DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
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Baltimore, Maryland 21244-1850

State Demonstrations Group

January 16, 2026

Julie Ewing
State Medicaid Director
Division of Integrated Healthcare
Department of Health & Human Services
PO Box 143101
Salt Lake City, UT 84114

Dear Director Ewing:

The Centers for Medicare & Medicaid Services (CMS) completed its review of the amended Evaluation Design, which is required by the Special Terms and Conditions (STCs), specifically, STC #17, of the section 1115 demonstration, "Utah Medicaid Reform 1115 Demonstration" (Project Nos: 11-W-00145/8 and 21-W00054/8), effective through June 30, 2027. CMS has determined that the amended Evaluation Design, which was submitted on November 20, 2025, and incorporates the demonstration amendments approved on July 2, 2024 and January 8, 2025, meets the requirements set forth in the STCs and our evaluation design guidance, and therefore approves the state's amended Evaluation Design.

CMS has added the approved amended Evaluation Design to the demonstration's STCs as Attachment M. 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 an Interim Evaluation Report, consistent with the approved Evaluation Design, is due to CMS one year prior to the expiration of the demonstration, or at the time of the extension application, if the state chooses to extend the demonstration. 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 with Utah on the Utah Medicaid Reform 1115 Demonstration. If you have any questions, please contact your CMS demonstration team.

Sincerely,

DANIELLE DALY -S

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Date: 2026.01.16 09:18:34 -05'00'

Danielle Daly
Director
Division of Demonstration Monitoring and Evaluation

cc: Tyler Deines, State Monitoring Lead, CMS Medicaid and CHIP Operations Group

Utah Medicaid Reform 1115 Demonstration: Evaluation Design Document

Report prepared by the Public Consulting Group

Draft EDD Submittal Date: March 15, 2023

Final EDD Submittal Date: July 31, 2023

Revised Final EDD Submittal Date: December 20, 2023

Second Revised Final EDD Submittal Date: February 9, 2024

Third Revised Final EDD Submittal Date: May 30, 2024

Fourth Revised Final EDD Submittal Date: December 30, 2024

Fifth Revised Final EDD Submittal Date: May 30, 2025

Sixth Revised Final EDD Submittal Date: November 19, 2025

PUBLIC CONSULTING GROUP

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A. General Background Information

1. Demonstration Name and Timing

On June 30, 2022, the Centers for Medicare & Medicaid Services (CMS) approved a five-year extension of Utah's section 1115 waiver, formerly known as the "Primary Care Network (PCN) Demonstration" (hereafter, "the Demonstration" or "the 1115 Demonstration"). The current extension is entitled "Medicaid Reform 1115 Demonstration" and is approved for the five-year period from July 1, 2022, through June 30, 2027. Through the Demonstration, CMS has granted the state expenditure authorities to expand service offerings for vulnerable populations, move some members into integrated managed care plans, and to provide coverage to populations not otherwise eligible for Medicaid. The Utah Department of Health and Human Services (DHHS), Division of Integrated Healthcare (DIH) administers the Utah Medicaid program and is responsible for the implementation of the Demonstration.

2. Demonstration Goals

The Medicaid Reform 1115 Demonstration expands coverage for populations not traditionally eligible for Medicaid through direct coverage or premium subsidies. By providing access to preventive care and enhanced services to vulnerable populations, the Demonstration aims to improve health outcomes and to reduce cost of care.

The Demonstration goals, as outlined in the Special Terms and Conditions[1], are:

1. Provide health care coverage for low-income Utahns eligible under the Demonstration who would not otherwise have access to, or be able to afford, health care coverage;
2. Improve beneficiary health outcomes and quality of life;
3. Lower the uninsured rate of low income Utahns;
4. Provide continuity of coverage for individuals eligible under the Demonstration;
5. Increase access to primary care;
6. Reduce uncompensated care provided by Utah hospitals;
7. Reduce barriers to health care and housing, an important social determinant of health;
8. Increase the utilization of preventive dental services, while reducing emergency dental procedure costs;
9. Improve access to services across the continuum of care;
10. Provide for better care coordination for individuals transitioning to community-based care;
11. Reduce the utilization of emergency departments and inpatient hospital settings for treatment where utilization is preventable or medically inappropriate;
12. Reduce the overdose death rate; and
13. Improve access to fertility preservation services for Medicaid eligible individuals diagnosed with cancer, as well as access to in vitro fertilization (IVF) services for individuals diagnosed with certain genetic disorders

With the addition of the Substance Use Disorder (SUD) and Serious Mental Illness (SMI) Institution for Mental Diseases (IMD) amendment approvals, the state expanded its objectives to include the following for individuals with SUD and/or SMI:

1. Improve access to services across the continuum of care;
2. Provide for better care coordination for individuals transitioning to community-based care;
3. Reduce the utilization of emergency departments and inpatient hospital settings for treatment, where utilization is preventable or medically inappropriate;
4. Reduce the overdose death rate; and

[1] Source: medicaid.gov/medicaid/section-1115-demonstrations/downloads/ut-primary-care-network-protocol-apprvl-ltr-01082025.pdf

5. Improve access to care for physical health conditions for these individuals.

With the addition of the Pre-Release Services under Reentry Demonstration Initiative amendment approval, the state has further expanded its objectives to include the following for eligible individuals:

- Increase coverage, continuity of care, and appropriate service uptake through assessment of eligibility and availability of coverage for benefits in correctional facility settings prior to release;
- Improve access to services prior to release and improve transitions and continuity of care into the community upon release and during reentry;
- Improve coordination and communication between correctional systems, Medicaid systems, managed care plans (as applicable) and community-based providers
- Increase additional investments in health care and related services, aimed at improving the quality of care for individuals in correctional facility settings, and in the community to maximize successful reentry post-release;
- Improve connections between correctional facility settings and community services upon release to address physical and behavioral health needs;
- Reduce all-cause deaths in the near-term post-release;
- Reduce the number of emergency department visits and inpatient hospitalizations among recently incarcerated Medicaid individuals through increased receipt of preventive and routine physical and behavioral health care; and
- Provide interventions for certain behavioral health conditions, including use of stabilizing medications like long-acting injectable antipsychotics and medications for addiction treatment for SUDs where appropriate, with the goal of reducing overdose and overdose-related death in the near-term post-release

3. DESCRIPTION

Utah's 1115 Demonstration was first approved in 2002 and has transformed over the last twenty years through extensions and amendments that have added new authorities and Demonstration populations.

The original PCN Demonstration provided a limited package of preventive and primary care benefits (the PCN benefit) to adults ages 19-64 with household incomes up to 150 percent of the Federal Poverty Level (FPL) and a slightly reduced benefit package to Parent/Caretaker Relatives (PCR) who comprised the Current Eligibles population. With Medicaid expansion in April 2019, PCN program participants became eligible for full state plan benefits, and the PCN benefit was phased out. The Current Eligible population was phased out by December 31, 2023, eliminating disparities in benefit packages by parental status. An assessment of the phase-out process is included in the evaluation design.

The 1115 Demonstration has historically served as a vehicle to provide premium assistance to adults with household incomes above Medicaid eligibility requirements. In 2006, the Utah Department of Health and Human Services (DHHS) amended the 1115 Demonstration to establish the Health Insurance Flexibility and Accountability Employer Sponsored Insurance (ESI) program, which provides premium assistance to adults with household incomes up to and including 150 percent of the FPL and CHIP-eligible children with family incomes up to 200 percent of the FPL. This was later amended to include adults with incomes up to 200 percent of the FPL and programmatically eligible adults and children obtaining coverage through COBRA[2]. Under the current 1115 Demonstration, premium assistance helps pay the individual's or family's share of monthly premium costs of ESI or COBRA and is aggregated under Utah's Premium Partnership for Health Insurance Program (UPP). Individuals in the Adult Expansion population with access to employer-sponsored insurance are required to enroll, with few exceptions. The state also increased the maximum assistance reimbursement amount in July 2021 making this program more substantial and potentially increasing the number of individuals covered by UPP. In February 2024, CMS approved an

[2] Consolidated Omnibus Reconciliation Act of 1986

increase in the premium subsidy for children that would otherwise receive CHIP services under the state plan from $120 to $180. If a plan offers dental coverage, the premium subsidy amount will increase from $140 to $200.

For nearly a decade, Utah's Demonstration has emphasized improving the behavioral health (BH) continuum of care. In November 2017 the state received approval to establish the Targeted Adult Medicaid (TAM) eligibility group. The TAM population consists of vulnerable adults ages 19-64, whose incomes are at or 0 percent of the FPL (effectively 5 percent of the FPL with the 5 percent disregard), and who meet detailed eligibility criteria in one of three targeted categories: chronically homeless, involved in the justice system and in need of substance use or mental health treatment, or are in need of substance use or mental health treatment. As of June 2022, enrollment in TAM was 9,384 individuals.

In December 2019, Utah received authority to enroll demonstration populations in managed care plans and to create an integrated managed care model, known as the Utah Medicaid Integrated Care (UMIC) plan. The four UMIC plans manage both physical and behavioral health benefits for the Adult Expansion population in Utah's five most populous counties: Davis, Salt Lake, Utah, Washington, and Weber. The Adult Expansion population in the rest of the state are enrolled in Accountable Care Organizations (ACOs) for their physical health service delivery system and in Prepaid Mental Health Plans (PMHPs) for their behavioral health service delivery system. The integrated care model is intended to provide more holistic and coordinated care than previously.

In March 2022, CMS approved the Housing Related Services and Supports (HRSS) amendment, allowing Utah to provide housing support services, such as tenancy supports, community transition services, and supportive living services to TAM individuals who meet additional eligibility criteria and exhibit one of seven risk factors. In an amendment approved in February 2024, an additional four risk factors were added to the HRSS program eligibility criteria to align eligibility with the sub-groups of the Targeted Adult group. The HRSS are paid on a fee-for-service basis. Providers are required to enroll and are evaluated to ensure they meet HRSS qualifications which includes being a certified case management provider. Once care plans have been approved, providers can submit claims for HRSS and receive reimbursement. As the program ramps up in the current waiver period, the state anticipates that HRSS will serve approximately 5,000 TAM individuals each year. By addressing crucial health related social needs in a high-needs population, the state anticipates that the HRSS program will improve participant health outcomes or quality of life and reduce non-housing related Medicaid costs.

In January 2025, CMS approved coverage of Health-Related Social Needs (HRSN) services. The amendment:

- expands the HRSS benefit to the Adult Expansion population and to recently incarcerated individuals;
- adds short-term rental assistance and short-term recuperative care for Adult Expansion and TAM populations;
- authorizes HRSN infrastructure investments; and
- authorizes the state to provide non-medical transportation (NMT) to and from HRSN services for eligible individuals.

Eligibility for HRSN services includes social and clinical risk factors and medical necessity criteria.

The 1115 Demonstration also includes components that focus on individuals with SUD and/or SMI, and youth with significant emotional disorder (SED) and/or behavioral challenges. Utah received approval of the SUD Implementation plan in November 2017. The Opioid Use Disorder (OUD) and SUD Program provides state plan behavioral health benefits to Demonstration participants. The state also received authority to provide residential and inpatient OUD/SUD treatment services to all Medicaid beneficiaries while they are short term residents in treatment settings that qualify as IMDs.

The SMI/SED Implementation plan was approved in December 2020 and is similar in expenditure authority to the OUD/SUD program. The state is taking action to meet key milestones of the SMI/SED program including, ensuring quality of care in psychiatric hospitals and residential settings, improving care coordination and transitions to community-based care, increasing access to the continuum of care including crisis stabilization services, and earlier identification and engagement in treatment and increased integration. Together, the SUD and SMI components expand access to mental health services, opioid use disorder (OUD) and other substance use disorder (SUD) services. The 1115 Demonstration supports state efforts to enhance provider capacity, improve the availability of Medication Assisted Treatment (MAT) and improve access to a continuum of SMI evidence-based services at varied levels of intensity, including crisis stabilization services.

In February 2019, Utah received CMS approval to provide state plan Medicaid coverage to Former Foster Care Youth from another state (FFCYAS) who were ever enrolled in Medicaid in another state and are not otherwise Medicaid eligible in Utah. State plan coverage is provided to this population until 26 years of age.

In November 2019, Utah received CMS approval for the provision of intensive stabilization services (ISS) to Medicaid eligible children and youth under age 21 in state custody or at risk of being placed in state custody who are experiencing significant emotional and/or behavioral challenges. The ISS program provides both state plan BH services and home and community-based services (HCBS) that are not currently authorized through the state plan.

The Demonstration also authorized the Clinically Managed Residential Withdrawal Pilot from May 1, 2019, to April 1, 2021; this benefit became available statewide as of April 1, 2021 to all eligible Medicaid members. As a result, the State received approval on July 23, 2021, to remove this pilot project from the 1115 Demonstration and CMS is not requiring the State to evaluate this population.

The current 1115 Demonstration includes dental coverage for vulnerable populations. The PCN Demonstration first provided an adult dental benefit to the Current Eligibles population in November 2006. CMS approved dental benefits for adults with disabilities or blindness in 2017. In 2019, the state chose to provide comprehensive dental benefits to TAM adults receiving SUD treatment because research showed that dental coverage could increase initiation and engagement in treatment for individuals living with SUD. In 2020 dental benefits were extended to Medicaid eligible individuals aged 65 and older and to TAM adults in need of porcelain or porcelain-to-metal crowns. In January 2025, CMS approved an expansion of dental benefits to all Medicaid-eligible adults.

In February 2024, CMS approved an amendment to the current 1115 Demonstration enabling the state to receive expenditure authority for fertility preservation services provided to certain individuals diagnosed with cancer, as well as for in vitro fertilization (IVF) and genetic testing services for certain individuals. Under the IVF and genetic testing amendment, the state may provide genetic testing services to eligible individuals, preimplantation genetic testing of embryos, and IVF services to eligible individuals, ages 18 through 35, diagnosed by a physician with a genetic trait associated with cystic fibrosis, morquio syndrome, sickle cell anemia, spinal muscular atrophy, or myotonic dystrophy. Under the fertility treatment for individuals diagnosed with cancer amendment, the state is now enabled to provide fertility preservation for eligible individuals diagnosed with cancer and requiring treatment that may cause a substantial risk of sterility or iatrogenic infertility (i.e., infertility caused by treatment for cancer). Services covered under this once per lifetime benefit include the collection and storage of eggs or sperm and coverage for cryopreservation storage. Coverage for cryopreservation storage is covered as a single payment in five-year increments. In January 2025, CMS authorized an increase in the upper age limit for fertility preservation services for individuals diagnosed with cancer from 40 to 50 years of age.

In July 2024, CMS approved an additional amendment to the 1115 Demonstration called the “Pre-Release Services under Reentry Demonstration Initiative” that allows the state to provide limited coverage for a targeted set of services to certain eligible incarcerated individuals for 90 days prior to the individuals’

expected release. This amendment closely aligns with CMS's "Reentry Demonstration Opportunity," described in the State Medicaid Director Letter released in April 2023.

Individuals residing in a county jail, state prison, or youth correctional facility who have been determined eligible for Medicaid based on an application filed before or during incarceration are eligible to receive a limited set of pre-release benefits for up to 90-days before their expected release date. These benefits include, but are not limited to, case management, medication-assisted treatment for SUD, and physical and behavioral health clinical consultation services. A full description of the pre-release services can be found in Table 2: Additional Demonstration Benefits, Programs and Services

4. Populations

Table 1 provides a summary of the demonstration populations during the Demonstration period. Adult Expansion (AE) is the largest population, consisting of approximately 116,000 adults ages 19-64 with incomes up to 133 percent of the FPL. Additional demonstration benefits, programs, and services are summarized in Table 2. The evaluation design includes hypotheses and research questions for all key policies and programs of the demonstration.

TABLE 1: DEMONSTRATION ELIGIBLE POPULATIONS

Demonstration Eligible Populations	Eligibility[3]	Benefits[2]	Estimated Number of Annual Enrollees[4]
Current Eligibles (CE)	Adults aged 19-64 who are medically needy and not aged, blind, or disabled. Individuals who are pregnant are excluded, through the 60th day postpartum.	Individuals enrolled in this eligibility category receive most of the benefits covered under Utah's state plan according to limitations specified in the state plan. Current Eligibles also receive benefits that are the equivalent of (b)(3) services under the state's 1915(b) PMHP waiver, which include; psychoeducational services, personal services, respite care and supportive living services (mental health services in residential treatment settings)	The CE population will be phased out entirely no later than December 31, 2023
Adult Expansion (AE)	Adults, age 19 through 64, who are not Current Eligibles, who are U.S. citizens/qualified non-citizens, are residents of Utah, and have household income at or below 133 percent of the FPL.	Expansion adults will receive state plan benefits and benefits that are the equivalent of (b)(3) services under the state's 1915(b) PMHP waiver, which include; psychoeducational services, personal services, respite care and supportive living services.	115,584
Utah Medicaid Integrated Care (UMIC) – a subgroup of the AE population	Adult Expansion members enrolled in the Utah Medicaid Integrated Care program, which operates in Utah's most populous counties: Davis, Salt Lake, Utah, Washington, and Weber.	Expansion adults will receive state plan benefits and benefits that are the equivalent of (b)(3) services under the state's 1915(b) PMHP waiver, which include; psychoeducational services, personal services, respite care and supportive living services.	49,963

[3] ut-cms-amndmnt-aprvl.pdf (medicaid.gov)

[4] The annual estimates reflect the enrollment numbers reported in the Annual Monitoring Report for the period July 2021 – June 2022 for populations that are continuing from the prior waiver period. Estimates for TAM HRSS, a new population, are taken from the approved Waiver renewal. Estimates for IVF and genetic testing and fertility preservation treatments, and estimates for HRSN Services, are taken from the state's amendment applications to CMS. Estimates for the Justice-Involved populations are taken from state-generated updates to the state's amendment application to CMS.

Demonstration Eligible Populations	Eligibility[3]	Benefits[2]	Estimated Number of Annual Enrollees[4]
Demonstration Populations III, V, VI, and Current Eligible CHIP Children	Demonstration Population III - working adults, aged 19-64, their spouses, and their children ages 19-26, with gross family incomes above 133 percent of the FPL and up to and including 200 percent of the FPL, are not otherwise eligible for Medicaid and participate in an approved ESI plan. Demonstration Population V - same as Demonstration population III, except that the eligible individual or custodial parent/caretaker is able to enroll in COBRA continuation coverage. Current Eligible CHIP Children - these children are eligible for the CHIP, but the children's parents have elected to receive premium assistance for the employee's share of the cost of ESI instead of receiving CHIP direct coverage. Demonstration Population VI - children up to age 19 with family income up to 200 percent of the FPL who would meet the definition of a low-income child. Population is divided into 2 groups: COBRA-Eligible Children and COBRA-Continuation Children.	Individuals in these eligibility categories are eligible to receive premium assistance (through ESI or COBRA) in paying the employee's, individual's, or family's share of the monthly premium cost of qualifying insurance plans. Together, the ESI and COBRA benefits are the "Utah Premium Partnership Program" (UPP). Premium assistance is the sole Medicaid benefit provided to these members.	1,288
Targeted Adult Medicaid (TAM)	Includes adults, ages 19 through 64, with incomes below five percent of the FPL and no dependent children, who meet detailed criteria in one of three major categories: ● Chronic homelessness ● Involved in the criminal justice system and in need of substance use or mental health treatment. ● In need of substance use or mental health treatment	Individuals enrolled in this eligibility category receive full Medicaid state plan benefits.	9,384

Demonstration Eligible Populations	Eligibility[3]	Benefits[2]	Estimated Number of Annual Enrollees[4]
Intensive Stabilizations Services (ISS)	Medicaid eligible children and youth under age 21, who are in state custody, or at risk of state custody, and experiencing significant emotional and/or behavioral challenges.	Individuals eligible for this category will receive state plan and home community-based crisis stabilization services during the first eight-weeks of the intensive program on a FFS basis using a daily bundled rate.	Anticipate 20
Former Foster Care Youth from Another State (FFCYAS)	Individuals under age 26, who were in foster care under the responsibility of a state other than Utah, or a tribe in such other state when they turned 18 (or such higher age as the state has elected for termination of federal foster care assistance under title IV-E of the Act), were ever enrolled in Medicaid, are now applying for Medicaid in Utah, and are not otherwise eligible for Medicaid.	Individuals enrolled in this eligibility category receive full Medicaid state plan benefits.	17

In addition to the benefits associated with each eligibility pathway outlined above, the Demonstration includes several benefits, programs, and services that have expanded over time to broaden access to care and to meet the needs of vulnerable populations (see Table 2).

TABLE 2: ADDITIONAL DEMONSTRATION BENEFITS, PROGRAMS, AND SERVICES

Additional Demonstration Benefits, Programs, and Services	Eligibility[5]	Benefits[2]	Estimated Number of Annual Enrollees[6]
Dental Benefit	As of the amendment approved in January 2025: all individuals enrolled in Medicaid and are the age of 21 or older. Previously, dental benefits were available only to the aged, blind, or disabled groups, and to TAM members receiving SUD treatment.	Individuals that are enrolled in this eligibility category will receive state plan dental benefits that are defined in the Utah Medicaid Provider Manual, Dental Services and porcelain or porcelain-to-metal crowns, if needed.	Entire Adult Expansion population 115,584
Health Related Social Needs (HRSN) Services	As of the amendment approved in January 2025: the following covered populations will be eligible to receive HRSN services if they also satisfy the applicable clinical and social risk criteria and the HRSN services is determined to be medically appropriate: Recently Incarcerated Individuals are eligible for HRSS. Adult Expansion and TAM demonstration populations are eligible for HRSS, Short-Term Rental Assistance, Short-Term Recuperative Care, and Short-Term Post Transition Housing	Housing-Related Services and Supports (HRSS): includes pre-tenancy navigation services, tenancy sustaining services, one-time transition and moving costs other than rent, home accessibility modifications and remediations that are medical necessary. Short-Term Rental Assistance: payment for rent and/or short-term temporary stays for up to six months in a 5-year period. Short-Term Recuperative Care (a/k/a Medical Respite): clinically oriented recuperative or rehabilitative services and supports for individuals who require ongoing monitoring and continuous access to medical care.	5,000

[5] ut-cms-amndmnt-aprvl.pdf (medicaid.gov)

[6] The annual estimates reflect the enrollment numbers reported in the Annual Monitoring Report for the period July 2021 – June 2022 for populations that are continuing from the prior waiver period. Estimates for TAM HRSS, a new population, are taken from the approved Waiver renewal. Estimates for IVF and genetic testing and fertility preservation treatments, and estimates for HRSN Services are taken from the state's amendment applications to CMS. Estimates for the Justice-Involved populations are taken from state-generated updates to the state's amendment application to CMS.

Additional Demonstration Benefits, Programs, and Services	Eligibility[5]	Benefits[2]	Estimated Number of Annual Enrollees[6]
		Short-Term Post Transition Housing: clinically oriented rehabilitative services and supports for individuals who do not require ongoing monitoring and continuous access to medical care.	
Serious Mental Illness (SMI) IMD Benefit	Medicaid recipients, age 21 through 64 receiving SMI services in IMD treatment settings.	The Demonstration grants Utah expenditure authority for services provided to beneficiaries during short term stays in an IMD to receive acute care for a primary diagnosis of SMI or SED for stays of up to 60 days, as long as the state shows at its midpoint assessment that it is meeting the requirement of a 30 day or less average length of stay (ALOS) for beneficiaries residing in an IMD who are receiving covered services in an IMD.	8
Opioid Use Disorder/ Substance Use Disorder Program	SUD benefits are available to all Medicaid members through state plan authority.	The Demonstration grants Utah expenditure authority to provide the following services in IMDs: residential treatment, withdrawal management, medication-assisted treatment (MAT), peer support, residential crisis stabilization.	767
In Vitro Fertilization and Genetic Testing Services	In Vitro Fertilization (IVF): Medicaid recipients ages 18-35 diagnosed by a physician or qualified health professional as having a genetic trait associated with cystic fibrosis, morquio syndrome, sickle cell anemia, or spinal muscular atrophy, and has a reproductive partner who has been diagnosed with the same condition. Has been diagnosed by a physician or qualified health professional as having a genetic trait associated with myotonic dystrophy. Genetic testing: Medicaid recipients who have a familial medical history or are in an ethnic group that has a high risk of one or more of the following medical	In vitro fertilization services, genetic testing services, and preimplantation genetic testing to test embryos for genetic disorders prior to transfer to the uterus. These services require prior authorization, and qualifying beneficiaries may receive up to three cycles of IVF per lifetime.	50

Additional Demonstration Benefits, Programs, and Services	Eligibility[5]	Benefits[2]	Estimated Number of Annual Enrollees[6]
	conditions: cystic fibrosis, morquio syndrome, myotonic dystrophy, sickle cell anemia, or spinal muscular atrophy.		
Fertility Preservation Benefit for Individuals Diagnosed with Cancer	Medicaid recipients diagnosed by a physician or qualified health professional as having an active cancer diagnosis requiring treatment that may cause a substantial risk of sterility or iatrogenic infertility. Post pubertal and up to age 50.	Individuals can receive egg and sperm collection and storage, preimplantation genetic testing prior to cryopreservation storage, cryopreservation storage. These benefits require prior authorization and are available once per lifetime.	226
Justice-Involved Reentry Benefit	Individuals who are inmates residing in county jails, state prisons, or youth correctional facilities and have been determined eligible for Medicaid pursuant to an application filed before or during incarceration.	Eligible individuals can receive the following pre-release services starting 90 days before their release from incarceration: ● Case management to assess and address physical and behavioral health needs; ● Medication-assisted treatment services for all types of SUD as clinically appropriate, with accompanying counseling; ● A 30-day supply of all prescription medications that have been prescribed for the individuals at the time of release; provided to the individual immediately upon release from the correctional facility; ● Physical and behavioral health clinical consultation services, as clinically appropriate, to diagnose health conditions, provide treatment, and support pre-release case managers' development of a post-release treatment plan and discharge planning; ● Diagnostic services, including laboratory and radiology services, and treatment	Adults: 3,600 Youth:15

Additional Demonstration Benefits, Programs, and Services	Eligibility[5]	Benefits[2]	Estimated Number of Annual Enrollees[6]
		services in addition to coverage for MAT described above; ● Prescribed drugs, in addition to MAT and the 30-day supply of prescription medication, and medication administration; ● Family planning services and supplies; ● Services provided by community health workers; ● Peer support services; ● Treatment for Hepatitis C; and ● Medical equipment and supplies and/or medical equipment provided upon release Youth eligible for CHIP will receive pre-release screening, diagnostic, and case management services starting 30 days before their release.[7]	

[7] Authority for pre-release services for CHIP eligible youth is covered under the SPA, and not held under the Utah Medicaid Reform 1115 Demonstration waiver; this evaluation will not include this population.

5. CONTEXT

The Utah Medicaid 1115 Demonstration also coincided with the unwinding of the Medicaid Continuous Enrollment requirement associated with the Covid-19 pandemic beginning in 2020. Enrollment in Medicaid remained high during the continuous enrollment period as states were required to keep current Medicaid beneficiaries enrolled. The unwinding of continuous eligibility for Medicaid began on March 1, 2023.[8] Under Utah's unwinding plan[9], every member's case was slated for a full review, with cases spread over a 12-month period. Cases most likely to change programs or coverage were prioritized for review, and those most likely to remain Medicaid eligible were deferred to later in the year. DHHS communicated with providers and beneficiaries about the redetermination process. Members are urged to update their contact information and check the unwinding website[10] to learn their anticipated review date. Redetermination will likely affect enrollment numbers in the Demonstration, as some individuals moved from one eligibility category to another, and individuals above income limits transitioned off Medicaid coverage. This evaluation design includes qualitative interviews and process metrics on implementation as it will be a moderating factor that may affect Demonstration outcomes.

[8] 10 Things to Know About the Unwinding of the Medicaid Continuous Enrollment Provision | KFF
[9] https://medicaid.utah.gov/unwinding/
[10] https://jobs.utah.gov/mycase/

B. Evaluation Questions and Hypotheses

1. Logic Model

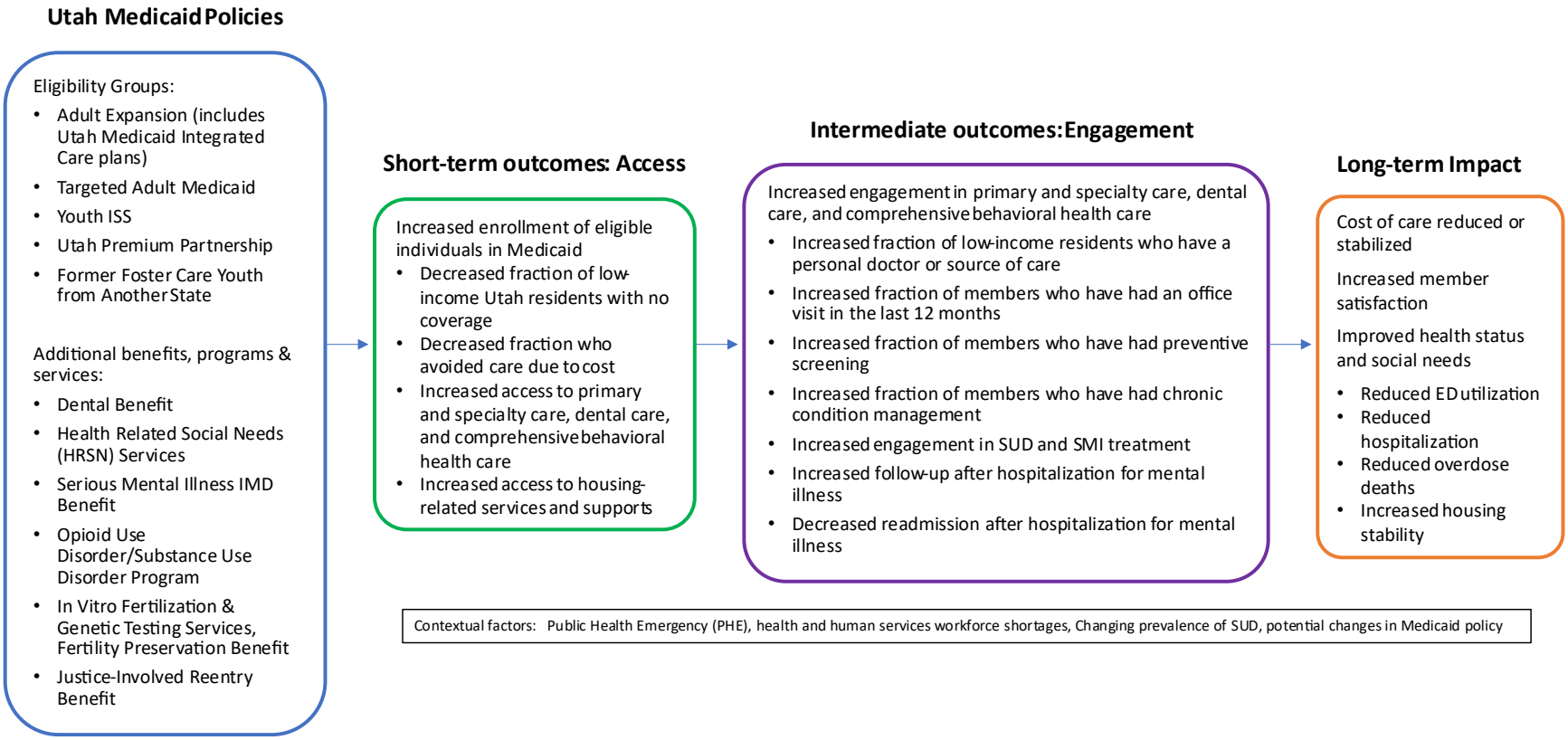


Figure 1: Medicaid Reform Demonstration Overall Logic Model

2. Hypotheses and Research Questions

The logic model above illustrates how the Demonstration objectives are expected to be achieved by program activities, following a natural progression from proximate to distal outcomes as the Demonstration goes on. Each outcome is represented by a testable hypothesis, listed below, about the impact of the Demonstration activities, and a corresponding research question. Tables 15-25 specify the measures that will be used to assess each hypothesis.

The hypotheses are organized by population or program/benefit, and are focused on the broad themes of increasing health care coverage, increasing access to primary care and appropriate utilization, reducing high-cost acute care utilization, including potentially preventable utilization, and reducing the cost of uncompensated care.

The first objective of the 1115 Demonstration, providing health care coverage for low-income Utahns eligible who would not otherwise have access to or be able to afford healthcare coverage, is achieved through enrollment in a number of the Demonstration populations, including the Adult Expansion, TAM, UPP, and ISS. Individuals in these populations would not otherwise be eligible for Medicaid without the presence of the Demonstration in Utah..[11] The first hypothesis is thus focused on the impact of the 1115 Demonstration overall on the population of low-income UT residents. A larger fraction of low-income UT residents is expected to report having access to coverage and engaging in healthcare relative to reported access and engagement in other states. Engagement in care is expected to improve member satisfaction and lead to reductions in inappropriate care utilizations, also known as “Low Value Care”.

The second hypothesis is similar to the first hypothesis, and focuses specifically on the Adult Expansion population. The second hypothesis is that the Demonstration will improve healthcare access and engagement for the Adult Expansion population. The state hypothesizes that by providing coverage through Medicaid expansion, members will engage in primary and preventive care, which will lead to reductions in acute care utilization. The Utah Medicaid Integrated Care (UMIC) population, a subpopulation of the Adult Expansion population, consists of members in Utah’s five-most populous counties who are enrolled in plans that integrate care for physical and behavioral health needs. Thus, the UMIC research questions are specific to the outcomes produced when members gain access to behavioral health care that is managed by the same managed care organization that manages their physical health care. It is anticipated that UMIC will improve engagement in BH services and reduce ED utilization.

The third hypothesis again focuses on access and engagement in healthcare, this time focusing on the TAM population. The state hypothesizes that the Demonstration will continue to improve healthcare access and engagement for this population.

The fourth hypothesis addresses the HRSN demonstration, which essentially expands the housing-related services and supports (HRSS) benefit previously available only to TAM members, to the entire Adult Expansion population who meet the needs-based eligibility criteria. The state is authorized to provide HRSS, short-term rental assistance, short-term recuperative care, short-term post-transition housing, and non-medical transportation (NMT). The evaluation design focuses on HRSS and NMT, with a planned implementation date of July 1, 2025. The other authorized services may, or may not, be implemented during the current demonstration period. If they are implemented, they should contribute to the same outcomes theorized for HRSS. It is anticipated that the HRSN demonstration will reduce the prevalence and severity of housing and transportation needs, increase continuity of BH treatment, and improve health outcomes for eligible members. Research questions include whether HRSN services were provided and utilized as planned, care manager perspectives on incorporating this new benefit, whether there is unmet need, and whether HRSS improves perceived health status. Other research questions about the HRSN demonstration focus on how HRSN affects high-cost acute care utilization.

[11] Individuals in the Current Eligibles population received expanded benefits through the waiver, although they would have received coverage regardless of the presence of the waiver.

The fifth and sixth hypotheses speak to BH services provided to Demonstration participants and Medicaid beneficiaries with SMI and SUD treated in Institutions of Mental Disease (IMD). The state anticipates that BH coverage for residential and inpatient services provided to members in IMDs will lead to a reduction in inpatient stays, ED utilization, and rate of unplanned readmission among recipients, resulting in cost decrease or stabilization. The state also anticipates this will lessen unmet need and increase engagement in treatment to reduce overdose deaths in the long-term. The IE will monitor the impact of the state's efforts to increase access to crisis stabilization services. Greater utilization of non-hospital, non-residential services should lead to greater reductions in inpatient stays, ED utilization, and overdose deaths in the long-term.

The seventh hypothesis addresses smaller Demonstration populations, which include UPP/ESI, ISS, , TAM Dental, and FFCYAS. The state anticipates that utilization for the services provided to these populations will increase and total cost of care will decrease, as these members engage in acute and preventive care. Although the number of Adult Expansion members enrolled in Employer Sponsored Insurance will grow due to the new provision present in this waiver requiring enrollment in ESI for all Adult Expansion members who have access to insurance through their employers, the number of members enrolled in ESI is not projected to exceed 1,385 members during this Demonstration period. As a result, the ESI population by itself is unlikely to lead to reductions in uncompensated care and inappropriate care utilization. In addition, the number of individuals in the FFCYAS population, and the number receiving ISS, were both very small in the prior Demonstration period. Therefore, the evaluation will include counts and a qualitative summary of program implementation.

Finally, hypotheses eight through eleven focus on the justice-involved (JI) population and the pre-release and reentry services newly covered. The state anticipates that the demonstration will enhance cross-system collaboration between the correctional and community-based services systems, that enrollment and redetermination support will improve continuity of coverage, and that coverage of pre-release and reentry services will improve engagement in high quality care, reduce unnecessary acute care utilization, and ultimately improve health outcomes for the JI population. In addition, the State will conduct a demonstration cost assessment including administrative costs of demonstration implementation and operation, Medicaid health services expenditures, and provider uncompensated care costs. The results of the cost assessment will be included in the Interim and Summative Evaluation Reports.

1. Hypothesis 1: The Demonstration overall will improve access to coverage and engagement in health care for low-income UT residents.

    - Primary research question 1.1: Did the fraction of low-income residents with no coverage decrease, relative to comparison states?
    - Primary research question 1.2: Did the fraction of low-income residents who avoided care due to cost decrease, relative to comparison states?
    - Primary research question 1.3: Did the fraction of low-income residents who have a personal doctor or usual source of care increase, relative to comparison states?
    - Primary research question 1.4: Did the fraction of low-income residents who had a primary or specialty care appointment in the last year increase, relative to comparison states?
    - Primary research question 1.5: Did the fraction of low-income residents who had a preventive screening in the last year increase, relative to comparison states?
    - Primary research question 1.6: What is the member experience of care in terms of access, timeliness, and patient-centeredness?
    - Primary research question 1.7: Did Low Value Care decrease among Demonstration participants, relative to baseline?

2. Hypothesis 2: The Demonstration will improve healthcare access and engagement for the Adult Expansion population.

    - Primary research question 2.1: Did inpatient hospital utilization decrease, relative to baseline, for the Adult Expansion population?
    - Primary research question 2.2: Did ED visits decrease, relative to baseline, for the Adult Expansion population?
        - Subsidiary research question 2.2a: Did ED visits for BH conditions decrease, relative to baseline, for the Adult Expansion population?
        - Subsidiary research question 2.2.b: Did UMIC plans reduce ED visits for BH conditions for Adult Expansion population, relative to FFS or physical health-only ACO plans?
    - Primary research question 2.3: Did engagement in primary and ambulatory care increase, relative to baseline, for the Adult Expansion population?
    - Primary research question 2.4: Did engagement in behavioral health care increase, relative to baseline, for the Adult Expansion population?
        - Subsidiary research question 2.4.a: Did UMIC plans improve engagement in behavioral health care for the Adult Expansion population, relative to FFS or physical health-only ACO plans?
    - Primary research question 2.5: Did engagement in treatment for chronic conditions increase, relative to baseline, for the Adult Expansion population?
    - Primary research question 2.6: Did preventive cancer screening increase, relative to baseline, for the Adult Expansion population?
    - Primary research question 2.7: Did dental service provision increase relative to baseline for the Adult Expansion population?
    - Primary research question 2.8: Did ED visits for non-traumatic dental conditions decrease relative to baseline for the Adult Expansion population?
    - Primary research question 2.9: Did follow-up after ED visits for non-traumatic dental conditions increase relative to baseline for the Adult Expansion population?
    - Primary research question 2.10: To what extent are beneficiaries aware of the dental care benefit?

3. Hypothesis 3: The Demonstration will improve healthcare access and engagement for the TAM population.

    - Primary research question 3.1: Did inpatient hospital utilization decrease, relative to baseline, for the TAM population?
    - Primary research question 3.2: Did ED visits decrease, relative to baseline, for the TAM population?
        - Subsidiary research question 3.2.a: Did ED visits for BH conditions decrease, relative to baseline, for the TAM population?
    - Primary research question 3.3: Did engagement in primary and ambulatory care increase, relative to baseline, for the TAM population?
    - Primary research question 3.4: Did engagement in behavioral health care increase, relative to baseline, for the TAM population?
    - Primary research question 3.5: Did dental service provision increase relative to baseline for the TAM population?
    - Primary research question 3.6: Did ED visits for non-traumatic dental conditions decrease relative to baseline for the TAM population?

- Primary research question 3.7: Did follow-up after ED visits for non-traumatic dental conditions increase relative to baseline for the TAM population?

4. Hypothesis 4: The HRSN Services demonstration will effectively mitigate members' housing and transportation needs, lead to more appropriate service utilization and improved physical and mental health outcomes.
    - Primary research question 4.1: What is the prevalence and severity of beneficiaries' social needs?
    - Primary research question 4.2: Were HRSN services provided and utilized as planned?
    - Primary research question 4.3: Did the HRSN demonstration effectively mitigate beneficiaries' housing and transportation needs?
    - Primary research question 4.4: Did high-cost acute utilization decrease, relative to baseline, for HRSN recipients?
    - Primary research question 4.5: Did engagement in primary and ambulatory care increase, relative to baseline, for HRSN recipients?
    - Primary research question 4.6: Did engagement in behavioral health care increase, relative to baseline, for HRSN recipients?
    - Primary research question 4.7: From the beneficiaries perspective, did the HRSN services meet their housing-related needs, support their engagement in behavioral health care, and overall positively impact their physical and mental health?
    - Primary research question 4.8: Did state and local investments in housing supports change over time during the HRSN demonstration?
    - Primary research question 4.9: Were there any improvements in the quality and effectiveness of downstream housing-related services and supports?

5. Hypothesis 5: The SMI and SUD Demonstrations increased access to appropriate treatment.
    - Primary research question 5.1: Did the number of individuals receiving services for SMI and/or SUD increase, relative to baseline?
    - Primary research question 5.2: Did ED visits for BH conditions decrease among individuals with SMI and/or SUD diagnoses, relative to baseline?
    - Primary research question 5.3: Did inpatient days (outside of IMDs) decrease, relative to baseline, for individuals with SMI and/or SUD?
    - Primary research question 5.4: Did engagement in SUD treatment increase among individuals with SUD diagnoses relative to baseline?
    - Primary research question 5.5: Did unplanned readmission following hospitalization for psychiatric treatment decrease among individuals with SMI relative to baseline?
    - Primary research question 5.6: Did utilization of any mental health service increase among low-income residents, relative to comparison states?
    - Primary research question 5.7: Did the number of individuals needing but not receiving SUD treatment decrease among low-income residents, relative to comparison states?
    - Primary research question 5.8: Did the rate of overdose deaths decrease, relative to baseline?
    - Primary research question 5.9: Did the number of individuals receiving crisis stabilization services increase (with an emphasis on non-hospital, non-residential services[12]?

[12] This includes services made available through crisis call centers, mobile crisis units, and coordinated community response services as defined in STC 12.4 SMI/SED Financing Plan.

6. Hypothesis 6: The SMI and SUD Demonstrations stabilized or reduced cost of care for these populations.

    - Primary research question 6.1: Did the total cost of care for individuals with SMI diagnoses change, relative to baseline?
        - Subsidiary research question 6.1.a: Did costs related to the diagnosis and treatment of SMI change, relative to baseline? (SMI-IMD costs + other SMI costs + non-SMI costs)?
        - Subsidiary research question 6.1.b: What types of care (inpatient + non-ED outpatient, + ED outpatient + pharmacy, + long-term care) are the primary drivers of the cost of care for the SMI population?
    - Primary research question 6.2: Did the total cost of care for individuals with SUD diagnoses change, relative to baseline?
        - Subsidiary research question 6.2.a: Did costs related to the diagnosis and treatment of SUD change, relative to baseline? (SUD-IMD costs + other SUD costs + non-SUD costs)?
        - Subsidiary research question 6.2.b: What types of care (inpatient + non-ED outpatient, + ED outpatient + pharmacy, + long-term care) are the primary drivers of the cost of care for the SUD population?

7. Hypothesis 7: The Demonstration delivered coverage/ services appropriately to individuals in the smaller Demonstration populations and programs.

    <u>UPP/ESI</u>

    - Primary research question 7.1: Did the number of individuals receiving coverage increase relative to baseline?
    - Primary research question 7.2: What was the average total Medicaid cost of care for enrollees?
    - Primary research question 7.3: Did the pmpm cost for enrollees change over time?

    <u>ISS</u>

    - Primary research question 7.4: Did the number of individuals receiving ISS increase relative to baseline?

    <u>Former Foster Care Youth from Another State (FFCYAS)</u>

    - Primary research question 7.5: How many FFCYAS received coverage?

    <u>Fertility and Genetic Testing Services</u>

    - Primary research question 7.6: Did the number of individuals receiving fertility preservation services increase relative to baseline?
    - Primary research question 7.7 Did the number of individuals receiving genetic testing services increase relative to baseline?

8. Hypothesis 8: The Justice-Involved Reentry Benefit will enhance cross-system communication and coordination between correctional and community services.

    - Primary research question 8.1: Did the Demonstration's services facilitate beneficiaries' post-release transitions to care?
    - Primary research question 8.2: Was communication and coordination between the correctional system and community-based health services enhanced?

9. Hypothesis 9: The Justice-Involved Reentry Benefit will improve pre-release service provision during the covered period and continuity of coverage for the justice-involved population.

- Primary research question 9.1: What Demonstration services did justice-involved individuals receive in the pre-release period?
- Primary research question 9.2: What was beneficiaries' experience of pre-release service provision?
- Primary research question 9.3: Were beneficiaries potentially in need of behavioral health services identified in the pre-release period?
- Primary research question 9.4: What fraction of justice-involved individuals received navigation support for accessing Medicaid coverage pre-release?
- Primary research question: 9.5: Did reentry continuity of coverage improve for incarcerated individuals compared to the pre-demonstration comparison population?

10. Hypothesis 10: The Justice-Involved Reentry Benefit's 90-day pre-release coverage period ("the coverage timeline") will support effective program implementation.

- Primary research question 10.1: Did the coverage timeline facilitate providing more coordinated, efficient, and effective reentry planning?
    - Subsidiary research question 10.1.a: Were assessments and care plans completed in a timely manner?
    - Subsidiary research question 10.1.b: Did beneficiaries receive a 30-day supply of all prescribed medications immediately upon release from the carceral setting?
- Primary research question 10.2: Did the coverage timeline enable pre-release management and stabilization of clinical, physical, and behavioral health conditions?
- Primary research question 10.3: Did the coverage timeline help mitigate potential operational challenges the state might have encountered in a more compressed timeline?

11. Hypothesis 11: The Justice-Involved Reentry Benefit will improve engagement in health care services and social, reduce acute care utilization, and improve health outcomes for the justice-involved population post-release.

- Primary research question 11.1: Did engagement in appropriate health care services post-release increase relative to a pre-demonstration comparison population?
- Primary research question 11.2: Did inpatient hospital utilization post-release decrease relative to the pre-demonstration comparison population?
- Primary research question 11.3: Did ED visits post-release decrease, relative to the pre-demonstration comparison population?
- Primary research question 11.4: Did the rate of deaths post-release decrease relative to the pre-demonstration population?
- Primary research question 11.5: Was the timing or provision of specific pre-release services associated with better post-release outcomes?

3. Independent Assessments

In addition to evaluating the hypotheses and research questions outlined in the previous section, several independent assessments will be conducted. The purpose and methods for each of these assessments are described here.

Wind-down of Current Eligibles

An assessment of the wind-down of the Current Eligibles (CE) demonstration population will be conducted. The original PCN Demonstration provided a limited package of preventive and primary care benefits (the PCN benefit) to adults ages 19-64 with household incomes up to 150 percent of the Federal Poverty Level (FPL) and a slightly reduced benefit package to Parent/Caretaker Relatives (PCR) who comprised the Current Eligibles population. With Medicaid expansion in April 2019, PCN program participants became eligible for full state plan benefits, and the PCN benefit was phased out. The Current Eligible population was phased out entirely on December 31, 2023, eliminating disparities in benefit packages by parental status.

The research question is: Was the wind-down process implemented efficiently and effectively? The assessment data sources are:

- Key Informant Interviews (KIIs) with 2-3 State agency staff
- MRT Demonstration Quarterly Monitoring Reports

High-level topics for the KIIs include operational challenges and successes, strategies implemented to overcome barriers, and overall lessons learned throughout the wind-down process.

Cost Assessments

A Demonstration cost assessment will be conducted. The IE will use the cost analyses in concert with findings from hypothesis tests to assess the demonstration's effects on the fiscal sustainability of the State's Medicaid program.

The IE will conduct a comprehensive cost analysis to support developing estimates of implementing the Reentry Demonstration Initiative, including covering associated services.

For the HRSN Demonstration, the IE will conduct a cost analysis to support developing comprehensive and accurate cost estimates of providing such services.

TABLE 3: DESCRIPTION OF COST ASSESSMENTS

Cost Assessment	Description
Medicaid Reform Demonstration	• Administrative costs, health service expenditures, uncompensated care • Exclude JIR costs, exclude HRSN costs
Justice-Involved Reentry	• Administrative costs, health service expenditures • Estimates of cost saved through reduced ED visits & hospital admissions
Health Related Social Needs	• Costs associated with potentially preventable high-acuity health care • Administrative costs, health service expenditures • Infrastructure investments

The cost assessments will rely on administrative data, the specific measures and data sources are provided in Table 4.

TABLE 4: COST ASSESSMENT MEASURES & DATA SOURCES

Measure	Data Source
Administrative Costs of the Demonstration • Report for JIR, HRSN, all other • Total and per beneficiary per month • PMPM growth rate	Form CMS-64
Medicaid Health Service Expenditures • Report for JIR, HRSN, all other • Total and per beneficiary per month • PMPM growth rate • Report by type of service, identify cost drivers, where possible	Form CMS-64, Medicaid claims data
Demonstration Costs: sum of administrative & services • Report for JIR, HRSN, all other • Total and per beneficiary per month • PMPM growth rate	Form CMS-64, Medicaid claims data
HRSN Infrastructure Costs	Form CMS-64, Annual Monitoring Reports
Provider Uncompensated Care Costs	CMS-HCRIS, NASHP HCT

C. Methodology

1. Evaluation Approach

The Independent Evaluator (IE) will use a mixed-methods evaluation approach that will combine administrative and survey data as well as qualitative data to address the goals and hypotheses presented in the Demonstration application and answer all research questions listed above.

The evaluation will employ multiple comparison strategies, both in-state and out-of-state. Interrupted Time Series (ITS) is the preferred approach to analyze the impact of the Demonstration by comparing trends during the pre-demonstration period to the Demonstration period. ITS will be the approach in all instances for which there is sufficient pre-demonstration data available. When pre-demonstration data is not available the evaluation will rely on descriptive statistics and trends over time To assess the impact of UMIC plans, regression analysis will compare members in three plan types – fee for service, physical health-only ACO, and UMIC.

Results will be stratified by demographic characteristics SMI/SUD status, and plan type, when sufficient numbers are available to permit comparisons. A summary of the characteristics of the Demonstration populations as of the end of the previous waiver period (June 30, 2022) is provided in Table 13 in the Subgroup Analyses section.

Comparisons to Medicaid beneficiaries in other states also provide valuable context. A difference-in-difference (DiD) comparison, and a synthetic control method (SCM), will be used to compare the impact of the Demonstration as a whole on the aggregate Medicaid population to Medicaid beneficiaries in other states. Out-of-state comparisons will address the research question “Did the Demonstration as a whole improve health care access and quality for the Medicaid beneficiary population?”

Member perspectives will be collected through a customized member survey, and through interviews of members receiving HRSS and pre-release and reentry services. Where a survey provides a broader and more representative sample, individual interviews allow for in-depth understanding of member experiences. Additional qualitative data will be collected through key informant interviews with stakeholders. Together, these complementary methods will enable a comprehensive evaluation of the Demonstration.

2. Target and Comparison Populations

As summarized in Table 1, the Demonstration provides coverage and services for multiple populations. Out-of-state comparison using national survey data and other publicly available data sources will be used for investigating the impact of the Demonstration as a whole on the full Medicaid eligible population. For specific populations, the comparison will be to pre-Demonstration trends. For UMIC plans, the comparison will be to other plan types without integrated BH services. The Demonstration populations (the target groups) and the approach to comparisons are shown below in Table 5.

TABLE 5: DEMONSTRATION POPULATIONS, BENEFITS, AND COMPARISONS

Demonstration (target) Population	Program Implementation Start	Baseline Years	Comparison[1]	Analytic Approach
Substance Use Disorder (SUD) IMD	November 9, 2017	November 1, 2017 - June 30, 2022	Pre-SUD demonstration baseline	Trend over time, Interrupted Time Series
Targeted Adult Medicaid (TAM)	November 1, 2017	November 1, 2017 - June 30, 2022	Pre-demonstration baseline	Trend over time, Interrupted Time Series
Adult Expansion Population	April 1, 2019 (partial expansion, up to 100% of the FPL) January 1, 2020 full expansion	July 1, 2018-June 30, 2022	Pre-demonstration baseline	Trend over time, Interrupted Time Series
Utah Medicaid Integrated Care (UMIC- subset of the Adult Expansion Population)	January 1, 2020	N/A	Three plan types: FFS, ACO, UMIC	Multiple Linear Regression
Serious Mental Illness (SMI) IMD	December 1, 2020	December 1, 2020 - June 30, 2022	Pre-demonstration baseline	Trend over time, Interrupted Time Series
Expanded Dental Benefit	January 13, 2025	January 1 2020 – December 31, 2024	Pre-Dental demonstration baseline	Interrupted Time Series
Health-related Social Needs Services	July 1, 2025	July 1, 2020—June 30, 2025	Pre-HRSN demonstration baseline	Longitudinal cohort design with pre-HRSN demonstration baseline, if available
Justice-Involved Adults	February 1, 2026	February 1, 2022-January 31, 2026	Pre-demonstration comparison baseline	Trend over time, Interrupted Time Series

[1] The term "pre-demonstration baseline" refers to the time period before the start of the current Demonstration period; before July 1, 2022. The term "pre-demonstration comparison baseline" refers to individuals who were incarcerated in Utah county jails or state prisons whose Medicaid status was paused due to incarceration.

Justice-Involved Reentry Comparison Group

To analyze outcomes for the Justice-Involved Adults, the IE plans to construct a historical, pre-demonstration comparison group comprised of individuals who were incarcerated in Utah county jails or state prisons before the implementation of the Justice-Involved Reentry benefit. Utah DHHS will provide Medicaid claims data for the pre-demonstration comparison group through the standardized claims-data transfer process. Utah DHHS can identify individuals for this population who have a suspension status due to incarceration for their Medicaid eligibility, and were assigned the "incarcerated benefit" during their incarceration, but are unable to identify specific carceral facilities. The accurate identification of this group relies on the historical assignment of the "incarcerated benefit". All adults released from incarceration in

Utah during the pre-demonstration baseline period, identified by a lift of Medicaid suspension status due to incarceration, will be included in the comparison group. There are no other criteria for inclusion in the comparison group. The IE has established a data use agreement between the IE, Utah DHHS, and the Utah Office of Vital Records and Statistics (OVRS) to provide vital statistics data. Appropriate identifiers will be used, including name, date of birth, social security number, and a unique client identifier to link vital statistics data with Medicaid data for the pre-demonstration comparison group.

Several demonstration populations are too small to feasibly conduct a comparison to a baseline period. The analytic approaches for these demonstration populations are primarily trend over time and descriptive statistics.

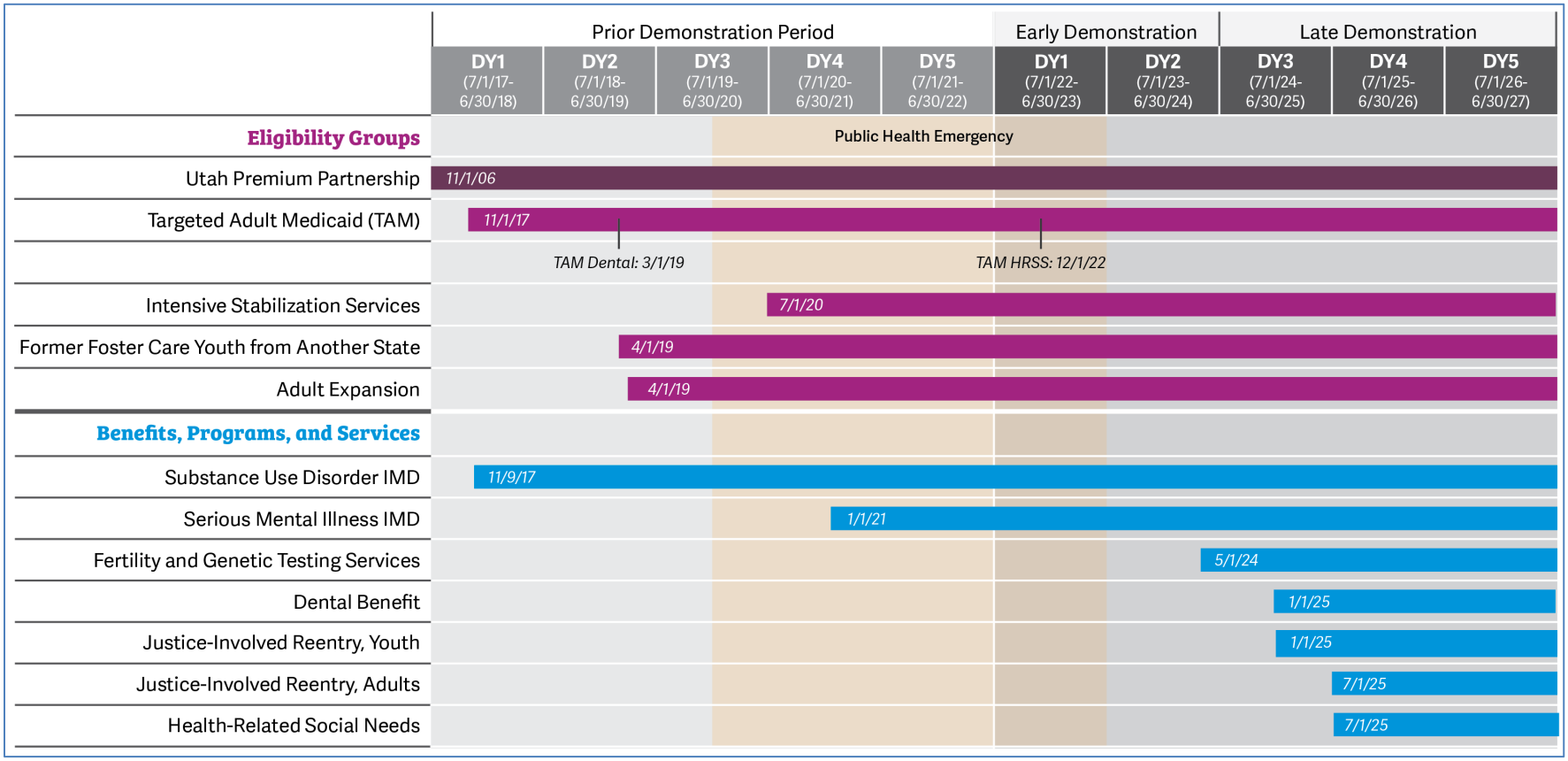
TABLE 6: SMALL DEMONSTRATION POPULATIONS

Demonstration (target) Population	Program Implementation Start	Analytic Approach
Utah Premium Partnership Program (UPP)	November 1, 2006	Trend over time, descriptive statistics
TAM Dental	March 1, 2019	Trend over time, descriptive statistics
Former Foster Care Youth from Another State (FFCYAS)	March 1, 2019	Counts (small population size)
Intensive Stabilizations Services (ISS)	July 1, 2020	Counts (small population size)
TAM members receiving Housing Related Services and Supports (HRSS)	December 1, 2022	Trend over time, descriptive statistics, qualitative interviews and analysis
Fertility and Genetic Testing Services	May 1, 2024	Counts (small population size)
Justice-Involved Youth	January 1, 2025	Counts (small population size)

3. EVALUATION PERIOD

This evaluation will cover the five-year Demonstration period from July 1, 2022, through June 30, 2027. The pre-Demonstration baseline will be the previous waiver period from July 1, 2017- June 30, 2022. The IE acknowledges that many policies authorized under this waiver are continuations of policies implemented in previous waiver periods. The goal of this evaluation is to quantify any gains realized in the current waiver period. As a result, the baseline period for each analysis will be specific to program start dates listed in Table 5. Please see Figure 2 below for more information. Sensitivity analysis will be conducted to determine whether excluding part of 2020 due to the Covid-19 PHE is appropriate.

Figure 2: Eligibility Groups and Services Timeline



*The planned implementation start date for the Justice-Involved Reentry benefit for adults has been extended from July 1, 2025 to February 1, 2026. This image will be updated when the JIR benefit for adults has launched.

4. Evaluation Measures

Evaluation hypotheses and corresponding measures are listed in Section F.4., Evaluation Tables.

5. Data Sources

The evaluation will use the following quantitative and qualitative data sources:

- National Surveys and Other Publicly Available Data Sources:
  - Behavioral Risk Factor Surveillance System (BRFSS)
  - National Survey of Drug Use and Health (NSDUH)
  - National Academy for State Health Policy's (NASHP) Hospital Cost Tool (HCT)
- Utah Specific Data Sources:
  - Medicaid Administrative Data
    - Eligibility & enrollment
    - Claims
    - Cost (Form CMS-64)
  - Carceral Facility Administrative Data
  - Justice-Involved Correctional Facility Readiness Assessment
  - Vital Statistics
  - Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey
  - Custom member survey
  - Participant interviews with TAM members receiving HRSS, JIR beneficiaries, and HRSN service recipients
  - Key Informant Interviews (KIIs)

National Surveys and Other Publicly Available Data Sources

Measures employing national survey data and other publicly available data sources for an out-of-state comparison will use a three-year pre-Demonstration baseline.

BRFSS

The BRFSS is a large, high-quality federal survey that may be used to measure outcomes of interest for out-of-state comparison groups. Importantly, the BRFSS contains respondents' state identifiers and demographic variables needed for comparison purposes. The IE will use the BRFSS data to address research questions related to coverage and access to care among low-income residents (Table 8).

The BRFSS insurance coverage question outcome does not allow determination of the source of coverage (e.g., Medicaid, Medicare, or private insurance) for years prior to 2022. In order to approximate which respondents are Medicaid eligible and who fall below 138 percent of the FPL, a continuous value for household income will be imputed using the midpoint of BRFSS income category. Using imputed income with household size allows the ability to link to annual thresholds for 138 percent FPL in each state. This method will be employed for the years prior to 2022 only.

The IE has also conducted power analysis for using the BRFSS. Our analyses will have high statistical power due to the large sample sizes involved. We estimated the minimum detectable effect sizes for each of our outcomes using Hu & Hoover's (2018) power equation for non-randomized longitudinal difference-in-difference studies:

$$MDES = \frac{T(1-\rho)\sigma}{bkn} \times \left(z_{1-\frac{\alpha}{2}} + z_{1-\beta}\right)^2$$

Where:

MDES = the minimum detectable effect size, defined as a percentage point change in outcome
T = the total number of time periods
b = the number of pre-intervention periods
k = the number of post-intervention periods
n = sample size
σ = standard deviation
ρ = serial correlation
$z_{1-\frac{\alpha}{2}}$ = The critical z-value for statistical significance
$z_{1-\beta}$ = desired statistical power

The final analysis will include 5 pre-intervention years and three post-intervention years. We used BRFSS data to identify serial correlations, standard deviations, and sample sizes for each study outcome. Serial correlation is the relationship between state-level means in consecutive years. We then calculated minimum detectable effect sizes (MDES) at 80% power and α=0.05. The MDES ranges from 0.41% to 0.58% for our access outcomes. For preventive service outcomes, the MDES ranges from 0.54% (receipt of annual checkup) to 2.29% (receipt of HPV test in the past 12 months). The sexual and reproductive health questions are only asked of female respondents in even years, which limits our ability to detect smaller effects.

TABLE 7: MINIMUM DETECTABLE EFFECT SIZES

Outcome	Serial correlation	Standard deviation	Sample size	MDES
Insurance Coverage	0.891	0.478	116,482	0.41
Having a personal doctor	0.840	0.488	116,893	0.48
Avoided care due to cost	0.796	0.460	117,000	0.58
Receipt of annual checkup	0.809	0.482	115,376	0.54
Receipt of mammogram in past 12 months	0.758	0.430	26,814	1.41

Notes: SD = Standard deviation. MDES = Minimum detectable effect size (percentage point change) at 80% for a difference-in-differences analysis with α=0.05.

NSDUH

To investigate the SUD and SMI waiver impact, the IE will use the NSDUH public use dataset. NSDUH collects data annually on incidence and treatment of mental health and substance use conditions. Key NSDUH questions address whether individuals have experienced BH conditions, and whether they have received treatment. The NSDUH public use dataset does not contain enough information to conduct a power analysis.

NASHP HCT

To investigate the Demonstration's impact on uncompensated care costs, the IIE will use the NASHP HCT. The HCT provides a range of measures for hospital revenue, costs, profitability, and break-even points across over 4,600 hospitals nationwide. The underlying dataset includes variables extracted and calculated from the national Healthcare Cost Report Information System (HCRIS).

TABLE 8: NATIONAL SURVEYS AND OTHER PUBLICLY AVAILABLE DATA

Survey	Topic	Survey Questions
BRFSS	Health Risk Factors	• Insurance Coverage • Having a personal doctor • Avoided care due to cost • Receipt of annual checkup • Receipt of mammogram in past 12 months
NSDUH	BH Needs and Services	• Received treatment for SUD in the last 12 months • Received treatment for mental health condition in the last 12 months • Needed, but did not receive, treatment for BH condition
NASHP Hospital Cost Tool	Uncompensated Care Cost	• Uncompensated care/bad debt as a percentage of net patient revenue, and as a percentage of operating expenditures

Medicaid Administrative Data

The IE anticipates receiving claims and other Medicaid administrative data, such as eligibility files, from the state on an annual basis. Administrative data is expected to be of high quality, in terms of completeness and accuracy.

The IE anticipates having access to aggregate CAHPS data collected by the health plans and reported to DHHS. Health plans are able to distinguish between ACO and UMIC plan enrollment in CAHPS data and report this information to the state. This data will allow for comparisons of plan types.

CAHPS data will also be used to analyze differences in access to care coordination and patient satisfaction between subgroups. Because CAHPS data will be available only in aggregate, subgroup analysis will be limited to the available demographic stratifications: age, race (White and Other), ethnicity (Hispanic/ Not Hispanic), and gender.

Correctional Facility Readiness Assessment and Carceral Facility Administrative Data

The state developed a Correctional Facility Readiness Assessment tool that is administered to each participating carceral facility prior to their implementation of the JIR benefit. The Readiness Assessment is a 37 item REDCap survey completed by an appropriate representative of each carceral facility. It captures information about facilities' existing operations and procedures (including screening for Medicaid enrollment, use of data sharing agreements, use of case management services, and provision of specific health services covered under the JIR benefit) and their plans for standing up the needed systems to support the JIR benefit.

The IE anticipates utilizing the results of the Correctional Facility Readiness Assessment to assess the pre-release services and operational capabilities of participating facilities prior to implementation of the Demonstration. This is important context for understanding the successes and challenges of Demonstration implementation.

Carceral facility administrative data refers to data elements that are pertinent to the evaluation of the Demonstration that are not captured in Medicaid administrative data. These data elements will be collected by the carceral facilities, and will be included in a Data Use Agreement developed between the carceral facilities, DHHS, and the IE. These data elements include information on date of incarceration, Medicaid

eligibility screening and application support, care planning, 30 day supply of Rx Medication upon release, and provision of health or social service referrals pre-release.

The JIR evaluation design is being prepared in parallel with the JIR implementation planning process, which includes establishing an electronic interface between carceral facilities and Medicaid systems to enable more "real-time" eligibility and enrollment data to be exchanged. In addition, Medicaid is working closely with the participating carceral facilities to establish data collection tools, processes, and workflows. The data needs for the evaluation were shared with the implementation team.

Custom member survey

The member survey will be administered once during the Demonstration period to a sample of approximately 6,000 adult Medicaid members who received a mental health diagnosis or service in the past 6 months. The mental health selection criteria is needed because a section of the survey is about access to mental health care. Examples of survey topics are summarized below in Table 9.

TABLE 9: MEMBER SURVEY TOPICS

Focus Area	Example topics
Access to Care	● Able to obtain care in a timely manner ● Ease of obtaining BH services ● Barriers to accessing care
Patient-centered care	● Satisfaction with amount of time doctor spent ● Doctor explains in a way you can understand
Coordination of care	● Primary care doctor has information needed about specialty care received

Survey Design

The IE will design the survey to assess the impact of the Demonstration on members' access to and engagement in health care. The survey will cover key topic areas related to members' recent history of health care coverage, access to health care (whether they have a primary care provider, if they have seen a specialist when needed, the regularity with which they obtain preventive care, etc.), and experience with care coordination. Being mindful of respondent burden, the IE aims for the survey length to not exceed 12 minutes when administered by phone.

Sample Frame Development and Sampling

The IE will work with DHHS to obtain the necessary member data, from which the IE will select a sample of members to survey. The sample will be comprised of 4,000 members. Assuming an approximately 35% response rate, we expect n=1,400 completed surveys (expected confidence interval of +/-2.54 at the 95% confidence level). To ensure that the sample accurately reflects the member population, the IE will conduct implicit random sampling using the appropriate variables available in the Pathways member database, such as gender, age, race/ethnicity, income, and length of enrollment in the program.

Assuming equal propensity for non-response between subgroups, we expect that this sample size will allow for reliable estimates for some subgroups of interest within a margin of error of +/- 5 percentage points, including by age group (individuals aged 19-26 years, aged 27-44 years, and aged 45-64 years), sex, and some racial and ethnic groups (Asian, White, Hispanic, Black, American Indian/Alaska Native and individuals of multiple races).

The ability to detect a significant difference between two groups is in part dependent on the measured prevalence of an outcome, and it will vary for each variable captured in the survey. Generally, if the prevalence of an outcome is around 50% in one group, this study is powered to detect a difference of 6.7

to 15.7 percentage points between respondents of different age groups, genders and racial and ethnic groups, with probability (power) of 80% at the 95% confidence level. If the prevalence of an outcome is very rare or very common (e.g., prevalence of 5% or 95%), this study is powered to detect smaller differences of 2.5 to 9.4 percentage points.

Survey Preparation

To maximize response rates, the IE will prepare the survey for three modes of data collection – mail, online (via smartphone/tablet device/PC), and phone. Each version will be thoroughly tested for quality control. The survey will also be translated into Spanish for interviewing respondents whose preferred language may be Spanish. Additional languages may be added if a need is identified.

Survey Administration

The IE will send the survey by mail to all members in the selected sample together with a cover letter (which will include an online link to the survey), and postage paid business reply envelope. For beneficiaries for whom email addresses are available, we will also send an email invitation with a link to the survey, followed by weekly reminder emails. After 21 days from the mailing, the IE will begin phone follow-up to non-respondents to administer the survey over the phone. To maximize response rates, the IE will make up to five phone attempts to each non-respondent at different times of day and during different days of the week including weekdays and weekends.

Data Analysis and Reporting

The IE will apply weights to the survey data to ensure that the weighted distribution of survey respondents accurately reflects the distribution of the member population on key population metrics, including gender, age, race/ethnicity, income, and length of enrollment in the program. Analysis of the survey data will focus on understanding members' access to health care, availability of employer-sponsored health insurance, and plans to transition to commercial health insurance. The IE will include analysis by key subgroups of interest, such as gender, age, and race/ethnicity.

Participant interviews with members receiving HRSS and/or pre-release and reentry services

Participant interviews will provide a necessary understanding of the experience of members receiving HRSS as well as pre-release and reentry services, including facilitators and barriers impacting the key outcome measures. The IE anticipates that the HRSS and JI populations will overlap, and interviews will be tailored to the experience and services received by members. The IE will conduct phone interviews to directly capture the input of participants, with privacy protections in accordance with CMS guidelines. Two waves of interviews will be conducted, with approximately 75-80 individuals in each wave (based on projected enrollment of approximately 56000 individuals) or until thematic saturation is reached for each subgroup. For this component of the evaluation, the IE is partnering with Dr. Palmira Santos, a doctoral-level social worker and researcher with expertise in interviewing individuals experiencing housing insecurity, BH conditions, and justice-involvement. Dr. Santos will lead the development of the interview guides, conduct interviews, and analyze results.

Potential interviewees will be invited to participate by their case managers, who will explain that the purpose of the evaluation is to improve the program and ask for permission to release their phone number. If an individual chooses to participate, the interviewer will receive only a first name (or chosen alias) and phone number for each participant. When a participant is reached by phone the interviewer will explain the evaluation and seek informed consent before beginning the interview.

Interviewees will be given a gift card as a thank-you, in a small amount for a store that does not sell alcohol or cigarettes.

TABLE 10: PARTICIPANT INTERVIEW TOPICS

Interview Question	Example topics
How do participants' interaction with care managers happen? In what ways is it helpful, or not helpful?	Outreach approach, engagement, and follow through. Understanding of participant needs and perspective – whether care manager took steps to assist or explained limitations of service
What role did the HRSS case manager have in participants' housing situation?	Addressing specific patient needs, timeliness, role of other housing liaisons
What factors enhance or inhibit participants' engagement in behavioral health care?	Factors (barriers/facilitators) to access, coordination, continuity, and outcome
Are participants experiencing unmet needs for health care, including SUD and SMI treatment?	Participation in behavioral and physical health services and support. Use of the ED and hospitalizations (avoidable and/or BH related) – perspective on alternatives. Participation in preventive, acute and chronic condition services
Do participants perceive their life circumstances have changed since receiving HRSS services?	Previous and current life (SDOH, family, work etc.) situation
Did participants receive services in the pre-release period that met their needs? Was there enough time to get the screening and services you needed prior to release? And did such services result in stable physical and behavioral health upon release?	Access to and quality of pre-release services (case management, behavioral health care, diagnostic services, family planning services). Perceptions of stigma associated with care.
Were participants' post-release transitions to care needs adequately met by the pre-release services?	Access to care and medications, continuity of coverage, care, medication, and providers.

NOTE: Participants interviewed include TAM members receiving HRSS, JIR beneficiaries, and HRSN service recipients

Key Informant Interviews

Qualitative data on program implementation will be gathered through key informant interviews (KIIs) with providers and state administrators. A total of 30-35 -30 KIIs are planned; three at each of the four health plans, five state employees participating in implementation, at least three community-based providers, case managers supporting HRSS and JIR, and carceral-setting administrators.

In addition to the administrative contacts from the ACOs and MCOs, the IE will interview at least three community-based providers, such as primary care providers and behavioral health clinicians, who directly serve Medicaid patients at sites such as community health centers, in order to capture the perspective of front-line clinicians working through the UMIC Demonstration. These providers will be asked about topics including integration of behavioral health care, barriers to access, and their perceptions of patients' engagement in care.

Because HRSS and JIR are new components of the Demonstration, interviews with case managers will provide essential insights into the challenges and successes during implementation. Case managers will be asked about topics including their observations regarding communication with members and providers, ways in which HRSS and JIR services are effective or not, and promising practices in care coordination for a population with housing instability and/or justice-involvement.

Semi-structured key informant interviews lasting 30-45 minutes per contact will be conducted by phone or videoconference, with privacy protections in accordance with CMS guidelines. Interviews will be recorded and transcribed. The IE will develop Interview guides in collaboration with DHHS for providers, health plans, and for state administrators involved in implementation of the Demonstration. The interview guide and questions will be tailored to the interviewee role. For example, state administrators will be invited to discuss the program rollout and feedback received from plans, health plan representatives will be asked about the plan's approach to integrating BH services, and questions regarding telehealth experiences will be directed towards clinicians.

As appropriate, interviews will explore successes and challenges with regard to program implementation, and other topics drawn from the logic model; examples are shown in Table7.[13] Interview guides will include questions that address disparities and health equity as appropriate for the interviewee's role. This may include population health analysis strategies, language services, and targeted outreach programs.

TABLE 11: TOPICS FOR KEY INFORMANT INTERVIEWS

Interview Question	Example topics
Was the Demonstration implemented effectively? Could the pre-release services provided under the JIR benefit have been effectively implemented in a shorter time period? Why or why not?	• Perceived successes and challenges in implementation ○ Care integration with behavioral health • Perceived steps towards integrating behavioral health with physical health services, e.g., screening and referrals • Perceptions about the role of telehealth in achieving Demonstration goals
Was cross-system coordination effective?	• Experiences with communication and data sharing between the carceral settings, Medicaid, and community-based services/healthcare
To what extent are BH services integrated with physical health services?	• Screening and referrals • Care coordination for members with BH conditions • Sharing of patient data across practices • Access to MAT pre-release and post-release
Did enrollment or outcomes differ by demographic factors?	• Perceptions of barriers to access and participation in care • Steps health plans/providers are taking to identify, understand, and address disparities in access and engagement
Was continuity of coverage and care improved by the Demonstration?	• Medicaid enrollment or redetermination navigation support for justice-involved population • Access to care pre-release in the carceral setting

6. ANALYTIC METHODS

Quantitative Analyses

The evaluation design includes multiple analytic strategies to answer the research questions and provide robust conclusions. The proposed approach is to use quasi-experimental analyses, employing descriptive

[13] KIIs will cover topics relevant to the evaluation of the Adult Expansion and ESI components of the Demonstration as well; these are covered in separate evaluation designs.

statistics, trends over time, interrupted time-series analysis (ITS), regression, difference-in-differences (DiD), and synthetic control methods (SCM) Quasi-experimental analyses will be conducted where data is available. Multivariate regression will be used to model outcomes over time, following individuals longitudinally. This approach allows for the trend over time to be adjusted for changes in the Demonstration populations as members enter and leave the Populations. For example, for Hypotheses 4, 5, and 6, interrupted time series will be used where data is available over the time period of interest.

For smaller Demonstration populations and small subgroups where regression analysis is not feasible, the evaluation will focus on trends over time. For example, Hypothesis 6 focuses on the smaller demonstration populations; most research questions for this hypothesis will be addressed with descriptive statistics, such as service counts and cost over time.

The specific analytic method for each research question is provided in section F.4 Evaluation Tables.

TABLE 12: SUMMARY OF ANALYTIC TACTICS TO BE USED FOR EVALUATION

Method	Comparison	Data sources
Subgroup comparison	Demonstration participants stratified by demographic and health factors	Encounter data, Administrative data
Event study/ time series	Trend during Demonstration vs baseline	Encounter data, Administrative data
Difference in difference; Synthetic Control Methods	Pre/Post change in Utah vs Pre/Post change in other states; predicted outcomes for 'synthetic UT'	National surveys and other public data sources

Descriptive statistics

The evaluation will provide summary tables of population size and characteristics, and outcomes for the three groups of Demonstration participants. Data will be analyzed using standard tests as rates, proportions, frequencies, and measures of central tendency (e.g., mean, median, mode). These tables will be used to develop a quantitative picture of the population, to describe raw trends, and to identify characteristics that will be included as covariates in regression modeling.

Prior to performing regression analysis of the plan types within AE, the composition of the beneficiary population in the three groups (FFS, ACO, and UMIC) will be compared to identify differences in demographic or clinical characteristics. ANOVA/MANOVA tests will be used as a first pass comparison of mean outcomes for the three groups. For metrics derived from BRFSS survey data, results for Utah will be compared to national averages for each year.

Trend over time and linear regression modeling

Outcomes of interest will be plotted over time for the duration of the Demonstration. The trend for each evaluation group will be modeled using multivariate linear regression and compared. The null hypothesis will be that the groups have identical trends. In order to account for demographic characteristics such as age and gender that may differ among groups, the IE will use inverse probability of treatment weighting. Individuals in intervention groups will be assigned weights based on the composition of the reference group, producing groups that are equivalent for measurable characteristics and allowing any difference in outcomes to be attributed to the intervention..[14]

For the measures with binary outcomes the models will be logistic; Poisson models will be used for count-based outcomes. The mixed effects logistic regression model accommodates for both fixed and random effects. In this case, it allows for the fact that members can appear multiple times in the datasets and that they can appear different numbers of times resulting in unbalanced data. The models will include the 'client id' variable as a random effect. The outcome variable will be the binary or count outcome. To assess changes over time for each population, a fixed effect for measurement year and population will be included in addition to an interaction term between them. Measurement year will be included as a continuous variable after plotting raw trends to assess linearity. Adjusted models will include the covariates gender, race/ethnicity, age as a continuous variable, region, and SMI/SUD diagnosis group, as appropriate.

[14] Austin PC, Stuart EA. Moving towards best practice when using inverse probability of treatment weighting (IPTW) using the propensity score to estimate causal treatment effects in observational studies. Stat Med. 2015; 34(28):3661–79. Epub 2015/08/05. https://doi.org/10.1002/sim.6607 PMID: 26238958; PubMed Central PMCID: PMC4626409.

Additional covariates will be considered for analyses specific to the JIR benefit, such as facility type. The post-release address of the JIR beneficiary may impact access to care outcomes and will be considered as a covariate. When adjustment variables besides age, gender and race are not statistically significantly associated (p <0.05) the IE will proceed with a stepwise selection to reduce the number of covariates in the model. The IE will also run stratified mixed models by gender, age group and race/ethnicity with the same adjustment procedures, if subgroup size is adequate. Models are described in the following formulas.

Mixed logistic regression model

$$logit(Y = 1_{ij}) = \beta_0 + \beta_1 Pop_i + \beta_2 MY_{ij} + \beta_3 MY_{ij} * Pop_i + \beta_x X_i + \gamma_{0i}$$

Mixed Poisson regression model

$$log\ log\ (Y)_{ij} = \beta_0 + \beta_1 Pop_i + \beta_2 MY_{ij} + \beta_3 MY_{ij} * Pop_i + \beta_x X_i + \gamma_{0i} + ln\ (offset)$$

Where Y corresponds to outcome of interest with a different expression depending on its distribution, β_0 to the overall intercept of the model, $\beta_1 Pop_i$ to the effect of belonging to a certain population group compared to a reference group, $\beta_2 MY_{ij}$ to the effect of measurement year as a continuous variable, $\beta_3 MY_{ij} * Pop_i$ is the interaction effect between population and measurement year which allows us to estimate change over time between populations, $\beta_x X_i$ corresponds to individual level adjustment covariates, and γ_{0i} corresponds to the random intercept of each client to account for the clustering effect of appearing in more than one measurement year. In the case of Poisson models, the model includes an offset, for EDU corresponding the total number of clients and for IPU to the total member-months.

Difference-in-difference

To examine the impact of the demonstration on its overarching aim of improved access, PCG will conduct a difference-in-difference (DiD) analysis to model the effect of the demonstration in Utah relative to comparison states. The comparison states are those states not exposed to the treatment of interest – in this case, all other states that either (1) have not expanded Medicaid, or (2) expanded Medicaid before the pre-intervention period (July 1st 2017 – June 30th 2022) The parallel trends assumption will be tested over the five years before the demonstration period. Sensitivity analysis will be conducted to determine whether the PHE influences the baseline or the parallel trends assumption.

The DiD model equation is:

$$Y_{its} = \alpha_s + \beta_t + \beta_2 Expansion_s + \beta_3 Post_t + \beta_4 Intervention_s \times Post_t + \delta X_{it} + \varepsilon_{ist}$$

Where:

Y_{its} = Our outcome(s) of interest
α_s = A vector of state fixed effects
β_t = A vector month and year fixed effects
$Intervention_s$ = A binary indicator for residence in our treated state (Utah)
$Post_t$ = A binary indicator for whether the outcome occurred during the demonstration period
δX_{it} = A vector of observed individual-level characteristics

Covariates will include respondent age, education, employment status, household size, veteran status, sex, household income, homeownership status, presence of children in the household, survey month, and whether the survey was conducted via landline or cell phone. The regression coefficient β_4 thus represents our regression-adjusted estimates of changes in outcomes associated with Utah's Medicaid expansion, after controlling for state, month, year, and observed covariates.

Synthetic control method

In addition to the DiD approach, the IE will use synthetic control methods (SCM) to estimate the association between implementation of the Demonstration and study outcomes. SCM have been employed to evaluate state-level policy impacts because they are particularly useful when estimating the impact of a policy change that affects a small number of treatment groups (i.e., a state).[15, 16, 17, 18] These methods are a quasi-experimental approach similar to traditional difference-in-difference (DID) estimation but require fewer assumptions to obtain estimates of association. DID assumes that any differential changes in outcomes between treated and control groups are attributable to the policy change. Yet treated and control groups are often nonequivalent in terms of pre-treatment outcome levels, trends in outcomes, and other important covariates. To mitigate this limitation, researchers typically attempt to control for observed variables that may be associated with both treatment likelihood and the outcome of interest. However, treatment and control groups may still differ in terms of outcome pre-trends and levels due to unobserved factors. This introduces potential selection issues, which may bias any estimates of association.

In contrast, SCM constructs a synthetic control. The synthetic control is constructed using a weighted average of the states included, with weights determined through a fully empirical process; weights for individual control units may range from 0 to 1 and are assigned so the synthetic control is as similar as possible to the treated group in terms of outcome pre-trends. Unlike traditional regression, inclusion of covariates is not required to achieve equivalence between treated and control groups.

Public Health Emergency; Sensitivity Analysis

The pre-Demonstration baseline period to be used for all quasi-experimental methods includes the period where the Covid-19 pandemic had a profound impact on health care utilization. First, trends for UT and controls will be modeled with and without the most affected months in 2020 and 2021. This sensitivity analysis will help to identify whether the groups have been impacted differentially. If the pattern changes observed in the first quarter of the Public Health Emergency are similar for all evaluation groups, then confounding of the results by pandemic impacts is less likely. The most affected quarters may be omitted from the baseline depending on the results.

Subgroup Analyses

The evaluation will seek to understand how different subgroups of participants are impacted by the Demonstration. Analyses will partition participants by gender, race/ethnicity, age, and SMI/ SUD diagnosis status. Where possible, race will include White, Black, Asian, Latinx, and Native American populations and Ethnicity will be characterized as Hispanic/Not Hispanic. Due to the low prevalence of some subgroups, it may be necessary to combine racial and ethnic groups for purposes of stratification. As seen in Table 13below, 45% of race/ethnicity data gathered during the previous waiver period was missing. It is unlikely the evaluation will be able to identify racial/ethnic disparities in outcomes due to the high amount of missing data unless there is substantial improvement in the availability of this data. While data on region is available (urban, rural, frontier), the state does not plan to conduct subgroup analyses by geographic location because the geography variable is confounded with Plan Type. Specifically, Adult Expansion members in 5 counties *must* enroll in the UMIC plans with integrated physical and behavioral health benefits. In 8 other

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[15] Abadie, A., 2012. *Synthetic control methods for comparative case studies: estimating the effect of California's tobacco control program. J Am Stat Assoc* 105(490):493-505. https://www.tandfonline.com/doi/abs/10.1198/jasa.2009.ap08746

[16] Rudolph, K.E., *et al.*, 2015. *Association between Connecticut's Permit-ti-Purchase handgun law and homicides. Am J Public Health* 105(8):e49-e54. https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2015.302703

[17] Santella-Tenorio, J. *et al*., 2020. *Association of recreational cannabis laws in Colorado and Washington state with changes in traffic fatalities. JAMA* 180 (8):1061-1068. https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2767647

[18] Bhatt, A. *et al.* 2020. *Association of changes in Missouri firearm laws with adolescent and young adult suicides by firearms. JAMA Netw Open* 3(11). https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2772526

counties, Adult Expansion *must* enroll in an ACO and a Prepaid Mental Health Plan. In the remaining counties of the state, members may enroll in an ACO or stay with FFS.

Analyses of the JIR benefit will be stratified by adult versus juvenile facility and by facility type (prison vs jail), as feasible. In Utah, there are 26 jails, two prisons, and nine juvenile detention centers. The IE's ability to stratify analyses by facility type will depend on facility-level participation in implementing the JIR benefit during the course of the demonstration period. Analyses will also be stratified by beneficiary demographic characteristics such as gender, age, SMI/SUD diagnosis, and length of incarceration as feasible.

TABLE 13: PREVIOUS WAIVER DEMONSTRATION PERIOD; POPULATION CHARACTERISTICS

Demographic / Health Characteristic		Adult Expansion (N= 92,026)	Targeted Adult Medicaid (N=9,582)
Gender	Male	44,703 (48.6%)	7,223 (75.4%)
	Female	47,323 (51.4%)	2,359 (24.6%)
Age	19-44	62,781 (68.2%)	6,948 (72.5%)
	45-54	15,821 (17.2%)	1,791 (18.7%)
	55-64	13,424 (14.6%)	843 (8.8%)
Race/ethnicity	Other/Missing	41,772 (45.4%)	3,840 (40.1%)
	White (non-Hispanic)	14,963 (16.3%)	1,634 (17.1%)
	Hispanic, Black, AIAN, Pacific Islander	35,291 (38.3%)	4,108 (42.9%)
SMI/SUD Diagnosis	None	66,539 (72.3%)	1,781 (18.6%)
	SMI Only	3,155 (3.4%)	171 (1.8%)
	SUD Only	16,658 (18.1%)	5,652 (59.0%)
	Both SMI/SUD	5,674 (6.2%)	1,978 (20.6%)

NOTE: The characteristics shown above represent every person ever enrolled during the previous waiver demonstration period (7/1/2017--6/30/2022), as of their last appearance in the claims data.

Cost Analyses for SUD and SMI Demonstrations

The analytic methods for the SUD Demonstration cost analysis are detailed below. *The same approach will be taken for the SMI Demonstration.* The only difference is the target group and the dates of the pre-demonstration baseline periods (outlined in Table 5).

SUD demonstration target group beneficiaries will be identified based on claims and encounters with an SUD diagnosis and/or procedure code. Pharmacy claims and encounters with a dispensed drug for Medication Assisted Treatment (MAT) will also be used to identify the population of interest. Once a beneficiary has been identified, they will remain in the population of interest until 11 months pass without another qualifying SUD claim or encounter.

There will be three levels of cost analyses:

I. Total Cost of Care = Total Medicaid Costs (claims and managed care capitation payments) + federal costs (Total Medicaid Costs * the Utah specific Federal Financial Participation rate)

II. Costs related to the diagnosis and treatment of SUD = SUD-IMD costs + other SUD costs + non-SUD costs

III. Source of care cost drivers = inpatient + non-ED outpatient, + ED outpatient + pharmacy, + long-term care

The Total Cost of Care will not include administrative costs, as the State does not currently track administrative costs specific to these demonstrations. Given the large number of waivers and amendments in Utah, it is not possible to estimate administrative costs separately.

Within each of the three levels, the results will be stratified by: SUD diagnosis only; SMI/SUD dual diagnosis. Given the lack of a comparison group, an interrupted time series model will be used to estimate the linear effects of the SUD demonstration. The IE will conduct both a logit model for estimating zero-cost months and a generalized linear model [GLM] for estimating non-zero cost months. The GLM model will use log costs to account for costs that are not normally distributed.

Qualitative analysis

Qualitative analysis will be used for participant and key informant interview transcripts. The research questions to be addressed, with corresponding example topics, are listed in Tables 18, 22, 23, 24, and 25 (Attachment 4). Interviews will address these questions by probing for perspectives from providers and from administrators involved in implementing the Demonstration. Thematic analysis using a coding tree derived from the Demonstration logic model will be used to excerpt transcripts. Additional themes that arise during coding will be added to the analysis. Results of provider interviews will be used to add context to the quantitative findings regarding experience of care, beneficiary engagement, and barriers to engagement. Results of provider and administrator interviews will address implementation and will inform the Evaluation Report chapter on Lessons Learned and Recommendations.

D. METHODOLOGICAL LIMITATIONS

1. **Lack of a true comparison group.** The Demonstration is implemented statewide, making a perfect comparison group impossible. To mitigate this limitation, the IE plans to use both in-state comparison among benefit groups, and out-of-state comparisons using national survey data sources. The JIR amendment to the Demonstration specifically also lacks a true comparison group as the state is unable to collect data from carceral settings who have not yet implemented the pre-release and reentry services. While the IE considered the use of leveraging the phased implementation of the JIR benefit by facility to create a comparison group and allow for a more rigorous analysis, data collection from non-participating facilities is not feasible due to limitations in data collection and data sharing infrastructure and processes at this time. To address this limitation, the IE plans to use a historical pre-demonstration comparison group, comprised of individuals who were incarcerated and released from state carceral facilities during the two years prior to the demonstration.

2. **Lack of pre-demonstration data on health care service provision in carceral settings.** Interrupted time-series is the preferred statistical method for analyzing the impact of the JIR demonstration by comparing pre-demonstration trends to post-intervention trends. The lack of pre-demonstration data on health care service provision in carceral settings prohibits using ITS to determine the impact of JIR on access to healthcare services pre-release.

3. **Sample size.** Population sample sizes may not support quasi-experimental analyses or stratification. Full UMIC participation is projected to be around 60,000 individuals. The data set for specific outcomes may not have sufficient size statistical analysis on all subgroups of interest. The IE will explore disparities in outcomes by race/ethnicity within the groups where numbers are sufficient. To further investigate health equity, KII interview guides will include questions about health plan efforts to identify and remediate disparities in access, such as population health analyses and targeted outreach. TAM and other populations are smaller. For the smallest populations, regression analysis is unlikely to be feasible, so descriptive and trend over time analyses will be used and stratification will be limited. For the ISS FFCYAS, and youth JI populations, the number of individuals may be too small to support significance testing, in which case descriptive results will be provided.

4. **Health Plan Reporting.** The independent evaluator will receive aggregate CAHPS data reported in aggregate by the health plans, stratified by gender, age, and race/ethnicity. Patient-level data is not available for privacy reasons. Data aggregation will limit the available subgroup analyses that can be performed. The current age and race/ethnicity reporting buckets for CAHPS data are limited and are not standardized across health plans. In order to aggregate data across the population, the IE will combine categories as needed, creating wider age bands, and characterizing race as White/Other.

5. **Lack of data on source of insurance coverage in national survey data.** The use of national survey data allows for out of state comparison groups but limits the ability to specifically identify individuals enrolled in the Demonstration. As noted in Section C.5, prior to 2022 the BRFSS insurance coverage outcome did not allow determination of the source of coverage (e.g., Medicaid, Medicare, or private insurance) As a result, it was not possible to identify individuals enrolled in Medicaid and thus not possible to determine if respondents fell into the Demonstration group or were enrolled in Medicaid in comparison states. While an approximation will be achieved by using income and household size to define a sample representing Demonstration participants as closely as possible, the inclusion of respondents who may not be part of the Demonstration group or be Medicaid enrolled in comparison states is expected to attenuate the effect estimates during the pre-demonstration period. While differences in BRFSS responses between Utah and the comparison states are of interest, the evaluation's results should be interpreted as associations and may not necessarily be directly attributed to the Demonstration.

6. **Historic effects.** The impacts of the Covid-19 pandemic/PHE were profound in 2020 and 2021 and are likely to continue to influence health care delivery well into the current Demonstration period. Analytic techniques described above will be used to minimize confounding by PHE effects during the baseline period. The PHE unwinding will take place during the Demonstration period, with eligibility redeterminations beginning in April 2023, and may lead to unusual levels of disenrollment and enrollment category changes. Ongoing direct and indirect impacts of the PHE such as staffing shortages will be considered in interpreting findings.

7. **Data availability for national surveys, publicly available data sources, and carceral setting data.** The evaluation design includes national surveys and other publicly available data sources for some research questions that involve comparisons between states and over time. The design plan is contingent on the continued administration of these surveys, data release schedules, the elements included in public use files, the timing and process for accessing restricted data, and the comparability of the surveys to previous years. The NASHP HCT utilizes cost reports submitted by hospitals; as such, hospital reporting errors may be introduced. Should barriers be encountered, the IE will explore other options. Additionally, the JIR amendment introduces data from the carceral setting (prisons, jails, and youth correctional facilities). The IE anticipates that there may be early availability or quality challenges with this new data source, as carceral facilities become familiarized with Medicaid billing and claims systems.

8. **Implementation dates and data sources for amendments newly approved during the Demonstration period.** The evaluation design includes evaluation plans for amendments newly approved during the Demonstration period (JIR and HRSN) that have not been implemented at the time of writing this evaluation design document. The evaluation of these amendments relies on administrative data sources that are currently being designed or built. The IE works closely with the state to align on data sources and availability. In addition, the JIR and HRSN implementations may take place too late in the Demonstration to generate sufficient claims data for claims-based measures, or for year-over-year comparisons to be feasible.

F. ATTACHMENTS

1. INDEPENDENT EVALUATOR

As required by the Centers for Medicare & Medicaid Services (CMS) and the Section 1115 Demonstration's Special Terms and Conditions (STCs), DHHS conducted an open solicitation process to secure a third-party evaluator to conduct an evaluation of the State of Utah's Section 1115 Demonstration.

The State issued one contract for all evaluation activities and the production of required CMS reports.[19] As the successful bidder, Public Consulting Group (PCG) demonstrated the following qualifications:

- Experience conducting program evaluations for programs administered by the federal department of Health and Human Services.
- Ability to provide at least two examples of program evaluations conducted meeting the above criterion.
- Experience with Medicaid claims data.
- Experience complying with human subjects' protection and data confidentiality laws (state and federal)
- Experience with quantitative and qualitative evaluation design, implementation, analysis, and reporting, and impact evaluations in public health and social services settings.

Consistent with the requirements of the State of Utah Division of Purchasing, DHHS selected and retained PCG as an independent evaluator to complete the independent evaluation of the Demonstration. DHHS contracted with the evaluator, PCG, to promote an independent evaluation, following the general requirements for each state contractor as well as project-specific standards.

The third-party evaluator, PCG, will conduct an evaluation following guidelines set forth by DHHS and CMS. The Department retains responsibility for monitoring the Demonstration activities and providing oversight of the evaluation design and overall approach for the contractor. To ensure a fair and impartial evaluation and mitigate any potential conflict of interest, the independent evaluator, PCG, will:

- Conduct an evaluation of the 1115 Demonstration hypotheses for the Adult Expansion, Current Eligible, Targeted Adult Medicaid (TAM), Targeted Adult Dental (TAM-Dental), Blind and Disabled Dental (BDD), Aged Dental, Employer-Sponsored Insurance (ESI), Utah Premium Partnership (UPP), Intensive Stabilization Services (ISS), and Former Foster Care Youth from Another State (FFCYAS) populations of the 1115 waiver, as well as for the Serious Mental Illness (SMI) and Substance Use Disorder (SUD) components[20], IVF and Genetic Testing, Fertility Treatment for Individuals Diagnosed with Cancer, Housing Related Services and Supports and Justice-Involved Reentry Services to determine if the goals and objectives of the Demonstration have been achieved.
- Meet the evaluation requirements of the 1115 Demonstration STCs.
- Follow the CMS approved evaluation design.
- Provide DHHS with the required annual interim evaluation report and summative evaluation report at the end of the 1115 Demonstration approval period, by the due dates outlined in the contract.
- Provide future evaluations as required by the contract, at the option of DHHS, and develop the evaluation design and implement the design upon CMS approval.
- Complete any required IRB applications, data sharing agreements, or other documents needed to protect human subjects and data confidentiality.
- Appropriately safeguard evaluation data in compliance with HIPAA requirements, protection of human subjects, data sharing agreements, state or federal laws, and other applicable regulations.

[19] This procurement sought an Independent Evaluator for all the components of the current waiver period which runs from July 1, 2022, through June 30, 2027. PCG was awarded a five-year contract covering these components.
[20] The Utah Department of Health requested that PCG develop a single comprehensive Evaluation Design for the Utah Medicaid Reform 1115 Demonstration encompassing all evaluation populations and waiver components.

The 1115 Demonstration evaluation conducted by PCG will determine if the goals and objectives of the 1115 Demonstration have been achieved. The evaluation will meet the requirement of the 1115 Demonstration STCs, follow the CMS approved evaluation design, and provide required deliverables.

DHHS staff worked with the evaluator to identify and address concerns that might arise during the administration of the contract. By requiring initial satisfaction of these standards by the contracting party in order to be awarded the contract, as well as ongoing maintenance of the requirements during the term of service, DHHS is in a position to receive an objective evaluation report that is the product of a fair, impartial, and conflict-free evaluation.

2. Evaluation Budget

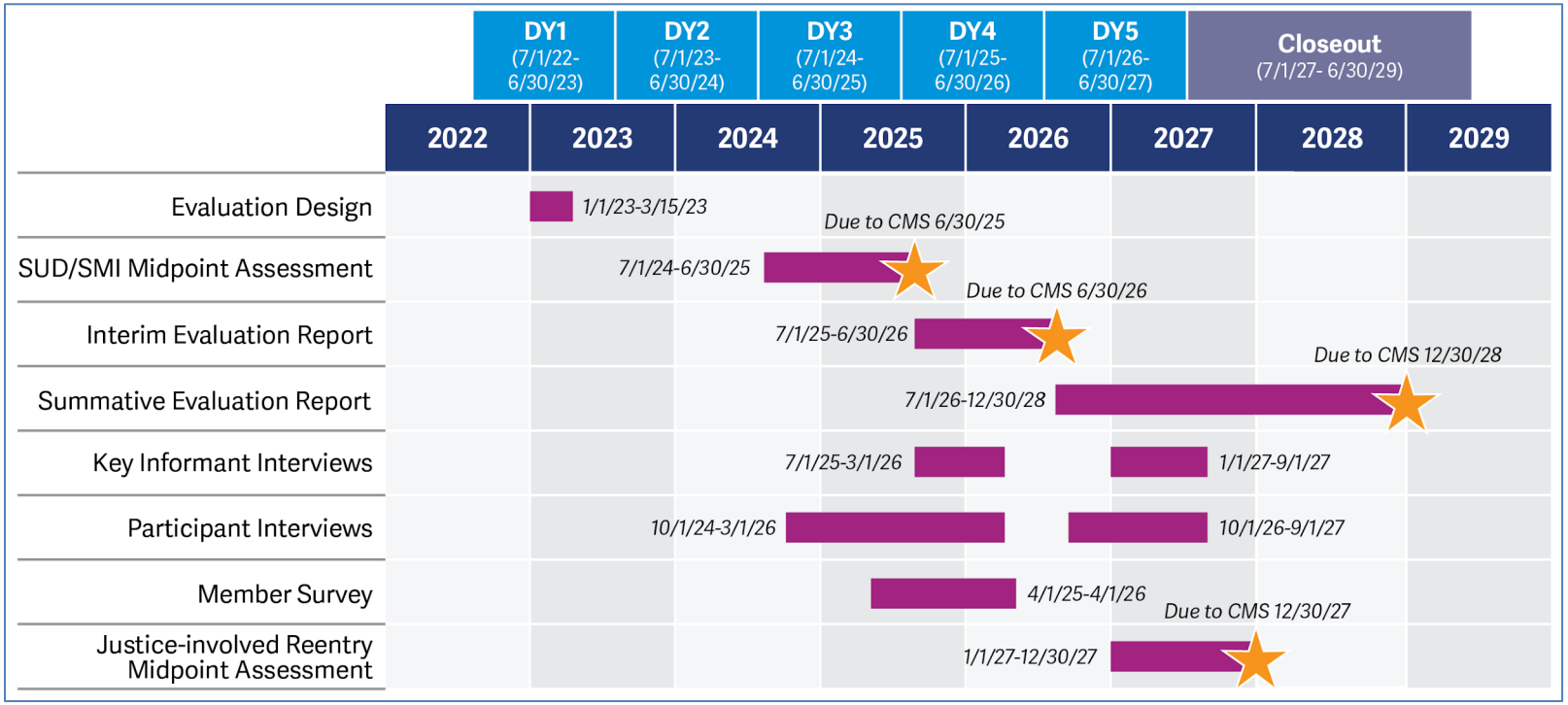
Table 14: Estimated Evaluation Budget

Evaluation Activity	Current Demonstration Period							
	DY1	DY2	DY3	DY4	DY5	Post Yr1	Post Yr2	
	7/1/2022 – 6/30/2023	7/1/2023 – 6/30/2024	7/1/2024 – 6/30/2025	7/1/2025 – 6/30/2026	7/1/2026 – 6/30/2027	7/1/2027 – 6/30/2028	7/1/2028 – 6/30/2029	**TOTAL**
Project Management	$49,500	$49,500	$153,082	$204,110	$102,055	$82,920	$76,541	**$717,708**
Evaluation Design		$16,875	$255,137	$68,037				**$340,049**
Quantitative Data	$289,980	$48,973	$102,055	$204,110	$204,110	$160,311	$163,288	**$1,172,827**
Summative Report Prior Demo Period	$143,820	$157,790						**$301,610**
Key Informant Interviews			$81,644	$136,073	$68,037	$27,640	$25,514	**$338,908**
Participant Interviews Wave 1		$50,000	$91,849	$149,680				**$291,529**
Custom Member Survey		$180,000	$10,205	$244,932	$68,037			**$503,174**
Participant Interviews Wave 2					$163,288	$22,112	$15,308	**$200,708**
Midpoint Assessment: SUD/SMI		$71,100	$204,110					**$275,210**
Interim Report			$122,466	$353,790	$40,822			**$517,078**
Midpoint Assessment: JIR						$116,087		**$116,087**
Summative Report					$34,018	$143,727	$229,623	**$407,368**
TOTAL	**$483,300**	**$574,238**	**$1,020,548**	**$1,360,731**	**$680,366**	**$552,797**	**$510,274**	**$5,182,256**

Note: Line items for new primary data collection activities (interviews and surveys) include costs for developing the tools, gathering the data, and performing data analytics.

3. Timeline and Major Milestones

Figure 3: Evaluation Timeline



4. Evaluation Tables

Table 15: Evaluation Summary, Hypothesis 1, Low-income UT residents

Hypothesis 1: The 1115 Demonstration overall will improve access to coverage and engagement in health care for low-income UT residents.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
Primary research question 1.1: Did the fraction of low-income residents with no coverage decrease, relative to comparison states?				
Comparison states	Any coverage	Fraction with any health insurance coverage	BRFSS	Difference-in-difference Synthetic control model
Primary research question 1.2: Did the fraction of low-income residents who avoided care due to cost decrease, relative to comparison states?				
Comparison states	Avoided care due to cost	Fraction who delayed or avoided needed care because of cost	BRFSS	Difference-in-difference Synthetic control model
Primary research question 1.3: Did the fraction of low-income residents who have a personal doctor or usual source of care increase, relative to comparison states?				
Comparison states	Has a personal doctor	Fraction who says they have one person they think of as their person doctor or provider	BRFSS	Difference-in-difference Synthetic control model
Primary research question 1.4: Did the fraction of low-income residents who had a primary or specialty care appointment in the last year increase, relative to comparison states?				
Comparison states	Had a primary or specialty appointment	Had a checkup or visit with a specialist in the last 12 months	BRFSS	Difference-in-difference Synthetic control model
Primary research question 1.5: Did the fraction of low-income residents who had a preventive screening in the last year increase, relative to comparison states?				
Comparison states	Had a preventative screening	Fraction who reported having a mammogram in the last 12 months	BRFSS	Difference-in-difference Synthetic control model
Primary research question 1.6: What is the member experience of care in terms of access, timeliness, and patient-centeredness?				
Pre-Demonstration baseline	Member satisfaction	Getting needed care Getting needed care quickly How well doctors communicate	CAHPS	Descriptive statistics; Trend over time
n/a Single point in time survey	Member satisfaction	Access to care Access to BH care Barriers to accessing physical care Barriers to accessing behavioral health care	Custom Member/Beneficiary Survey	Descriptive statistics

Hypothesis 1: The 1115 Demonstration overall will improve access to coverage and engagement in health care for low-income UT residents.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
		Patient centered care Coordination of care		
Primary research question 1.7: Did Low Value Care decrease among Demonstration participants, relative to baseline?				
Pre-Demonstration baseline	Low Value Care	List of low value care scenarios appropriate for the Demonstration will be developed	Claims	Trend over time Interrupted Time Series

TABLE 16: EVALUATION SUMMARY, HYPOTHESIS 2, ADULT EXPANSION / UMIC

Hypothesis 2: The Demonstration will improve healthcare access and engagement for the Adult Expansion population.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
Primary research question 2.1: Did inpatient hospital utilization decrease, relative to baseline, for the Adult Expansion population?				
Pre-Demonstration baseline	Inpatient Utilization (IPU)	Inpatient admissions per member per year	Claims	Trend over time Interrupted Time Series
Primary research question 2.2: Did ED visits decrease, relative to baseline, for the Adult Expansion population?				
Pre-Demonstration baseline	ED visits (EDU)	ED visits per member per year	Claims	Trend over time Interrupted Time Series
Subsidiary research question 2.2.a: Did ED visits for BH conditions decrease, relative to baseline, for the Adult Expansion population?				
Pre-Demonstration baseline	ED-BH visits (EDU-BH)	ED visits for BH condition per member per year	Claims	Trend over time Interrupted Time Series
Subsidiary research question 2.2.b: Did UMIC plans reduce ED visits for BH conditions for Adult Expansion population, relative to FFS or physical health-only ACO plans?				
Plan Type Comparison: UMIC, FFS/PMHP, ACO/PMHP	ED-BH visits (EDU-BH)	ED visits for BH condition per member per year	Claims	Multiple linear regression; ANOVA

Primary research question 2.3: Did engagement in primary and ambulatory care increase, relative to baseline, for the Adult Expansion population?				
Pre-Demonstration baseline	Adults' Access to Preventative/Ambulatory Health Services (AAP)	Fraction of beneficiaries who had an ambulatory or preventive care visit during the measurement year	Claims	Interrupted Time Series
Primary research question 2.4: Did engagement in behavioral health care increase, relative to baseline, for the Adult Expansion population?				
Pre-Demonstration baseline	Antidepressant Medication Management (AMM)	Adults with a diagnosis of major depression who were newly treated with antidepressant medication and remained on their antidepressant medications.	Claims	Interrupted Time Series
Pre-Demonstration baseline	Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET)	Fraction with a new episode of alcohol or other drug dependence who: 1) initiated treatment within 14 days of diagnosis. 2) engaged in continued treatment within 34 days of the initiation visit.	Claims	Interrupted Time Series
Pre-Demonstration baseline	Follow-Up After Hospitalization for Mental Illness (FUH)	Following discharge for mental illness or intentional self-harm, fraction with outpatient follow-up in 7 days, and within 30 days.	Claims	Interrupted Time Series
Pre-Demonstration baseline	30-Day All-Cause Unplanned Readmission Following Psychiatric Hospitalization in an Inpatient Psychiatric Facility (REA)	The rate of unplanned, 30-day, readmission for Demonstration beneficiaries with a primary discharge diagnosis of a psychiatric disorder or dementia/Alzheimer's disease.	Claims	Interrupted Time Series
Subsidiary research question 2.4.a: Did UMIC plans improve engagement in behavioral health care for Adult Expansion population, relative to FFS or physical health-only ACO plans?				
Plan Type Comparison: UMIC, FFS/PMHP, ACO/PMHP	Antidepressant Medication Management (AMM)	Adults with a diagnosis of major depression who were newly treated with antidepressant medication and remained on their antidepressant medications.	Claims	Multiple linear regression; ANOVA
Plan Type Comparison: UMIC, FFS/PMHP, ACO/PMHP	Initiation and Engagement of Alcohol and Other Drug Abuse	Fraction with a new episode of alcohol or other drug dependence who: 1) initiated treatment within 14	Claims	Multiple linear regression; ANOVA

	or Dependence Treatment (IET)	days of diagnosis. 2) engaged in continued treatment within 34 days of the initiation visit.		
Plan Type Comparison: UMIC, FFS/PMHP, ACO/PMHP	Follow-Up After Hospitalization for Mental Illness (FUH)	Following discharge for mental illness or intentional self-harm, fraction with outpatient follow-up in 7 days, and within 30 days.	Claims	Multiple linear regression; ANOVA
Plan Type Comparison: UMIC, FFS/PMHP, ACO/PMHP	30-Day All-Cause Unplanned Readmission Following Psychiatric Hospitalization in an Inpatient Psychiatric Facility (REA)	The rate of unplanned, 30-day, readmission for Demonstration beneficiaries with a primary discharge diagnosis of a psychiatric disorder or dementia/Alzheimer's disease.	Claims	Multiple linear regression; ANOVA
Primary research question 2.5: Did engagement in treatment for chronic conditions increase, relative to baseline, for the Adult Expansion population?				
Pre-Demonstration baseline	Monitoring for persistent medications (MPM)	Assesses adults who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent (for hypertension or heart disease) during the measurement year and received at least one therapeutic monitoring event for the therapeutic agent during the measurement year:	Claims	Interrupted Time Series
Pre-Demonstration baseline	Engagement in Diabetes Care (EDC)	Adults with type 1 or type 2 diabetes who had at least two A1C tests in the year	Claims	Interrupted Time Series
Primary research question 2.6: Did preventive cancer screening increase, relative to baseline, for the Adult Expansion population?				
Pre-Demonstration baseline	Breast Cancer Screening (BCS)	Women 50 years and over who had at least one mammogram to screen for breast cancer in the past two years	Claims	Interrupted Time Series
Primary research question 2.7: Did dental service provision increase relative to baseline for the Adult Expansion population?				
N/A	Dental Service Recipients	Number of unique individuals who received dental services	Claims	Descriptive statistics
N/A	Dental Services	Number of dental services provided	Claims	Descriptive statistics

Primary research question 2.8: Did ED visits for non-traumatic dental conditions decrease relative to baseline for the Adult Expansion population?				
Pre-Dental Expansion baseline	Ambulatory Care Sensitive ED Visits for Non-Traumatic Dental Conditions in Adults (Dental Quality Alliance measure EDV-A-A)	Number of emergency department (ED) visits for ambulatory care sensitive non-traumatic dental conditions per 100,000 member months for adults	Pre-Dental Expansion baseline	Interrupted Time Series
Primary research question 2.9: Did follow-up after ED visits for non-traumatic dental conditions increase relative to baseline for the Adult Expansion population?				
Pre-Dental Expansion baseline	Follow-Up after Emergency Department Visits for Non-Traumatic Dental Conditions in Adults (Dental Quality Alliance EDF-A-A)	The percentage of ambulatory care sensitive non-traumatic dental condition emergency department visits among adults aged 18 years and older in the reporting period for which the member visited a dentist within (a) 7 days and (b) 30 days of the ED visit	Claims	Interrupted Time Series
Primary research question 2.10: To what extent are beneficiaries aware of the dental care benefit?				
N/A	Dental Benefit Awareness	Percentage of survey respondents who answer “yes” to: Does your health insurance cover any dental services, such as routine cleanings?	Custom Member Survey	Descriptive statistics

TABLE 17: EVALUATION SUMMARY, HYPOTHESIS 3, TAM

Hypothesis 3: The Demonstration will improve healthcare access and engagement for the TAM population.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
Primary research question 3.1: Did inpatient hospital utilization decrease, relative to baseline, for the TAM population?				
Pre-Demonstration baseline	Inpatient Utilization (IPU)	Inpatient admissions per member per year	Claims	Interrupted Time Series

Primary research question 3.2: Did ED visits decrease, relative to baseline, for the TAM population?				
Pre-Demonstration baseline	ED visits (EDU)	ED visits per member per year	Claims	Interrupted Time Series
Subsidiary research question 3.2.a: Did ED visits for BH conditions decrease, relative to baseline, for the TAM population?				
Pre-Demonstration baseline	ED-BH visits	ED visits for BH condition per member per year	Claims	Interrupted Time Series
Primary research question 3.3: Did engagement in primary and ambulatory care increase, relative to baseline, for the TAM population?				
Pre-Demonstration baseline	Adults' Access to Preventative/Ambulatory Health Services (AAP)	Fraction of beneficiaries who had an ambulatory or preventive care visit during the measurement year	Claims	Interrupted Time Series
Baseline	Monitoring for persistent medications (MPM)	Assesses adults who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent (for hypertension or heart disease) during the measurement year and received at least one therapeutic monitoring event for the therapeutic agent during the measurement year:	Claims	Interrupted Time Series
Primary research question 3.4: Did engagement in behavioral health care increase, relative to baseline, for the TAM population?				
Pre-Demonstration baseline	Follow-Up After Hospitalization for Mental Illness (FUH)	Following discharge for mental illness or intentional self-harm, fraction with outpatient follow-up in 7 days, and within 30 days.	Claims	Interrupted Time Series
Pre-Demonstration baseline	30-Day All-Cause Unplanned Readmission Following Psychiatric Hospitalization in an	The rate of unplanned, 30-day, readmission for Demonstration beneficiaries with a primary discharge	Claims	Interrupted Time Series

	Inpatient Psychiatric Facility (REA)	diagnosis of a psychiatric disorder or dementia/Alzheimer's disease.		
Pre-Demonstration baseline	Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET)	Fraction with a new episode of alcohol or other drug dependence who: 1) initiated treatment within 14 days of diagnosis. 2) engaged in continued treatment within 34 days of the initiation visit.	Claims	Interrupted Time Series
Primary research question 3.5: Did dental service provision increase relative to baseline for the TAM population?				
N/A	Dental Service Recipients	Number of unique individuals who received dental services	Claims	Descriptive statistics
N/A	Dental Services	Number of dental services provided	Claims	Descriptive statistics
Primary research question 3.6: Did ED visits for non-traumatic dental conditions decrease relative to baseline for the TAM population?				
Pre-TAM Dental Benefit baseline	Ambulatory Care Sensitive ED Visits for Non-Traumatic Dental Conditions in Adults (Dental Quality Alliance measure EDV-A-A)	Number of emergency department (ED) visits for ambulatory care sensitive non-traumatic dental conditions per 100,000 member months for adults	Claims	Interrupted Time Series
Primary research question 3.7: Did follow-up after ED visits for non-traumatic dental conditions increase relative to baseline for the TAM population?				
Pre-TAM Dental Benefit baseline	Follow-Up after Emergency Department Visits for Non-Traumatic Dental Conditions in Adults (Dental Quality Alliance EDF-A-A)	The percentage of ambulatory care sensitive non-traumatic dental condition emergency department visits among adults aged 18 years and older in the reporting period for which the member visited a dentist	Claims	Interrupted Time Series

		within (a) 7 days and (b) 30 days of the ED visit		

TABLE 18: EVALUATION SUMMARY, HYPOTHESIS 4, HRSN DEMONSTRATION

Hypothesis 4: The HRSN Services demonstration will effectively mitigate members' housing and transportation needs, lead to more appropriate service utilization and improved physical and mental health outcomes.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
Primary research question 4.1: What is the prevalence and severity of beneficiaries' social needs?				
N/A	Prevalence of housing-related needs; individual level	Number and percent of beneficiaries eligible for HRSS	Administrative Data	Descriptive statistics
N/A	Extent of housing-related needs; Community level	Housing affordability (<=30% of income) at the county level	American Community Survey, Area Health Resources File	Trend over time
Primary research question 4.2: Were HRSN services provided and utilized as planned?				
N/A	HRSN Provider Availability	Number of HRSN providers and description of service offerings	Administrative	Descriptive statistics
N/A	HRSN Service Utilization	HRSN service counts by type of service	Claims	Descriptive statistics Trend over time
N/A	NMT Utilization	NMT service counts	Administrative	Descriptive statistics Trend over time
Primary research question 4.3: Did the HRSN demonstration effectively mitigate beneficiaries' housing and transportation needs?				
N/A	Found housing	Fraction of previously unhoused HRSS participants who moved into housing while receiving HRSS.	Administrative	Descriptive statistics
N/A	Housing stability	Fraction of HRSS participants who maintained stable housing for a defined time period.	Case records	Descriptive statistics
Primary research question 4.4: Did high-cost acute utilization decrease, relative to baseline, for HRSN recipients?				

Hypothesis 4: The HRSN Services demonstration will effectively mitigate members' housing and transportation needs, lead to more appropriate service utilization and improved physical and mental health outcomes.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
Longitudinal cohort design with pre-HRSN demonstration baseline, if available	ED visits	ED visits condition per member per year	Claims	Trend over time or Interrupted time series
Longitudinal cohort design with pre-HRSN demonstration baseline, if available	ED-BH visits	ED visits for BH condition per member per year	Claims	Trend over time or Interrupted time series
Longitudinal cohort design with pre-HRSN demonstration baseline, if available	Potentially preventable ED visits	ED visits for ambulatory sensitive conditions, such as asthma, urinary tract infections, and complications from diabetes (AHRQ measure)	Claims	Trend over time or Interrupted time series
Longitudinal cohort design with pre-HRSN demonstration baseline, if available	Inpatient utilization	Inpatient stays per member year	Claims	Trend over time or Interrupted time series
Longitudinal cohort design with pre-HRSN demonstration baseline, if available	Potentially preventable inpatient utilization	Inpatient stays for ambulatory sensitive conditions, such as asthma, urinary tract infections, and complications from diabetes (AHRQ measure)	Claims	Trend over time or Interrupted time series
Primary research question 4.5 Did engagement in primary and ambulatory care increase, relative to baseline, for HRSN recipients?				
Longitudinal cohort design with pre-HRSN demonstration baseline, if available	Adults' Access to Preventative/Ambulatory Health Services (AAP)	Fraction of beneficiaries who had an ambulatory or preventive care visit during the measurement year	Claims	Trend over time or Interrupted time series
Longitudinal cohort design with pre-HRSN demonstration baseline, if available	Monitoring for persistent medications	Assesses adults who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent (for hypertension or heart disease) during the measurement year and received at least one therapeutic monitoring event for the therapeutic agent during the measurement year:	Claims	Trend over time or Interrupted time series
Primary research question 4.6: Did engagement in behavioral health care increase, relative to baseline, for HRSN recipients?				

Hypothesis 4: The HRSN Services demonstration will effectively mitigate members' housing and transportation needs, lead to more appropriate service utilization and improved physical and mental health outcomes.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
Longitudinal cohort design with pre-HRSN demonstration baseline, if available	30-Day All-Cause Unplanned Readmission Following Psychiatric Hospitalization in an Inpatient Psychiatric Facility (REA)	The rate of unplanned, 30-day, readmission for Demonstration beneficiaries with a primary discharge diagnosis of a psychiatric disorder or dementia/Alzheimer's disease.	Claims	Trend over time or Interrupted time series
Longitudinal cohort design with pre-HRSN demonstration baseline, if available	Follow-Up After Hospitalization for Mental Illness (FUH)	Following discharge for mental illness or intentional self-harm, fraction with outpatient follow-up in 7 days, and within 30 days.	Claims	Trend over time or Interrupted time series
Primary research question 4.7: From the beneficiaries' perspective, did the HRSN services meet their housing-related needs, support their engagement in behavioral health care, and overall positively impact their physical and mental health?				
N/A	Quality of HRSS, participant perspective	How satisfied are participants with the HRSS they received? What was helpful, not helpful? How easy or difficult is it to find appropriate housing without, and with, HRSS assistance? Are participants satisfied with their housing arrangements?	Participant Interviews	Qualitative analysis
N/A	Engagement in care, participant perspective	What factors enhance or inhibit participants' engagement in physical health care? in behavioral health care?	Participant Interviews	Qualitative analysis
N/A	Overall physical and mental health, participant perspective	How do participants think their physical and mental health has changed since receiving HRSS services?	Participant Interviews	Qualitative analysis
Primary research question 4.8: Did state and local investments in housing supports change over time during the HRSN demonstration?				
Baseline year	Local availability of HRSS	Percent change in number of HRSS type programs for the duration of the amendment	Administrative: Maintenan	Percent change in each year compared to the baseline year

Hypothesis 4: The HRSN Services demonstration will effectively mitigate members' housing and transportation needs, lead to more appropriate service utilization and improved physical and mental health outcomes.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
			ce of Effort section of Annual Monitoring Reports	
Primary research question 4.9: Were there any improvements in the quality and effectiveness of downstream housing-related services and supports?				
N/A	HRSN Provider Self-Assessment	Provider perceptions of the impact of infrastructure investments and related supports on the quality and effectiveness of their housing-related services and supports.	Key Informant Interviews	Qualitative

TABLE 19: EVALUATION SUMMARY, HYPOTHESIS 5, SMI/SUD

Hypothesis 5: The SMI and SUD Demonstrations increased access to appropriate treatment.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
Primary research question 5.1: Did the number of individuals receiving services for SMI and/or SUD increase, relative to baseline?				
Baseline year (DY1)	Service Counts: SUD	Number of members receiving SUD treatment	Claims	Descriptive statistics; Trend over time
Baseline year (DY1)	Service Counts: SMI	Number of members receiving SUD treatment	Claims	Descriptive statistics; Trend over time
Primary research question 5.2: Did ED visits for BH conditions decrease among individuals with SMI and/or SUD diagnoses, relative to baseline?				
Pre-Demonstration baseline Stratify by: SMI only, SUD only, SMI/SUD dually diagnosed	ED-BH visits	ED visits for BH condition per member per year	Claims	Interrupted Time Series
Primary research question 5.3: Did inpatient days (outside of IMDs) decrease, relative to baseline, for individuals with SMI and/or SUD?				

Hypothesis 5: The SMI and SUD Demonstrations increased access to appropriate treatment.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
Pre-Demonstration baseline Stratify by: SMI only, SUD only, SMI/SUD dually diagnosed	Inpatient days	Inpatient days PMPY, exclusive of IMD stays	Claims	Interrupted Time Series
Primary research question 5.4: Did engagement in SUD treatment increase among individuals with SUD diagnoses relative to baseline?				
Pre-Demonstration baseline	Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET)	Fraction with a new episode of alcohol or other drug dependence who: 1) initiated treatment within 14 days of diagnosis. 2) engaged in continued treatment within 34 days of the initiation visit.	Claims	Interrupted Time Series
Primary research question 5.5: Did unplanned readmission following hospitalization for psychiatric treatment decrease among individuals with SMI relative to baseline?				
Pre-Demonstration baseline	30-Day All-Cause Unplanned Readmission Following Psychiatric Hospitalization in an Inpatient Psychiatric Facility (REA)	The rate of unplanned, 30-day, readmission for Demonstration beneficiaries with a primary discharge diagnosis of a psychiatric disorder or dementia/Alzheimer's disease.	Claims	Interrupted Time Series
Primary research question 5.6: Did utilization of any mental health service increase among low-income residents, relative to comparison states?				
Comparison states	Mental health treatment	Percentage who reported receiving mental health (non-SUD) treatment in the last 12 months	NSDUH	Difference-in-difference; Synthetic control model
Primary research question 5.7: Did the number of individuals needing but not receiving SUD service decrease among low-income residents, relative to comparison states?				
Comparison states	SUD treatment	Percentage who reported receiving SUD treatment in the last 12 months	NSDUH	Difference-in-difference; Synthetic control model
Primary research question 5.8: Did the rate of overdose deaths decrease, relative to baseline?				
Pre-Demonstration baseline	Overdose deaths	State rate of overdose deaths	Administrative	Interrupted Time Series
Primary research question 5.9: Did the number of individuals receiving crisis stabilization services increase (with an emphasis on non-hospital, non-residential services)?				

Hypothesis 5: The SMI and SUD Demonstrations increased access to appropriate treatment.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
Pre-Demonstration baseline	Crisis stabilization services	Crisis Stabilization service count	Claims	Interrupted Time Series

TABLE 20: EVALUATION SUMMARY, HYPOTHESIS 6, SMI/SUD COST OF CARE

Hypothesis 6: The SMI and SUD Demonstrations stabilized or reduced cost of care for these populations.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
Primary research question 6.1: Did the total cost of care for individuals with SMI diagnoses change, relative to baseline?				
Pre-Demonstration baseline	Total Cost of Care	Total costs per beneficiary per month is the sum of the state's Medicaid costs (inpatient, outpatient, pharmacy, long-term care, IMD, and MCO capitated payments) and the federal cost (total Medicaid * FMAP for Utah).	Claims	Interrupted time series
Subsidiary research question 6.1.a: Did costs related to the diagnosis and treatment of SMI change, relative to baseline? (SMI-IMD costs + other SMI costs + non-SMI costs)?				
Pre-Demonstration baseline	Costs related to the diagnosis and treatment of SMI	These costs include *SMI-IMD costs + other SMI costs + non-SMI costs*	Claims	Interrupted time series

Subsidiary research question 6.1.b: What types of care (inpatient + non-ED outpatient, + ED outpatient + pharmacy, + long-term care) are the primary drivers of the cost of care for the SMI population?				
Pre-Demonstration baseline	Source of treatment cost drivers	These costs include inpatient + non-ED outpatient, + ED outpatient + pharmacy, + long-term care	Claims	Interrupted time series
Primary research question 6.2: Did the total cost of care for individuals with SUD diagnoses change, relative to baseline?				
Pre-Demonstration baseline	Total Cost of Care	Total costs per beneficiary per month is the sum of the state's Medicaid costs (inpatient, outpatient, pharmacy, long-term care, IMD, and MCO capitated payments) and the federal cost (total Medicaid * FMAP for Utah).	Claims	Interrupted time series
Subsidiary research question 6.2.a: Did costs related to the diagnosis and treatment of SUD change, relative to baseline? (SUD-IMD costs + other SUD costs + non-SUD costs)?				
Pre-Demonstration baseline	Costs related to the diagnosis and treatment of SMI	These costs include *SMI-IMD costs + other SMI costs + non-SMI costs*	Claims	Interrupted time series
Subsidiary research question 6.2.b: What types of care (inpatient + non-ED outpatient, + ED outpatient + pharmacy, + long-term care) are the primary drivers of the cost of care for the SUD population?				
Pre-Demonstration baseline	Source of treatment cost drivers	These costs include *inpatient + non-ED outpatient, + ED outpatient + pharmacy, + long-term care*	Claims	Interrupted time series

TABLE 21: EVALUATION SUMMARY, HYPOTHESIS 7, SMALL DEMONSTRATION POPULATIONS: UPP/ESI, ISS, FFCYAS, FERTILITY AND GENETIC TESTING SERVICES

Hypothesis 7: The Demonstration delivered coverage/ services appropriately to individuals in the smaller Demonstration populations.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
UPP/ESI				
Primary research question 7.1: Did the number of individuals receiving coverage increase relative to baseline?				
Baseline year (DY1)	Enrollment	Number of unique individuals enrolled in each plan (UPP/ESI)	Claims	Descriptive statistics Trend over time
Primary research question 7.2: What was the average total Medicaid cost of care for enrollees?				

Hypothesis 7: The Demonstration delivered coverage/ services appropriately to individuals in the smaller Demonstration populations.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
Baseline year (DY1)	Total cost of care	Total cost of care (paid claims plus premium payments) for each plan (UPP/ESI)	Claims	Descriptive statistics Trend over time
Primary research question 7.3: Did the pmpm cost for enrollees change over time?				
Baseline year (DY1)	Average pmpm expenditure	Total per member per month cost of care (paid claims plus premium payments) for each plan (UPP/ESI)	Claims	Descriptive statistics Trend over time
ISS				
Primary research question 7.4 Did the number of individuals receiving ISS increase relative to baseline?				
Baseline year (DY1)	ISS Service Recipients	Number of unique individuals who received ISS	Claims	Counts
FFCYAS				
Primary research question 7.5: How many FFCYAS received coverage?				
Baseline year (DY1)	Number of FFCYAS	Number of unique individuals in FFCYAS coverage group	Required Monitoring Reports	Counts
Fertility and Genetic Testing Services				
Primary research question 7.6: Did the number of individuals receiving fertility preservation services increase relative to baseline?				
Baseline year (DY1)	Fertility services	Number of unique individuals receiving fertility preservation services	Claims	Counts
Primary research question 7.7: Did the number of individuals receiving genetic testing services increase relative to baseline?				
Baseline year (DY1)	Genetic testing services	Number of unique individuals receiving genetic testing services	Claims	Counts

TABLE 22: EVALUATION SUMMARY, HYPOTHESIS 8, JUSTICE-INVOLVED POPULATIONS

Hypothesis 8: The Justice-Involved Reentry Benefit will enhance cross-system communication and coordination between correctional and community services.				
Comparison Strategy	**Measure Name**	**Measure Description**	**Data source**	**Analytic Approach**
Primary research question 8.1: Did the Demonstration's services facilitate beneficiaries' post-release transitions to care?				
N/A	Were beneficiaries able to access and engage in continuous care post-release that met their needs?	Beneficiaries' Perceptions	Beneficiary Interviews	Qualitative Analysis
N/A	Were beneficiaries able to access and engage in continuous care post-release that met their needs?	Case Managers' Perceptions	Case Manager Interviews	Qualitative Analysis
Primary research question 8.2: Was communication and coordination between the correctional system and community-based health services enhanced?				
N/A	What changes were made to communication systems between institutions?	Correctional system staff Perceptions	Correctional system staff interviews	Qualitative Analysis
N/A	What changes were made to communication systems between institutions?	Community-based providers' Perceptions	Community-based providers interviews	Qualitative Analysis

TABLE 23: EVALUATION SUMMARY, HYPOTHESIS 9, JUSTICE-INVOLVED POPULATIONS

Hypothesis 9: The Justice-Involved Reentry Benefit will improve pre-release service provision during the covered period and continuity of coverage for the justice-involved population.						
Comparison Strategy	**Measure Name**	**Measure Description**	**Numerator**	**Denominator**	**Data source**	**Analytic Approach**
Primary research question 9.1: What Demonstration services did justice-involved individuals receive in the pre-release period?						
N/A	Pre-release service distribution	Distribution of services rendered by service type and date. Service types include: clinical consultation (non-BH), diagnostic (radiology and lab), treatment (non-MAT), family planning and supplies, CHW, hepatitis C, medical equipment and supplies, hepatitis C screening, hepatitis C treatment if indicated, SUD services, MAT, MAT counseling, peer support	N/A	N/A	Claims/administrative	Descriptive statistics
N/A	Pre-demonstration carceral setting service offerings	Description of services offered by participating carceral settings in their institution's pre-demonstration	N/A	N/A	Carceral Facility Readiness Assessment and Key Informant Interviews	Document Review Descriptive statistics Qualitative Analysis
N/A	What services (case management or care provision) did beneficiaries receive in the 90 days before release? What services that beneficiaries needed did they not receive in the	Beneficiaries' Perceptions	N/A	N/A	Beneficiary Interviews	Qualitative Analysis

	90 days before your release?					
Primary research question 9.2: What was beneficiaries' experience of pre-release service provision?						
N/A	Beneficiary experience of pre-release services	Beneficiary self-reported experience of quality of care	N/A	N/A	Beneficiary interviews	Qualitative Analysis
N/A	Provider availability	Ratio of facility Medicaid-enrolled providers to JIR beneficiaries	Medicaid-enrolled providers	JIR beneficiaries	TBD.[21]	Descriptive statistics stratified by provider type
N/A	Pre-release service wait time	Time from JIR benefit start date to first Medicaid reimbursed service	N/A	N/A	Claims	Descriptive statistics stratified by service type (where feasible)

Primary research question 9.3: Were beneficiaries potentially in need of behavioral health services identified during the pre-release period?						
N/A	Diagnosed Mental Health Disorders (DMH)	The percentage of JIR beneficiaries who were diagnosed with a mental health disorder	Of the denominator, number diagnosed with a mental health disorder	JIR beneficiaries	Claims	Descriptive statistics
N/A	Diagnosed Substance Use Disorders (DSU)	The percentage of JIR beneficiaries who were diagnosed with a substance use disorder ● Alcohol disorder ● Opioid disorder	Of the denominator, number diagnosed with a substance use disorder	JIR beneficiaries	Claims	Descriptive statistics

[21] The data source for facility Medicaid-enrolled providers has not yet been fully determined. It will likely be a combination of Medicaid provider enrollment data and carceral facility administrative data, such lists of providers that have entered into contracts or agreements with the facility.

		• Other or unspecified drugs • Any SUD				
Primary research question 9.4: What fraction of justice-involved individuals received navigation support for accessing Medicaid coverage pre-release?						
N/A	Intake coverage screening	Percentage of individuals newly incarcerated in participating institutions who were screened for coverage status.[22]	Newly incarcerated individuals screened for Medicaid coverage	All newly incarcerated individuals in participating facilities	Carceral Facility Administrative Data	Descriptive statistics (stratified by time from intake to screening)
N/A	Medicaid renewal applications for justice-involved population	Percentage of incarcerated individuals who responded completely to Medicaid redetermination request	Incarcerated individuals who responded completely to Medicaid redetermination requests	Incarcerated individuals who received Medicaid redetermination requests	Medicaid Administrative Data: Eligibility and Enrollment	Descriptive statistics
N/A	New Medicaid applications for justice-involved population	Number of incarcerated individuals who submitted applications for Medicaid coverage	N/A/	N/A	Medicaid Administrative Data: Eligibility and Enrollment	Descriptive statistics
Primary research question 9.5: Did JIR beneficiaries experience gaps in coverage at the time of release?						
N/A.[23]	Reentry continuity of coverage	Average number of days from release to Medicaid coverage reinstatement for incarcerated individuals with suspended status	N/A	N/A	Medicaid Administrative Data: Eligibility and Enrollment	Descriptive statistics

[22] In addition to coverage screening of newly incarcerated individuals, the carceral facilities will also screen individuals who were incarcerated prior to the demonstration. The process and timeline for such screenings is not yet in place. The IE may add a measure for screening of previously incarcerated individuals to the design once the planning process is complete.

[23] The preferred design it to compare JIR beneficiaries to a pre-demonstration group, or a non-participating comparison group, on continuity of coverage. The design will include the comparison approach if release dates are available for a potential comparison group.

Table 24: Evaluation Summary, Hypothesis 10, Justice-Involved Populations

Hypothesis 10: The Justice-Involved Reentry Benefit's 90-day pre- release coverage period ("the coverage timeline") will support effective program implementation.						
Comparison Strategy	**Measure Name**	**Measure Description**	**Numerator**	**Denominator**	**Data source**	**Analytic Approach**
Primary research question 10.1: Did the coverage timeline facilitate providing coordinated, efficient, and effective reentry planning?						
Subsidiary research question 10.1.a: Were assessments and care plans completed in a timely manner?						
N/A	Timely case management assessment	Time from JIR benefit start to first case management meeting/assessment	N/A	N/A	Carceral Facility Administrative Data	Descriptive statistics
N/A	Timely care planning	Time from JIR benefit start date to development of a care plan	N/A	N/A	Carceral Facility Administrative Data	Descriptive statistics
Subsidiary research question 10.1.b: Did beneficiaries receive a 30-day supply of all prescribed medications immediately upon release from the carceral setting?						
N/A	Prescription Medication Supply	Percentage of JIR beneficiaries who received a 30-day supply of all prescription medications that have been prescribed for the individual at the time of release immediately upon release from the correctional facility	JIR beneficiaries who received a 30-day supply of all prescription medications at release	JIR beneficiaries with prescription medication needs	Carceral Facility Administrative Data	Descriptive statistics
Primary research question 10.2: Did the coverage timeline enable pre-release management and stabilization of clinical, physical, and behavioral health conditions?						
N/A	Did the coverage timeline enable pre-release management and stabilization of clinical, physical, and behavioral health conditions?	Beneficiary Perceptions	N/A	N/A	Beneficiary Interviews	Qualitative Analysis

Hypothesis 10: The Justice-Involved Reentry Benefit's 90-day pre- release coverage period ("the coverage timeline") will support effective program implementation.						
Comparison Strategy	**Measure Name**	**Measure Description**	**Numerator**	**Denominator**	**Data source**	**Analytic Approach**
Primary research question 10.3: Did the coverage timeline help mitigate potential operational challenges the state might have encountered in a more compressed timeline?						
N/A	Did the coverage timeline help mitigate operational challenges?	State and Correctional System Perceptions	N/A	N/A	State and Correctional system staff interviews	Qualitative Analysis

TABLE 25: EVALUATION SUMMARY, HYPOTHESIS 11, JUSTICE-INVOLVED POPULATIONS

Hypothesis 11: The Justice-Involved Reentry Benefit will improve engagement in health care and social services, reduce acute care utilization, and improve health outcomes for the justice-involved population post-release.						
Comparison Strategy	**Measure Name**	**Measure Description**	**Numerator**	**Denominator**	**Data source**	**Analytic Approach**
Primary research question 11.1: Did engagement in appropriate health care services post-release increase relative to a pre-demonstration comparison population?						
Pre-demonstration comparison population	Controlling High Blood Pressure (CBP)	The percentage of JIR beneficiaries who had a diagnosis of hypertension (HTN) and whose blood pressure was adequately controlled	JIR beneficiaries with a diagnosis of hypertension with blood pressure adequately controlled	JIR beneficiaries with a diagnosis of hypertension	Claims	Trend over time Interrupted Time Series
Pre-demonstration comparison population	Monitoring for Persistent Medications (MPM)	JIR beneficiaries who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent (for hypertension or heart disease) during the measurement year and received at least one therapeutic monitoring event	JIR beneficiaries who received at least 180 treatment days of ambulatory medication for a select therapeutic agent and received at least	JIR beneficiaries prescribed an ambulatory medication therapy	Claims	Trend over time Interrupted Time Series

Hypothesis 11: The Justice-Involved Reentry Benefit will improve engagement in health care and social services, reduce acute care utilization, and improve health outcomes for the justice-involved population post-release.						
Comparison Strategy	**Measure Name**	**Measure Description**	**Numerator**	**Denominator**	**Data source**	**Analytic Approach**
		for the therapeutic agent during the measurement year	one therapeutic monitoring event for the therapeutic agent			
Pre-demonstration comparison population	Adults' Access to Preventative/Ambulatory Health Services (AAP)	Fraction of JIR beneficiaries who had an ambulatory or preventive care visit during the measurement year	Number of JIR beneficiaries who had an ambulatory or preventive care visit	JIR beneficiaries	Claims	Trend over time Interrupted Time Series
Pre-demonstration comparison population	Pharmacotherapy for Opioid Use Disorder (POD)	The percentage of OUD pharmacotherapy events that lasted at least 180 days among JIR beneficiaries with a diagnosis of OUD and a new OUD pharmacotherapy event	OUD pharmacotherapy events that lasted at least 180 days	JIR beneficiaries with a diagnosis of OUD and a new OUD pharmacotherapy event	Claims	Trend over time Interrupted Time Series
N/A	Access to social services post-release	Beneficiary and case manager perceptions of beneficiary engagement in social services in the post-release period	N/A	N/A	Beneficiary and case manager interviews	Qualitative Analysis
Primary research question 11.2: Did inpatient hospital utilization post-release decrease relative to the pre-demonstration comparison population?						
Pre-demonstration comparison population	Inpatient Utilization (IPU)	Inpatient admissions per JIR beneficiary per year	Total inpatient admissions	Total JIR beneficiaries	Claims	Trend over time Interrupted Time Series
Primary research question 11.3: Did ED visits post-release decrease, relative to the pre-demonstration comparison population?						
Pre-demonstration comparison population	ED visits (EDU)	ED visits per JIR beneficiary per year	Total ED visits	Total JIR beneficiaries	Claims	Trend over time Interrupted Time Series

Hypothesis 11: The Justice-Involved Reentry Benefit will improve engagement in health care and social services, reduce acute care utilization, and improve health outcomes for the justice-involved population post-release.						
Comparison Strategy	**Measure Name**	**Measure Description**	**Numerator**	**Denominator**	**Data source**	**Analytic Approach**
Pre-demonstration comparison population	ED-BH visits (EDU-BH)	ED visits for BH condition per JIR beneficiary per year	Total ED visits for BH conditions	Total JIR beneficiaries	Claims	Trend over time Interrupted Time Series
Pre-demonstration comparison population	Potentially Preventable ED visits	Non-Emergent ED visits per JIR beneficiary per year	Total non-emergent ED visits	Total JIR beneficiaries	Claims	Trend over time Interrupted Time Series
Primary research question 11.4: Did the rate of deaths post-release decrease relative to the pre-demonstration comparison population?						
Pre-demonstration comparison population	All-cause deaths	All-cause deaths among JIR beneficiaries	All cause deaths among JIR beneficiaries	JIR beneficiaries	Vital statistics	Trend over time Interrupted Time Series
Pre-demonstration comparison population	Suicide deaths	Suicide deaths among JIR beneficiaries	Suicide deaths among JIR beneficiaries	JIR beneficiaries	Vital statistics	Trend over time Interrupted Time Series
Pre-demonstration comparison population	Overdose deaths	Overdose deaths among JIR beneficiaries	Overdose deaths among JIR beneficiaries	JIR beneficiaries	Vital statistics	Trend over time Interrupted Time Series
Primary research question 11.5: Was the timing or provision of specific pre-release services associated with better post-release outcomes?						
Associations between the pre-release service distribution data and post-release outcomes (utilization, engagement, deaths) will be explored. There are no new measures needed for this analysis.						Exploratory Regression