldom or Never) - Denominator: total number of respondents				
	- Percentage of family respondents who report that their child can see health professionals when needed	- Numerator: number of family respondents who reported that their child can see health professionals when needed (Response Options: Always, Usually, Sometimes, Seldom or Never) - Denominator: total number of respondents				
	- Percentage of family respondents who report that their child can go to the dentist when needed	- Numerator: number of family respondents who report that their child can go to the dentist when needed (Response Options: Always, Usually, Sometimes, Seldom or Never) - Denominator: total number of respondents				

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
	- Percentage of family respondents who report that they are able to get respite services if they need them	- Numerator: number of family respondents who report that they are able to get respite services if they need them (Response Options: Always, Usually, Sometimes, Seldom or Never) - Denominator: total number of respondents				
	- Percentage of family respondents who report that their family gets the supports and services it needs	- Numerator: number of family respondents who report that their family gets the supports and services it needs (Response Options: Yes, No) - Denominator: total number of respondents				
Hypothesis 4.5 – Following implementation of the TennCare III demonstration, premium requirements for participants in Part A of the Katie Beckett program will not reduce the likelihood of enrollment or enrollment continuity among participants.						
Primary RQ 4.5.a: How many and what percentage of children approved for Part A of the Katie Beckett program do not enroll due to non-payment of the premium?	- Number and percentage of children approved for Part A of the Katie Beckett program who do not enroll due to non-payment of premium	- Numerator: number of children approved for Part A of Katie Beckett program who do not enroll due to non-payment of premium - Denominator: total number of children approved for Part A	- TennCare Eligibility and Enrollment Data (2022-2030)	- Not applicable	- Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 4.5.b: How many and what percentage of Katie Beckett Part A program enrollees are suspended from the program due to non-payment of premiums?	- Number and percentage of individuals who are suspended from Part A of the Katie Beckett program due to non-payment of premiums	- Numerator: number of children suspended from Part A of Katie Beckett program due to non-payment of premium - Denominator: total number of children enrolled in Part A annually	- TennCare Eligibility and Enrollment Data (2022-2030)	- Not applicable	- Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Primary RQ 4.5.c: How many and what percentage of Katie Beckett Part A program enrollees voluntarily separate from the program?	- Number of individuals who voluntarily separate from Part A of the Katie Beckett program	- Number of individuals who voluntarily separate from Part A of the Katie Beckett program	- TennCare Eligibility and Enrollment Data (2022-2030)	- Not applicable	- Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Subsidiary RQ 4.5.c.i: Among Katie Beckett Part A program enrollees who voluntarily separate from the program, to what extent is this voluntary separation associated with the premium requirements?	- Reasons for voluntary separation from Part A of the Katie Beckett program	- Not applicable	- TennCare Enrollee Survey or Focus Group (2023, 2026, 2029)	- Not applicable	- Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 4.5.d: What is the health insurance status and reported change in health status among Katie Beckett Part A enrollees that were: • Suspended from the program due to non-payment of premiums; or • Voluntarily separated from the program?	See subsidiary questions below.	See subsidiary questions below.	See subsidiary questions below.	See subsidiary questions below.	See subsidiary questions below.	See subsidiary questions below.
Subsidiary RQ 4.5.d.i: What is the health insurance status and reported change in health status among Katie Beckett Part A enrollees that were suspended from the program due to non-payment of premiums?	- Insurance status for Katie Beckett Part A enrollees who were suspended	- Not applicable	- TennCare Enrollee Survey or Focus Group (2023, 2026, 2029)	- Not applicable	- Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Reported health status for Katie Beckett Part A enrollees who were suspended		- TennCare Enrollee Survey or Focus Group (2023, 2026, 2029)	- Enrollees who remain in Tennessee's Katie Beckett program	- Comparison of means	

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Subsidiary RQ 4.5.d.ii: What is the health insurance status and reported change in health status among Katie Beckett Part A enrollees that voluntarily separated from the program?	- Insurance status for Katie Beckett Part A enrollees who voluntarily separated	- Not applicable	- TennCare Enrollee Survey or Focus Group (2023, 2026, 2029)	- Not applicable	- Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Reported health status for Katie Beckett Part A enrollees who voluntarily separated		- TennCare Enrollee Survey or Focus Group (2023, 2026, 2029)	- Enrollees who remain in Tennessee's Katie Beckett program	- Comparison of means	
Hypothesis 4.6 – Part B of the Katie Beckett program (Medicaid Diversion) will delay and/or divert eligible children from enrolling in TennCare.						
Primary RQ 4.6.a: Has the implementation of Part B of the Katie Beckett program delayed and/or diverted eligible children from enrolling in TennCare?	- Length of stay in Katie Beckett for Part B enrollees who meet the at-risk level of care - percentage	- Numerator: number of days in Katie Beckett Part B program for enrollees who meet the at-risk level of care - Denominator: number of days between enrollment and age-out of Katie Beckett program (at age 18) for enrollees who meet the at-risk level of care	- TennCare Eligibility and Enrollment Data (2021-2030)	- Not applicable	- One-group posttest-only	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
	- Imputed savings of Katie Beckett Part B enrollees who meet the at-risk level of care	- Estimated cost of Part B enrollees who meet the at-risk level of care if enrolled in full TennCare benefits, minus the $10,000 Part B per enrollee funding cap				

Figure 18. Analytic Table – Goal 5: Manage expenditures at a stable and predictable level, and at a cost that does not exceed what would have been spent in a Medicaid fee-for-service program

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Hypothesis 5.1 – Following implementation of the TennCare III demonstration, TennCare expenditures will grow at a slower and more sustainable rate than the average national Medicaid expenditures.						
Primary RQ 5.1.a: Has TennCare maintained an expenditure growth rate that is slower than the average national Medicaid expenditure growth rate?[21]	- Total TennCare expenditure growth rate	- Numerator: TennCare expenditures from the previous year subtracted from TennCare expenditures in the current year - Denominator: TennCare expenditures from the previous year	- TennCare Expenditure Data (2017-2030) - Medicaid Budget and Expenditure System (MBES) (2017-2030)	- National benchmarks	- Difference-in-differences	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)

[21] The independent evaluator will consider impacts of the American Rescue Plan, including enhanced Federal Medical Assistance Percentages (FMAP) funds.

Research Question	Outcome Measure(s)	Specifications	Data Source(s)	Comparison Group	Analytic Approach	Reporting Schedule
Primary RQ 5.1.b: What is the difference between TennCare's aggregate costs by expenditure group compared to the budget neutrality test limits by expenditure group and how does this change over the duration of the demonstration period?	- TennCare aggregate costs by expenditure group vs. budget neutrality test limits by expenditure group	- Total annual TennCare aggregate costs across expenditure groups subtracted from total annual budget neutrality test limits across expenditure groups	- TennCare Expenditure Data (2021-2030)	- Not applicable	- Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Primary RQ 5.1.c: What are the administrative operational costs of the demonstration?	- Administrative cost of ongoing demonstration operation	- Administrative cost of ongoing demonstration operation	- TennCare Expenditure Data (2021-2030)	- Not applicable	- Descriptive analysis	- First Interim Evaluation (2023) - Second Interim Evaluation (2026) - Third Interim Evaluation (2029) - Summative Evaluation (2032)
Hypothesis 5.2 – Following the implementation of TennCare's authority to suspend Medicaid eligibility for enrollees who have been convicted of Medicaid fraud, the number of Medicaid fraud incidents in State or Local courts will maintain or decrease.						
Primary RQ 5.2.a: Has the implementation of TennCare's authority to suspend Medicaid eligibility for individuals convicted of Medicaid fraud maintained or decreased the number of enrollees who have been convicted of Medicaid fraud in State or Local courts?	- Number of enrollees convicted of Medicaid fraud in State or Local courts	- Number of enrollees convicted of Medicaid fraud in State or Local courts	- State and Local Law Enforcement Agency Data (TBD, when authority is implemented)	- Not applicable	- Interrupted time series design	- TBD, when authority is implemented
Primary RQ 5.2.b: What is the reported health insurance status among individuals who are suspended from TennCare due to a Medicaid fraud conviction?	- Insurance status of suspended individuals before and after conviction	- Not applicable	- TennCare Administrative Data (TBD, when authority is implemented)	- Not applicable	- Descriptive analysis	- TBD, when authority is implemented

D. Methodological Limitations

Section D details the methodological limitations of the TennCare III Evaluation Design, how said limitations may prevent causal inferences about the impact of TennCare III program components, and what approaches may be taken by the independent evaluator to minimize these limitations.

Figure 19 details overarching limitations that impact all demonstration goals. **Figure 20** provides a detailed breakdown of methodological limitations specific to demonstration goals.

Figure 19. Methodological Limitations – Overall

Limitation	Description of Limitation	Approaches to Minimizing Limitation
COVID-19 impact	• Beginning in March 2020, the COVID-19 pandemic spurred significant changes in health care service delivery and utilization. The public health emergency will likely alter Medicaid enrollment levels, program expenditures, enrollee satisfaction, service utilization, and access to care. • COVID-19 has prevented standard data collection for multiple measures, including the NCI and NCI-AD Surveys, which involve in-person interviews. Since in-person interviews were infeasible in MY 2020-2021, NCI and NCI-AD data were not collected for this time period.	• CYs 2020 and 2021 were largely removed from the analytic method baseline and intervention evaluation periods. • The inclusion of any data from CYs 2020 and 2021 will be carefully analyzed by the independent evaluator and supplemented by data from additional pre-COVID-19 or post-COVID-19 years. Utilization data from these years will be particularly scrutinized and/or avoided due to COVID-19-related impacts. • For questions related to TennCare program expenditures and the budget neutrality test limits (e.g., 5.1.a and 5.1.b), the independent evaluator will consider impacts of the American Rescue Plan, including enhanced Federal Medical Assistance Percentages (FMAP) funds. • In the evaluation reports, the independent evaluator will also recognize and account for additional funding and potential increases in payments to NFs because of COVID-19, which could affect LTSS cost trends.
Limited number of in-state comparison groups	• Since many of the TennCare III demonstration components impact the entire TennCare enrollee population, in-state comparison groups are largely infeasible. For demonstration components that target specific subgroups, such as the Katie Beckett program, the unique characteristics of the target population (e.g., children under the age of 18 with complex medical needs or disabilities) also limit the availability of appropriate in-state comparison groups. The inability to identify in-state comparison groups	• The Evaluation Design includes out-of-state comparisons wherever possible. Out-of-state comparison groups will be selected for similarity to the TennCare intervention population, including using propensity score matching to select a similar cohort for the comparison group whenever possible. • The Evaluation Design includes comparisons to national and regional benchmarks, which can provide a valid counterfactual, or an approximation of the intervention group had they not been exposed to the intervention.

Limitation	Description of Limitation	Approaches to Minimizing Limitation
	could render certain outcomes at least partly attributable to extraneous factors outside of the demonstration.	However, these benchmarks assume that TennCare enrollees are similar to Medicaid enrollees either nationally or in the chosen regions.
Limited ability to control for differences in Medicaid populations in other states	• Medicaid population demographics and other characteristics vary greatly among states. As a result, when using data sources like ACS for out-of-state comparison groups, the independent evaluator may have limited ability to control for different characteristics.	• The independent evaluator can select out-of-state comparison groups from states with similar Medicaid eligibility requirements, geographic variation, and income levels. • The independent evaluator may use statistical techniques (e.g., propensity score matching) to control for differences, when necessary.
Limitations of ITS and one-group pretest-posttest analyses	• ITS requires data for the same time period length before and after the implementation of treatment. This disqualifies certain data sources that do not provide a sufficient volume of historical data from being included in the later Interim and Summative Evaluations, given the 10-year length of the TennCare III demonstration. • Since ITS and pretest-posttest are intended to be longitudinal methods of analysis, they become unsuitable when characteristics of the intervention population and/or economic environment change over time. There may be certain changes that the independent evaluator cannot control for.	• ITS will mainly be used for data sources where a sufficient amount of pre-implementation historical data is available. • Population differences over time will be observed. If necessary, matching techniques can be used to address the differences.
Confounding factor: changes in case-mix over time	• The TennCare population may change and fluctuate in terms of eligibility, enrollee demographics, service utilization, medical needs, and other demographic characteristics throughout the 10-year demonstration period.	• It is intended for the independent evaluator to report on appropriate caveats, context, and discussion of data limitations related to the TennCare enrollee population.
Limitations in survey data collection	• Survey length could affect the response rate. • A lower response rate will have a negative impact on the representativeness and generalizability of the survey data. • New surveys created and proposed for the Evaluation must use baseline data that is gathered after the actual demonstration implementation. • The number of eligible participants or response rate for surveys targeting	• The independent evaluator will ensure that surveys do not exceed a reasonable amount of time to complete (e.g., 15 minutes). • Appropriate caveats, context, and discussion of data limitations on response rate and sample size will be included in the Evaluation Reports. • The surveys will contain retrospective questions about enrollee outcomes and perspectives of the demonstration implementation and the years leading up

Limitation	Description of Limitation	Approaches to Minimizing Limitation
	individuals not actively enrolled in the Katie Beckett program may be low.	to implementation where applicable. • The independent evaluator will take efforts (e.g., follow up with individuals until the target sample size is met) to meet the minimum threshold required for inclusion and use sample weighting or other techniques to ensure a fully representative sample. • Appropriate caveats, context, and discussion of data limitations will be included in the Evaluation Reports.
Limitations in isolating the effects of overlapping demonstration components	• It may be difficult to establish a causal relationship between a singular demonstration component and a demonstration outcome. Since many TennCare III program components impact the entire TennCare population, multiple components may be contributing to a certain outcome in the intervention population.	• Regression analysis may be used to control for confounding factors where appropriate. • Sufficient qualitative analysis and interpretation of quantitative results will provide context for any potential overlap in outcomes. • Staggered implementation of program components not yet implemented (e.g., fraud suspension) may be considered to help isolate the effects on TennCare's demonstration goals.
Limitation of DiD analysis	• DiD is most effective when beneficiary-level data is available. However, there may be measures for which beneficiary-level out-of-state data is unavailable, and national or regional benchmarks must be used (e.g., HEDIS® measures). Since the benchmarks are set at an aggregate level (program- or plan-wide), the statistical power of the DiD approach and out-of-state comparison is limited. • To support a causal interpretation, DiD requires the assumption of "parallel trends" of the intervention and comparison groups, meaning that if the intervention was not implemented, the change in the intervention group would be the same as the change in the comparison group. This assumption may be challenged by the lack of a viable in-state comparison group.	• Comparison to benchmarks offers a higher level of rigor than if there was no comparison group whatsoever. • Comparison to benchmarks will be supplemented with descriptive analysis, comparison to historical data, and additional context where possible. • The independent evaluator may use techniques such as visual trend analysis to confirm that the "parallel trend" assumption is met with the selected out-of-state comparison group.
Limitation of availability of pre-period data	• For hypotheses and research questions related to policy components that remain unchanged between TennCare II and TennCare III (e.g., CHOICES), it is less likely that a significant change in utilization or other outcomes will be	• The independent evaluator should be specific in their interpretation for these research questions; the results should be interpreted as the change in observed trends between TennCare II and TennCare III, as opposed to interpreting

Limitation	Description of Limitation	Approaches to Minimizing Limitation
	observed between the two demonstrations. Instead, pre-period data (e.g., prior to TennCare I implementation) should be used to address questions about impacts or changes. • The ability to use or access pre-period data from prior to the original TennCare Demonstration is limited or infeasible.	as the effect of the original policy implementation.

Figure 20. Methodological Limitations – Goal-Specific

Limitation	Description of Limitation	Approaches to Minimizing Limitation
Goal 2: Ensure enrollee access to health care, including safety net providers		
Limited ability to isolate the impact of TennCare III on the longstanding retroactive eligibility waiver	• Since the retroactive eligibility waiver has been in place since 1994, it may be difficult to isolate the effect of the waiver specifically under TennCare III. • When comparing to other states, it will be difficult to isolate differences in outcomes due to the impact of the retroactive eligibility waiver, since Medicaid programs vary widely in policies and implementation.	• It is intended that the independent evaluator will include appropriate context regarding retroactive eligibility limitations in the Interim and Summative Evaluations.
Goal 4: Provide enrollees with appropriate and cost-effective HCBS within acceptable budgetary parameters		
Limited ability to isolate the impact of TennCare III on the longstanding CHOICES program and I/DD programs	• Since the CHOICES program has existed since 2010, ECF CHOICES since 2016, and 1915c waiver programs since 1987, it may be difficult to isolate the effect of TennCare III on each MLTSS program.	• Appropriate caveats, context, and discussion of data limitations will be included in the Evaluation Reports.

E. Attachments

1. Independent Evaluator

TennCare has selected Guidehouse as its independent evaluator. Guidehouse has over 20 years of experience analyzing and evaluating health-related programs. Members of the Guidehouse team have backgrounds in health policy, health economics, statistical modeling, survey design, and quantitative and qualitative research methods. A Guidehouse team assisted TennCare with the development of the TennCare III Evaluation Design.

Guidehouse is currently under contract to provide actuarial services to the Tennessee Department of Finance and Administration, Division of TennCare. To ensure an independent evaluation, Guidehouse is establishing a separate team that is primarily responsible for the analyses and evaluation required by the TennCare III Evaluation Design. This team will operate independently of teams involved in actuarial and/or implementation activities. Guidehouse will also sign a “no conflict of interest” statement.

As such, TennCare can assure that Guidehouse will conduct a fair and impartial evaluation, prepare objective Evaluation Reports, and that there will be no conflict of interest.

2. Evaluation Budget

The table below presents a breakdown of estimated evaluation costs by calendar year. While the demonstration is approved for 10 years, the required total evaluation period (inclusive of work after the conclusion of the demonstration) spans 12 calendar years.

Evaluation Budget Estimates

Calendar Year	Estimated Cost
CY 2021	$223,250
CY 2022	$470,000
CY 2023	$1,010,500
CY 2024	$470,000
CY 2025	$470,000
CY 2026	$1,010,500
CY 2027	$470,000
CY 2028	$470,000
CY 2029	$1,010,500
CY 2030	$470,000
CY 2031	$470,000
CY 2032	$558,500
Total Cost (July 2021 - June 2032)	**$7,103,250**

The average evaluation cost is estimated to be roughly $591,938 per calendar year.

Over the life of this required demonstration evaluation period, we estimate that 5 percent ($355,162.50) of the total evaluation budget will be spent on survey and measure development; 15 percent ($1,065,487.50) on qualitative data collection, cleaning, and coding; 40 percent ($2,841,300) on quantitative data collection, cleaning, and coding; and 40 percent ($2,841,300) on analyses and report generation. Funds to support travel to focus groups and interviews and the purchase of software, hardware, and supplies are also included.

3. Timeline and Major Milestones

Figure 21 describes the timeline for hiring an independent evaluator and submitting Evaluation-related deliverables to CMS.

Figure 21. TennCare III Evaluation: Timeline and Major Milestones

Task	CY 2021				CY 2022				CY 2023				CY 2024				CY 2025				CY 2026				CY 2027				CY 2028				CY 2029				CY 2030				CY 2031				CY 2032			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Prepare																																															
Contract with Independent Evaluator																																															
Reporting *(shaded months indicate month of submission)*																																															
Quarterly Monitoring Reports																																															
Annual Monitoring Reports																																															
Interim Evaluation Reports																																															
Summative Evaluation Report																																															