NORC at the University of Chicago

Rhode Island Comprehensive Demonstration

Interim Evaluation Report

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Acronyms

ACA	Affordable Care Act
ACO	Accountable Care Organization
ACS	American Community Survey
AE	Accountable Entity
AMI	Acute Myocardial Infarction
APM	Alternative Payment Mechanism
BH	Behavioral Health
BHDDH	Behavioral Healthcare, Developmental Disabilities, and Hospitals
BVCHC	Blackstone Valley Community Health Care
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CFO	Chief Financial Officer
CHC ACO	Community Health Care ACO
CMS	The Centers for Medicare & Medicaid Services
CPT	Current Procedural Terminology
DSHP	Designated State Health Programs
ED	Emergency Department
EOHHS	Executive Office of Health & Human Services
FFS	Fee-for-Service
FQHC	Federally Qualified Health Center
HCBS	Home- and Community-Based Services
HIPAA	Health Insurance Portability and Accountability Act
HIT	Health Information Technology
HSTP	Health System Transformation Project
IHH	Integrated Health Home
IHP	Integrated Healthcare Partners
IMD	Institution of Mental Disease
IT	Information Technology
MCO	Managed Care Organization

MH	Mental Health
NHPRI	Neighborhood Health Plan of Rhode Island
OUD	Opioid Use Disorder
PCHC	Providence Community Health Centers
PCP	Primary Care Provider
PHSRI	Prospect Health Services Rhode Island
PRS	Peer Recovery Specialists
PVI	Pandemic Vulnerability Index
RI	Rhode Island
ROI	Return on Investment
SDOH	Social Determinants of Health
SNAP	Supplemental Nutrition Assistance Program
SOR	State Opioid Response
SSI	Supplemental Security Income
STC	Special Terms and Conditions
SUD	Substance Use Disorder
TANF	Temporary Assistance for Needy Families
TCOC	Total Cost of Care
TIA	Transient Ischemic Attack

Executive Summary

Approximately one-third of all Rhode Islanders are enrolled in Rhode Island's Medicaid program. Medicaid program expenditures are the largest item in the state's annual budget and have continued to increase in recent years.[1,2] Since Medicaid serves a large proportion of the population and is a fundamental economic driver for the state, Medicaid reform is a central component in driving innovation across Rhode Island's health care system. The state of Rhode Island designed their Comprehensive section 1115(a) Medicaid Demonstration ("the Demonstration") in 2013 to reinvent Medicaid, leveraging the key principles and goals outlined in **Exhibit ES.1**. The Demonstration allowed for more flexibility for the state to provide more cost-effective and high-quality care.

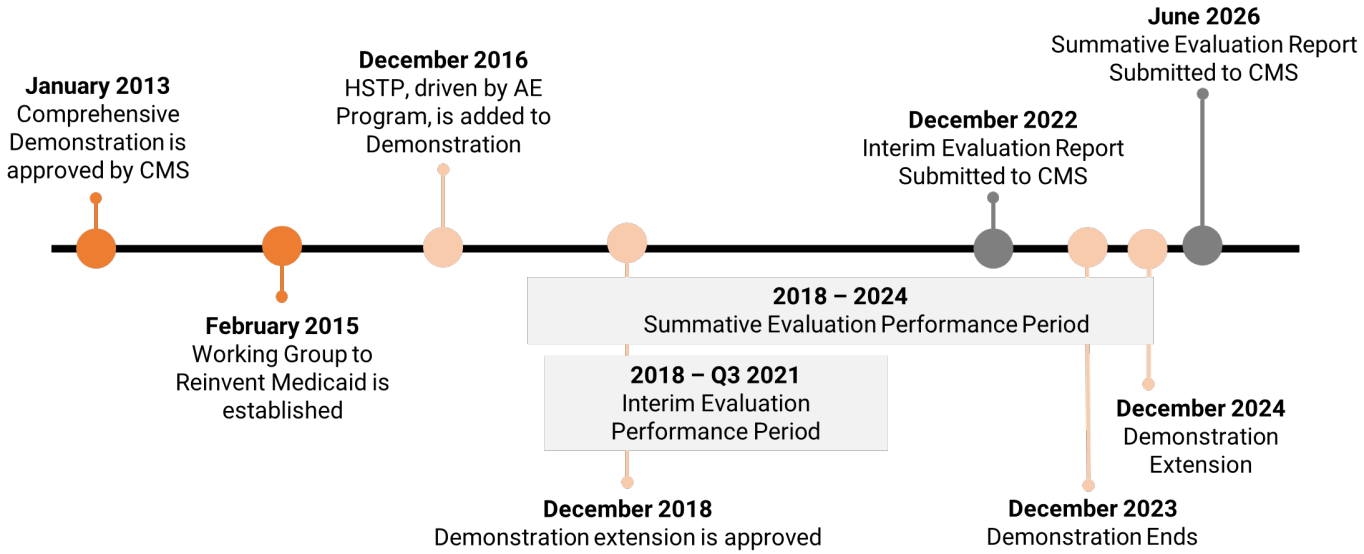
Exhibit ES.1. Key Principles and Goals from Working Group to Reinvent Medicaid

Principle 1: Pay for value, not volume
■ GOAL 1: Substantially transition away from fee-for-service models to a system where members get their care through provider organizations that are accountable for the quality, health outcomes, and total cost of care for their members. ■ GOAL 2: Define Medicaid-wide population health targets, and, where possible, tie them to payments. ■ GOAL 3: Maintain and expand on our record of excellence – including our #1 ranking – on delivering care to children.
Principle 2: Coordinate physical, behavioral, and long-term health care
■ GOAL 4: Maximize enrollment in integrated care delivery systems. ■ GOAL 5: Implement coordinated, accountable care for high-cost/high-need populations. ■ GOAL 6: Ensure access to high-quality primary care. ■ GOAL 7: Leverage health information systems to ensure quality, coordinated care.
Principle 3: Rebalance the delivery system away from high-cost settings
■ GOAL 8: Shift Medicaid expenditures from high-cost institutional settings to community-based settings. ■ GOAL 9: Encourage the development of accountable entities for integrated long-term care.
Principle 4: Promote efficiency, transparency, and flexibility
■ GOAL 10: Improve operational efficiency.

SOURCE: Report of the Working Group to Reinvent Medicaid

Exhibit ES.2 provides an overview of the Rhode Island Demonstration timeline, from design to expiration.[3] The amendment, approved in December 2016, incorporated goals and initiatives from the Reinventing Medicaid Act of 2015, aiming to shift toward value-based care in the Medicaid program.[3]

Exhibit ES.2. Rhode Island Demonstration Implementation and Evaluation Timeline



In December 2018, CMS authorized Designated State Health Programs (DSHP) funds to maintain federal matching funding for two key health system components: 1) health workforce development, and 2) vital state health programs. This funding released additional funds to help the state implement the Health System Transformation Project (HSTP), primarily through the development of Accountable Entities (AEs). AEs are integrated provider organizations responsible for the total cost of care and health care outcomes for attributed populations, and are the key mechanisms by which Rhode Island is aiming to achieve the greater accountability and value-based care as laid out in the Reinventing Medicaid Act. The four primary principles of the Demonstration are:

- Pay for value, not volume
- Improve coordination of physical, behavioral, and long-term health care
- Rebalance the delivery system away from high-cost settings
- Promote efficiency, transparency, and flexibility

Extension of Rhode Island's Comprehensive Demonstration

The 2018 five-year extension of the Demonstration, which is the focus of this evaluation, reflects the four aforementioned principles. The extension included changes in eligibility, demonstration benefits, delivery system, and financing, including:

- **Changes to Medicaid eligibility** to streamline the member liability collection process, codify needs-based criteria for service options available to adults with developmental and intellectual disabilities, and create a new eligibility pathway for children with disabilities to receive care in a residential treatment facility.

- **Changes in Demonstration benefits** to improve access to a range of programs and cover more services, including members with substance use disorders (SUDs), homebound individuals, and adults in need of home- and community-based support services.
- **Delivery system enhancements,** including a pilot project that will allow Medicaid dental providers to bill for time related to improving appointment compliance, care coordination, motivational interviewing, and patient education.
- **Changes in Demonstration financing,** including: 1) an alternative payment methodology (APM) for personal care and homemaker services; 2) an extension of the Designated State Health Programs (DSHP) authority, which funds the HSTP, through December 31, 2020; and 3) waiving the IMD exclusion to improve access to substance use treatment.

The Demonstration extension also includes nine new programs and additional benefits for members. This interim evaluation report will focus on five of these new programs, as described in **Exhibit ES.3.** Chapters 3 through 7 include more information on each program, their eligibility criteria, and key design features.

Exhibit ES.3. Rhode Island Comprehensive Demonstration Programs

Accountable Entities (AE) Program	• Implemented in 2018. The primary driver for health care system transformation for Rhode Island Medicaid's program. • AEs function as integrated provider organizations and are financially responsible for the cost of care, quality, and outcomes. • Alternative payment models are established between MCO health plans and AEs through value-based contracts. • By the beginning of PY4, EOHHS had certified seven AEs serving 190,995 attributed Medicaid members.
Behavioral Health Link (BH Link)	• Began in 2019. Includes triage center and hotline for crisis stabilization and short-term treatment for behavioral health needs. • Seeks to reduce ED visits related to mental health conditions and provide treatment services to improve outcomes. • Treatments provided include physician services, medication treatment, skilled nursing care, services from mental health professionals, comprehensive assessment and triage, and crisis stabilization.
Piloting Dental Case Management (DCM)	• Conducted in 2019. Permitted six Rhode Island dental practices to participate in demonstration of impact of four new dental case management CPT codes. • New codes address appointment compliance barriers, care coordination, motivational interviewing, and patient education. • Aims to address the social determinants of health and improve member and provider experience and oral health outcomes.
Institutions of Mental Disease (IMD) Exclusion	•Demonstration funding for IMD services for SUD treatment began in July 2019. •Waives the exclusion individuals aged 22-64 years old residing in IMDs and aims to allow RI to maintain and enhance member access to substance use disorder treatment in appropriate settings.
Peer Recovery Specialist (PRS) & Family/Youth Support Partners (FYSP) Programs	•Secured additional federal matching funds in 2019 •PRS aims to provide individuals who are experiencing/at risk for hospitalization, overdose, or homelessness, or were recently released from institutions with a support system to develop and learn healthy living skills. •FYSP offers services to help stabilize children under 21 with behavioral health disorder(s) or developmental disabilities and promote well-being of the child and family.

Key Demonstration Stakeholders. The Rhode Island Executive Office of Health and Human Services (EOHHS) is the single state agency for administering the Rhode Island Medicaid program, which includes three Medicaid managed care organizations (MCOs) that provide services directly to Rhode Island Medicaid members and collaborate with AEs to implement value-based care initiatives. The Department of Behavioral Health, Developmental Disabilities, and Hospitals (BHDDH) works closely with EOHHS to provide services to approximately 50,000 Rhode Islanders who are living with mental

illness and/or substance use disorders, developmental disabilities, or who require long-term acute care at a state hospital.[4]

Evaluation Overview & Goals

The goal of this interim evaluation is to: 1) assess the performance of each of the five Demonstration programs, 2) describe successes and challenges related to implementation, and 3) present high-level findings on the Demonstration's impact on Medicaid spending, hospitalizations, all-cause readmissions, emergency department visits, annual wellness visits, and other key outcomes relevant to each Demonstration program. This evaluation directly assesses three of the four demonstration principles (pay for value, not volume; improve coordination of physical, behavioral, and long-term health care; rebalance the delivery system away from high-cost settings), and indirectly assesses the fourth principle (promote efficiency, transparency, and flexibility) as it is outside the scope of this evaluation.

To evaluate the Demonstration, we first conducted descriptive analyses for all five Demonstration programs, focusing on characterizing the members in each program and trends in unadjusted and risk-adjusted spending, utilization, and quality outcomes. The AE Program, the program with the largest number of members attributed in each quarter, is the only Demonstration program for which it was feasible to conduct an impact analysis with both a comparison group and a baseline period. Due to the program design and number of members in each of the four remaining programs, it was not feasible to construct either a meaningful baseline period (Behavioral Health [BH] Link, Dental Case Management [DCM]) or an appropriate comparison group (Peer Recovery Specialist [PRS] and Family/Youth Support Partners [FYSP] Programs, Institutions of Mental Disease [IMD] Exclusion Waiver). Considering these limitations, we conducted additional descriptive analysis to characterize performance on spending and utilization outcomes[†] and performed either cross-sectional analyses in the performance period or a pretest-posttest analysis to examine the Demonstration programs' performance. **Exhibit ES.4** provides a program-level overview of the periods of performance included this interim evaluation, whether we evaluated each program's impact on the treatment group against a comparison group, and our analytic approaches evaluating each program.

Exhibit ES.4. Analytic Approach for Demonstration Programs

Program	Performance Period	Baseline Period	Comparison Group	Analytic Approach
AE Program	Q3 2018 – Q3 2021	Q3 2014 – Q3 2016	RI Medicaid-only members in expansion, Rite Care, and RHP population, who were **never attributed to an AE during the performance period**.	Difference-in-differences
BH Link	Q1 2020 – Q3 2021	N/A	18+ Medicaid members with one or more BH conditions or diagnosed SUDs who	Cross-sectional analyses

[†] For the AE program, we were able to conduct impact analyses; see Section 2.4 for more details.

Program	Performance Period	Baseline Period	Comparison Group	Analytic Approach
			were **not treated through the BH Link triage center.**	
DCM Pilot	CY 2019	N/A	18+ RI Medicaid members **seen by participating providers** and who **did not receive services under the 4 dental case management CPT codes**.	Cross-sectional analyses
IMD Exclusion	Q3 2019 – Q2 2021	Q3 2017 – Q2 2019	N/A	Pretest-posttest analyses
PRS/FYSP	Q3 2019 – Q2 2021	Q3 2017 – Q2 2019	N/A	Pretest-posttest analyses

High-Level Summary of Findings

This report details interim evaluation findings across five of the Demonstration projects. Chapter 1 provides an overview of the Demonstration, Chapter 2 summarizes the evaluation methodology, and Chapters 3 through 7 detail the methods and key findings for each of the five programs. Chapter 8 provides the key findings for the entire Medicaid population. Throughout this report, we describe the trends in member attribution or participation in Demonstration programs, the sociodemographic characteristics of the members attributed to the program compared to the characteristics of comparison group members (where applicable), and unadjusted and risk-adjusted trends in core and program-specific outcomes.

For the AE program, we measured impact of the program using a difference-in-differences analysis and examined subgroups by AE and race. Due to the limitations discussed above, for the other four programs, we assessed impact using either cross-sectional analyses (BH Link and DCM) or pretest-posttest analyses (IMD Exclusion Waiver, PRS/FYSP Programs). When considering outcomes for these Demonstration programs, it is important to consider that they were operating in large part during the COVID-19 pandemic, a period that saw unprecedented drops in health care utilization and drastic shifts in care-seeking patterns.[5,6,7] Due to the nature of our analyses (i.e., most programs' performance periods overlapped completely with the pandemic) and the widespread impact of the COVID-19 pandemic, we are unable to quantify the effect of the COVID-19 pandemic on observed declines even when accounting for individual-level COVID-19 diagnoses and county-level pandemic statistics. Readers should interpret these results with caution.

Below we provide high-level findings from the interim evaluation, organized by evaluation hypotheses and research questions. Findings are repeated when they are relevant to more than one research question. Unless otherwise noted, all differences for utilization and spending outcomes are statistically significant at $p<0.05$.

Evaluation Hypothesis #1

The Demonstration will reduce utilization and overall Medicaid spending while maintaining quality of care for Rhode Island Medicaid members.

Research Question #1: What percentage of Medicaid members are attributed to each Demonstration program?

- Member attribution to the **AE Program** rose steadily over the course of the performance period (July 2018 – September 2021). By September 2021, 209,188 Rhode Island Medicaid members were attributed to AEs, representing 68% of Rhode Island's total eligible Medicaid population (i.e., Medicaid members in an MCO). A total of 199,154 AE-attributed members met the inclusion criteria for our analyses (enrolled in Medicaid and AE-attributed in all months of a calendar quarter).
- There was relatively steady usage of the **BH Link** program, with approximately 200-250 members each quarter accessing BH Link services.
- Participation in the **DCM Pilot** was very limited (25 total unique members) due to challenges in recruiting and enrolling target dental practices. Due to this small sample size, spending and utilization estimates may be unreliable and we are limited in our ability to generalize results beyond this small population.
- Use of the **IMD Exclusion Waiver** also remained relatively constant, with approximately 1,000-1,100 Medicaid members receiving SUD treatment in a residential IMD setting each quarter.
- Uptake of **PRS/FYSP** services was slow (fewer than 100 members per quarter) until mid-2020, when usage spiked. Since this program is designed to attract service providers who may have no prior experience with Medicaid, the slow uptake in early quarters was likely related to challenges in setting up new systems for Medicaid billing and reimbursement with those new providers.

Research Question #2: What are the trends in spending, utilization, and quality of care for Medicaid members in each Demonstration program?

- **BH Link** users had higher rates of risk-adjusted acute care utilization, including hospitalizations (278.4 per 1,000 members), all-cause readmissions (96.4 per 1,000 members), ED visits (1,236 per 1,000 members), IMD service use (270.0 per 1,000 members), and ED visits for BH services (1,037.1 per 1,000 members), relative to comparison members.
- **BH Link** users had higher observed average risk-adjusted spending relative to the comparison group, likely driven by higher acute care utilization (hospitalizations, all-cause readmissions, ED visits, IMD service use, and ED visits for BH services).
- Due to low enrollment and the emphasis of the pilot on dental services, no acute care utilization outcomes are meaningful for the **DCM Pilot**.
- Rhode Island Medicaid members covered by the Demonstration's **IMD Exclusion Waiver** had a higher hospitalization rate (40.9 per 1,000 members) per quarter in the performance period (July 2019 – September 2021) than the baseline period (July 2017 – June 2019).
- Members accessing IMD services under the **IMD Exclusion Waiver** had higher quarterly risk-adjusted spending ($1,486 per member), driven in part by the increase in hospitalizations.
- Members using **PRS/FYSP** services had a steep decline in ED visits (1,545.7 per 1,000 members) after the program's inception in July 2019; however, this decline should be

interpreted in the context of broader decreased service utilization during the COVID-19 pandemic, as most members received services after the start of the pandemic.

- Members using **PRS/FYSP** services showed lower annual risk-adjusted spending in the two years after program implementation, driven by decreases in ED visits and ambulatory health services in the baseline period. We were unable to determine the extent to which these decreases were attributable to the PRS/FYSP since the majority of the performance period overlapped with the COVID-19 pandemic, which drove declines in care in all settings.

Research Question #3: What are the trends in spending, utilization, and quality of care for all Medicaid members in the Demonstration?

- Medicaid Members had significantly higher average annual Medicaid spending ($242 per member) and higher SUD-related Medicaid spending ($1,222 per member) during the current Demonstration period compared to the two years prior.
- Medicaid members had a significant increase in annual wellness visits (5.3 per 1,000 members), during the current Demonstration period.

Research Question #4: What is the impact on spending, utilization, and quality of care for AE-attributed members?

- The **AE Program** had a mixed impact on acute care utilization, with an increase in hospitalizations (7.4 per 1,000 members) and a decrease in readmissions (26.4 per 1,000 members), with no impact on ED visits.
- Reflecting the mixed impact on acute care and ambulatory utilization, the **AE Program** showed no impact on total Medicaid spending, relative to the comparison group.
- Risk-adjusted average spending during the **AE Program** was lower for white AE-attributed members than non-white members. A DID analysis to assess whether the impact of the AE program differs for race subgroups is planned for the Summative Evaluation Report (sample size permitting).

Research Question #5: What is the experience of care for AE-attributed members? Are they satisfied with their care?

- The **AE Program** showed increased rates of breast cancer screening (26.8 per 1,000 members), which is consistent with MCO quality performance tracking data.
- While not specific to the AE-attributed population, Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey results for all three MCOs indicated high rates of member satisfaction, consistent with national benchmarks.

Evaluation Hypothesis #2

The Demonstration will increase coordination among different care types, leading to better health outcomes for Rhode Island Medicaid members.

Research Question #6: Does better care integration reduce high-cost care for members?

- The **AE program** had higher rates of potentially avoidable ED visits (4.6 per 1,000 members) and hospitalizations (7.4 per 1,000 members), but a decrease in all-cause readmissions (26.4 per 1,000 members).
- Members attributed to the **AE Program** showed an increase in 7-day follow-up after hospitalization for mental illness (29.8 per 1,000 members), but a decrease in 30-day follow-up for the same measure (68.6 per 1,000 members). This may indicate that AEs' increased focus on care coordination is concentrated on the time immediately after an acute event.
- **BH Link** users had higher 30-day follow-up after an ED visit for mental illness (117.0 per 1,000 members) and preventative/ambulatory health services (994.8 per 1,000 members), potentially driven by the connections to follow-up services in the community that BH Link can provide to members.

Research Question #7: To what extent has the Demonstration integrated BH and SUD care into medical care? How has this affected health outcomes and BH/SUD treatment uptake for Medicaid members?

- Members attributed to the **AE Program** showed an increase in 7-day follow-up after hospitalization for mental illness (29.8 per 1,000 members), but a decrease in 30-day follow-up for the same measure (68.6 per 1,000 members). This may indicate that AEs' increased focus on care coordination is concentrated on the time immediately after an acute event.
- **BH Link** users had higher 30-day follow-up after an ED visit for mental illness (117.0 per 1,000 members), potentially driven by the connections to follow-up services in the community that BH Link can provide to members.
- Members accessing **PRS/FYSP** services showed a steep decline in use of preventative and ambulatory care services (3,597.5 per 1,000 members) and ED visits for BH services (794.9 per 1,000 members) after the program's inception in July 2019. However, this decline should be interpreted in the context of broader decreased service utilization during the COVID-19 pandemic, particularly for nonurgent or preventative care.

Research Question #8: Does the demonstration increase uptake of prevention-focused resources into routine medical care for high-cost/high-need Medicaid members?

- Uptake of dental case management in the **DCM Pilot** was low, with a total of 76 claims recorded for 25 members. One provider recorded 68 of the 76 total claims during the pilot year.
- **DCM Pilot** participants had a slightly higher unadjusted number of dental health services (1.9 per member, compared to 1.6 per member for the comparison group); however, due to the small number of participants in the program (25 members), we were unable to estimate risk-adjusted averages for the groups.
- Members accessing **PRS/FYSP** services showed a steep decline in use of preventative and ambulatory care services (3,597.5 per 1,000 members) after the program's inception in July 2019; however, this decline should be interpreted in the context of broader decreased service utilization during the COVID-19 pandemic, particularly for nonurgent or preventative care.

Evaluation Hypothesis #3

The Demonstration will shift care away from high-cost settings, reducing spending while increasing utilization in lower-cost settings.

Research Question #9: What are the trends in ED visits and IMD service use for members accessing behavioral health services?

- Members accessing **BH Link** services had higher IMD service use (270.0 per 1,000 members) and ED visits (1,236.0 per 1,000 members) than comparison members, likely reflecting greater need among that population.
- Members accessing **PRS/FYSP** services showed a steep decline in ED visits (1,545.7 per 1,000 members) and IMD service use (2,707.8 per 1,000 members) after the program's inception in July 2019; however, this decline should be interpreted in the context of broader decreased service utilization during the COVID-19 pandemic.
- Members attributed to the **AE Program** showed an increase in 7-day follow-up after hospitalization for mental illness (29.8 per 1,000 members), but a decrease in 30-day follow-up for the same measure (68.6 per 1,000 members). This may indicate that AEs' increased focus on care coordination is concentrated on the time immediately after an acute event.
- Reflecting the mixed impact on acute care and ambulatory utilization, the **AE Program** showed no impact on total Medicaid spending, relative to the comparison group.
- Members accessing IMD services under the **IMD Exclusion Waiver** had higher quarterly risk-adjusted spending ($1,486 per member), driven in part by the increase in hospitalizations.
- Members using **PRS/FYSP** services showed lower annual risk-adjusted spending in the two years after program implementation, driven by decreases in ED visits and ambulatory health services in the baseline period. We were unable to determine the extent to which these decreases were attributable to the PRS/FYSP since the majority of the performance period overlapped with the COVID-19 pandemic, which drove declines in care in all settings.

Next Steps

We will produce a Summative Final Evaluation Report, expanding upon the initial findings presented in this Interim Evaluation Report with subsequent evaluation findings through the entire Demonstration period (2018 – 2024). The extended evaluation timeframe will allow us to consider more rigorous evaluation designs, such as including additional timepoints in the pretest-posttest analyses. In addition to updates on the topics addressed in the Interim Evaluation Report, the Summative Final Evaluation Report will include implications of the final evaluation results for future initiatives, and a discussion of the extent to which specific elements of the Demonstration were sustained after the Demonstration programs' conclusion.

Chapter 1: Introduction

Rhode Island's Medicaid program, administered by the Executive Office of Health and Human Services (EOHHS), provides essential services and works to "ensure access to high-quality and cost-effective services that foster health, safety, and independence of all Rhode Islanders." As the single state agency for Medicaid, EOHHS contracted with NORC in 2018 to conduct an independent evaluation of the state's section 1115 demonstration, the "Rhode Island Comprehensive Demonstration," which currently runs through December 31, 2023. The evaluation began in 2018 and will conclude in 2026, culminating with a Summative Evaluation Report. This report, the Interim Evaluation Report, presents interim evaluation findings using Medicaid data through September 2021. The report includes an introduction to the Demonstration and evaluation approach (Chapter 1), a detailed description of the evaluation methodology (Chapter 2), evaluation findings for each of five Demonstration programs (Chapters 3–7), the entire Medicaid population (Chapter 8) and future plans for analysis and evaluation (Chapter 9).

Approximately one-third of all Rhode Islanders are enrolled in Rhode Island's Medicaid program, and Medicaid program expenditures are the largest item in the state's annual budget and have continued to increase in recent years.[1] This number has increased in recent years due to the Medicaid eligibility expansion in 2014 under the Affordable Care Act (ACA), as well as the federal rules implemented via the Families First Coronavirus Response Act (FFRCA), which allows states that provide continuous enrollment to Medicaid members as of March 18, 2020, to receive additional federal funding.[2,8] In 2020, approximately 88 percent of Medicaid members were covered under managed care plans, with the remaining 12 percent in fee-for-service (FFS) Medicaid.[9] Currently, EOHHS contracts with three managed care organizations (MCOs) that serve Rhode Island Medicaid members: 1) the Neighborhood Health Plan of Rhode Island (NHPRI; approximately 185,000 members), 2) UnitedHealthcare (approximately 96,000 members), and 3) Point32Health (formerly Tufts Health Plan; approximately 16,000 members).[9,10] Both NHPRI and UnitedHealthcare have been in Rhode Island's Medicaid managed care program since its inception in 1994; Tufts Health Plan joined as an MCO in 2016.[11]

1.1 Delivery System Reform in Rhode Island

As in many states, Rhode Island's history of providing care for Medicaid members does not incentivize the provision of whole-person care due to inherent limitations of the fee-for-service (FFS) model, which is focused on medical care for specific health conditions. Although the system provides high-quality care across settings for discrete services, it is organized such that no single provider has purview over care integration or overall health outcomes. This often leads to fragmented care and missed opportunities for intervention, as well as acute care needs (e.g., emergency department visits) that may have been prevented by more-coordinated care. Lack of care integration poses particular

challenges for Medicaid members with complex health issues, who account for a disproportionate share amount of claims expenditures. For instance, in state fiscal year 2019, nine percent of all Rhode Island Medicaid members were considered high-cost members (i.e., members who incur more than $15,000 in claims expenditures in a year); those nine percent of members accounted for 73 percent of Medicaid claims expenditures. In Rhode Island, nearly half of claims expenditures for high-cost members occur in residential and rehabilitation services for persons with developmental disabilities and in nursing facilities for members with disabilities or who are older adults.[12] Among Medicaid members incurring high costs who reside in the community (approximately 40%), the majority have multiple comorbidities that would greatly benefit from an integrated approach to treatment.[13]

Because Medicaid serves one out of three Rhode Islanders, Medicaid reform is a central component in driving innovation across Rhode Island's health care system. In 2015, Governor Gina Raimondo established the "Working Group to Reinvent Medicaid" to identify progressive, sustainable savings initiatives to transform the state's Medicaid program. The Working Group conducted a comprehensive review of the state's Medicaid program and submitted a final report that included recommendations for a multi-year transformation of the Medicaid program and state-financed health care in Rhode Island.[14] The plan identified the four high-level principles and 10 goals to guide Rhode Island's path toward a reinvented Medicaid program (**Exhibit 1.1.1**).

Exhibit 1.1.1. Key Principles and Goals from Working Group to Reinvent Medicaid

Principle 1: Pay for value, not volume
▪ GOAL 1: Substantially transition away from fee-for-service models to a system where members get their care through provider organizations that are accountable for the quality, health outcomes, and total cost of care for their members. ▪ GOAL 2: Define Medicaid-wide population health targets, and, where possible, tie them to payments. ▪ GOAL 3: Maintain and expand on our record of excellence – including our #1 ranking – on delivering care to children.
Principle 2: Coordinate physical, behavioral, and long-term health care
▪ GOAL 4: Maximize enrollment in integrated care delivery systems. ▪ GOAL 5: Implement coordinated, accountable care for high-cost/high-need populations. ▪ GOAL 6: Ensure access to high-quality primary care. ▪ GOAL 7: Leverage health information systems to ensure quality, coordinated care.
Principle 3: Rebalance the delivery system away from high-cost settings
▪ GOAL 8: Shift Medicaid expenditures from high-cost institutional settings to community-based settings. ▪ GOAL 9: Encourage the development of accountable entities for integrated long-term care.
Principle 4: Promote efficiency, transparency, and flexibility
▪ GOAL 10: Improve operational efficiency.

SOURCE: Report of the Working Group to Reinvent Medicaid

Through these principles and goals, the Working Group, in partnership with the General Assembly and community partners, passed the Reinventing Medicaid Act of 2015 and developed a plan to achieve over $70 million in annual Medicaid savings by redesigning the system to promote high-quality and holistic care for members without reducing benefits or eligibility.[15] This vision for Rhode Island's Medicaid program has guided reforms and initiatives over the subsequent seven years.

1.2 Rhode Island's Comprehensive Demonstration

Rhode Island's Comprehensive section 1115(a) Medicaid Demonstration ("the Demonstration") began in 2013 and allowed for greater flexibility for the state to provide more cost-effective and high-quality care than previous CMS guidance.[16] All services provided by Rhode Island's Medicaid program were covered under this waiver, with the exception of disproportionate share hospitals, administrative expenses, phased Part D contributions, and payments to local education agencies for services provided in school-based settings. This Demonstration was initially approved through December 31, 2018.

In May 2016, EOHHS requested an amendment to the existing Demonstration that incorporated goals and initiatives from the Reinventing Medicaid Act of 2015, aiming to shift toward value-based care in the Medicaid program.[3] This amendment was approved in December 2016 and established the Designated State Health Program (DSHP) and the Health System Transformation Plan (HSTP),[3] permitting approximately $160 million for approved use of funds. DSHP funding was authorized by CMS to maintain funding for two key health system components: 1) health workforce development, via partnerships with Rhode Island secondary education institutions, and 2) vital state health programs (e.g., tuberculosis clinics, the Center for Acute Infectious Disease Epidemiology). This funding allocation released additional funds that the state could use to implement the HSTP, primarily through the development of Accountable Entities (AEs). AEs are integrated provider organizations responsible for total cost of care and health care outcomes for attributed populations and are the key drivers through which Rhode Island aims to achieve the greater accountability and value-based care laid out in the Reinventing Medicaid Act. MCOs contract with AEs through value-based purchasing strategies. The goal of coordination between MCOs and AEs is to enable improved case management and other member support resources to promote integrated, focused, and timely care that meets multi-faceted needs of members.

Three key components of Rhode Island's Health System Transformation Plan:

- Encouraging provider accountability
- Developing the next generation of managed care
- Building a robust health care workforce

In July 2018, EOHHS requested a 5-year extension of the existing Demonstration to further support and expand on the four principles of Medicaid reinvention.[17] Approved by CMS on December 20, 2018, the extension includes the following changes in the areas of eligibility, demonstration benefits, delivery system, and financing:

- **Medicaid eligibility** changes will streamline the beneficiary liability collection process, codify the needs-based criteria for service options available to adults with developmental and intellectual disabilities, and create a new eligibility pathway for children with disabilities to receive care in a residential treatment facility.
- **Changes in demonstration benefits** will improve access to a range of programs and cover more services, including members with substance use disorders, homebound individuals, and adults in need of home- and community-based support services.
- **Delivery system enhancements** include a pilot project which will allow Medicaid dental providers to bill for time related to improving appointment compliance, care coordination, motivational interviewing, and patient education. The pilot will address social determinants of

health that affect compliance with appointments and treatment recommendations, improving oral health outcomes, and improving member experience.

- **Demonstration financing** changes include the following: 1) an alternative payment methodology (APM) for personal care and homemaker services; 2) an extension of the DSHP authority, which funds the HSTP, through December 31, 2020; and 3) waiving the IMD exclusion to improve access to substance use treatment.

Since approval of the extended Demonstration in December 2018, CMS has approved a number of amendments requested by EOHHS, including updates to expenditure authorities, approval of federal financial participation (FFP) for home stabilization services and telephonic psychiatric consultation,[18] and considerations for Demonstration changes as a result of the COVID-19 pandemic.[19]

Goals of the Demonstration

Building off the work completed by Rhode Island's Working Group to Reinvent Medicaid as described above, Rhode Island's Comprehensive Demonstration seeks to address service gaps and other issues identified by the Working Group by improving coordinated, cost-effective, person-centered health care. The four main goals of the Demonstration align with the principles identified by the Working Group and are described in more detail below.

Pay for value, not volume. The Demonstration promotes the principle of "pay for value, not volume" by transitioning Rhode Island's Medicaid program away from FFS models toward value-based care, establishing Medicaid-wide population health targets tied to payments, and maintaining and expanding excellence in program design and outcomes. AEs are the primary vehicle driving these changes via a population health approach and facilitation of partnerships among MCOs, providers, and Rhode Island Medicaid. **Exhibit 1.2.1** presents specific strategies identified by EOHHS for working towards each goal under this principle.

AEs shift care to **value based payment**, increase focus on **total cost of care**, create **new forms of organization** to incentivize common enterprise, improve **care integration,** build **interdisciplinary capacity,** and integrate **advanced data capabilities**.

Exhibit 1.2.1. Goals and Strategies for Principle 1 (Pay for Value, Not Volume)[20]

GOAL 1: Substantially transition away from fee-for-service models to a system where members get their care through provider organizations that are accountable for the quality, health outcomes, and total cost of care for their members.
▪ Strategy 1: Increase the percent of members attributed to AEs ▪ Strategy 2: Continue to support HSTP to move towards greater provider accountability
GOAL 2: Define Medicaid-wide population health targets, and, where possible, tie them to payments.
▪ Strategy 3: Support AE measure development and tracking
GOAL 3: Maintain and expand on our record of excellence – including our #1 ranking – on delivering care to children.
▪ Strategy 4: Pilot a dental case management program ▪ Strategy 5: Cover family home visiting programs to improve birth and early childhood outcomes ▪ Strategy 6: Continue support for children's dental care through RIte Smiles

▪ Strategy 7: Support the education and training of the health care workforce to ensure those providing care to Medicaid members are adequately prepared

SOURCE: 1115 Waiver Driver Diagram (EOHHS)

Coordinate physical, behavioral, and long-term health care. The Demonstration aims to increase access to critical levels of care for opioid use disorder (OUD) and other substance use disorders (SUD), increase the use of evidence-based and SUD specific patient placement criteria, and set state-wide standards for residential treatment provider qualifications.[21] The extension seeks to improve coordination of health care by maximizing enrollment in integrated care delivery systems, implementing coordinated accountable care for high-cost/high-need populations, ensuring access to high-quality primary care, and leveraging health information systems. In the extension, the state also received authority for several critical programs to improve access to cost-effective, high-quality, "whole person" integrated care. **Exhibit 1.2.2** shows strategies identified by EOHHS as potential drivers of transformation to coordinate physical, behavioral, and long-term care.

Exhibit 1.2.2. Goals and Strategies for Principle 2 (Coordinate Physical, Behavioral, and Long-Term Health Care)

GOAL 4: Maximize enrollment in integrated care delivery systems
▪ Strategy 1: Incentivize the establishment, growth, and participation of AEs through HSTP funding opportunities
GOAL 5: Implement coordinated, accountable care for high-cost/high-need populations
▪ Strategy 2: Address gaps in treatment for adults with special health care needs by covering home-based therapeutic services, life skills training, and other evidence-based practices ▪ Strategy 3: Support parents and youth navigating behavioral health challenges through coverage of Peer Support Services ▪ Strategy 4: Better support primary care physicians by allowing psychiatric consultation in primary care settings
GOAL 6: Ensure access to high-quality primary care
▪ Strategy 5: Provide access to care for homebound individuals by reimbursing home-based primary care services
GOAL 7: Leverage health information systems to ensure quality, coordinated care
▪ Strategy 6: Support AEs in HIT development/interoperability through HSTP funding sources

SOURCE: 1115 Waiver Driver Diagram (EOHHS)

Rebalance the delivery system away from high-cost settings. To facilitate the shift away from high-cost institutional settings and to community-based care, EOHHS designed a long-term services and supports (LTSS) Alternative Payment Methodology (APM) Program focused specifically on the home and community-based services needed to prevent the Medicaid-eligible population from needing institutional LTSS.[21] The Program aims to encourage and enable LTSS eligible and aging populations to live successfully in their communities, improve and ensure equitable access to home and community-based services (HCBS) that prevent LTSS eligible populations from needing institutional LTSS, and foster a sustainable network of high quality HCBS providers that are equipped to meet the diverse needs of LTSS members. The LTSS APM will launch in July 2022 as an 18-month pilot program. The full Program is expected to launch in January 2024, and run for four years, through December 2027.

EOHHS anticipates that the LTSS APM will ultimately be integrated with the Comprehensive AEs to better provide an integrated and accountable care network for members. **Exhibit 1.2.3** shows strategies identified by EOHHS as potential drivers of transformation to rebalance the delivery system away from high-cost settings.

Exhibit 1.2.3. Goals and Strategies for Principle 3 (Rebalance the Delivery System Away from High-Cost Settings)

GOAL 8: Shift Medicaid expenditures from high-cost institutional settings to community-based settings
▪ Strategy 1: Provide BH crisis services to divert ED visits and ensure members are connected to appropriate levels of care ▪ Strategy 2: Streamlined/expedited eligibility for LTSS to expand the array of Home and Community-Based Services offered to members with an institutional level of care, or those at risk of needing an institutional level of care ▪ Strategy 3: Modernize Home- and Community-Based Services (HCBS)benefit package and service definitions ▪ Strategy 4: Expand the types of covered non-recurring, set-up expenses to improve transitions between care settings ▪ Strategy 5: Support and expand self-directed models of care ▪ Strategy 6: Promote socialization, long-term recovery, wellness, self-advocacy, and community connections for individuals with chronic conditions through the services of peer recovery specialists ▪ Strategy 7: Allow MCOs the flexibility to provide additional, value-add services
GOAL 9: Encourage the development of accountable entities for integrated long-term care
▪ Strategy 8: Develop alternative payment methodologies for home care providers

SOURCE: 1115 Waiver Driver Diagram (EOHHS)

Promote efficiency, transparency, and flexibility. Establishing an environment that promotes flexibility and transparency within the systems and structures delivering health care in Rhode Island is an essential component of reform (**Exhibit 1.2.4**). Improving operational efficiency will include the development of resources and capacity within state government to adequately oversee its health care system partners and drive system change.

Exhibit 1.2.4. Goals and Strategies for Principle 4 (Promote Efficiency, Transparency, and Flexibility)

GOAL 10: Improve operational efficiency
▪ Strategy 1: Collect member liability directly from the member to reduce provider burden and improve program integrity ▪ Strategy 2: Shortened application for expedited eligibility for LTSS

SOURCE: 1115 Waiver Driver Diagram (EOHHS)

New Demonstration Benefits and Programs

The 2018 extension for Rhode Island's Comprehensive Demonstration includes several new programs and benefits for members, which will be the focus of this evaluation. Nine new programs, described briefly below, were slated for implementation in the Demonstration. Of these, five have been implemented to date and will be included in this interim evaluation report. Four of the programs are not

a focus of the interim evaluation because they have not been implemented or, in the case of the Home- and Community-Based Services Benefit Package, no new services were established under CMS' approved language. If any of these four programs are funded under the Demonstration in future years, they will be included in the Summative Evaluation Report.

Accountable Entities Program. The Accountable Entities (AE) Program is a critical aspect of Rhode Island's HSTP, which was implemented in 2018 and is the primary driver for health system transformation for Rhode Island Medicaid's program. AEs function as integrated provider organizations that are financially responsible for the total cost of care, health care quality, and outcomes among their attributed populations. Alternative payment models are established between MCO health plans and AEs through the development of value-based contracts. By September 2021, EOHHS had certified seven AEs serving 209,188 attributed Medicaid members. The process by which Medicaid members are attributed to AEs is described in more detail in Chapter 3. Recognizing that success hinges on having the appropriate workforce in place, AEs also leverage the state's Health Workforce Transformation project, which supports the establishment of AEs and the development of education and training programs to build career pathways to AEs and capacities for AEs. See Chapter 3 for additional information and evaluation findings for the AE Program.

Behavioral Health Link (BH Link). The BH Link Program began in 2019, incorporating a triage center and hotline to provide immediate assistance and support to patients seeking crisis stabilization and short-term treatment for behavioral health needs, including mental health and substance use disorders. It seeks to reduce ED visits related to mental health conditions by Rhode Island Medicaid members and to provide responsive treatment services from BHDDH-licensed Behavioral Healthcare Organization staff to improve outcomes. Beginning on January 29, 2020, the triage center began billing using a CMS-approved bundled rate billing methodology that can be billed once daily per member. Treatments provided include but are not limited to physician services, medication treatment, skilled nursing care, services from mental health professionals, comprehensive assessment and triage, and crisis stabilization. See Chapter 4 for additional information and evaluation findings for BH Link.

Piloting Dental Case Management (DCM). The DCM Pilot Program was conducted in 2019 and was modeled after similar programs that had positive outcomes in other states. It permitted six Rhode Island dental practices, including private practices, hospital-based clinics, and federally qualified health centers (FQHCs), to participate in a demonstration of the impact of four new dental case management Current Procedural Terminology (CPT) codes. The new codes address appointment compliance barriers, care coordination, motivational interviewing, and patient education to improve oral health literacy. The goals of the program were to address the social determinants of health that affect compliance, as well as to improve member experience, member oral health outcomes, and provider experience (e.g., fewer no-shows and broken appointments, greater chance of improvement to oral health). See Chapter 5 for additional information and evaluation findings for the DCM Pilot Program.

Promoting Access to Appropriate, High-Quality Substance Use Treatment by Waiving the Institutions of Mental Disease (IMD) Exclusion. The IMD exclusion was implemented under the Demonstration in 2019. Previously, federal financial participation excludes individuals aged 22-64 years old residing in IMDs. This exclusion has resulted in 1) Medicaid enrollees being treated in hospital emergency

departments, which are more expensive and less prepared for mental health/substance abuse; 2) undermined continuity of care efforts; 3) limited access to substance use treatment programs and constrained Medicaid-funded services and supports; and 4) parity concerns. This program waives this IMD exclusion, with the goal of allowing RI to maintain and enhance member access to SUD services in appropriate settings. See Chapter 6 for additional information and evaluation findings for the IMD exclusion.

Peer Recovery Specialist (PRS) and Family/Youth Support Partners (FYSP) Programs. The PRS and FYSP programs, which secured additional federal matching funds in 2019, aim to provide individuals with an enhanced support system to develop healthy living skills. As part of the programs, a PRS or FYSP works with members to offer the skillset and unique vantage point of someone who has succeeded in managing a serious behavioral health condition or developmental disability, or is an adult with personal experience caring for a child or other family member with a similar mental illness and/or substance use disorder. The key objective of the PRS program is to provide individuals who are experiencing or at risk for hospitalization, overdose, or homelessness, or were recently released from institutions (e.g., hospital, prison) with a support system to develop and learn healthy living skills. Interventions promote socialization, long-term recovery, wellness, self-advocacy, and connections to the community. The FYSP program offers services to children under 21 years of age and their caregivers to help stabilize the child with behavioral health disorder(s) or developmental disabilities and promote the well-being of the child and family. Target outcomes include improved socialization, long-term recovery, wellness self-advocacy, and connection to the community. Additional target outcomes include the treatment of mental health and/or substance use disorders and residing in the community rather than being institutionalized. See Chapter 7 for additional information and evaluation findings for the PRS/FYSP programs.

Covering Family Home Visiting Programs to Improve Birth and Early Childhood Outcomes *(not included in this report)*. Although not yet implemented as funded under this Demonstration, this program targets Medicaid-eligible pregnant women, and children younger than five years old, who are at-risk for adverse health, behavioral, and educational outcomes to be provided evidence-based home visiting services. Evidence-based tools will be used to identify risk for poor outcomes, and families with multiple risk factors for poor outcomes will be prioritized for services. The home visits are designed to improve maternal and child health outcomes, encourage positive parenting, and promote child development and school readiness. Because this program has not yet been implemented, findings are not included in this evaluation report.

Supporting Home- and Community-Based Therapeutic Services for the Adult Population (*not included in this report)*. Although not yet implemented pending additional funding support, this program is intended to provide home- and community-based therapeutic services to Medicaid members aged 21 or older with at least one of the following: 1) a chronic condition, 2) a behavioral health diagnosis, 3) a neurological diagnosis, or 4) a significant impairment in functioning level determined by a validated screening tool. This program aims to address the treatment gaps that exist due to Rhode Island's fragmented system of population-specific treatment services between child- and adult-eligible services. Expanding eligibility to include adults will help young adults transition from the child system to the adult system. The program may improve outcomes for children and increase access to support

services for 16- to 25-year-olds at risk for developing a serious mental health or substance use condition. Because this program has not yet been implemented, findings are not included in this evaluation report.

Improving Access to Care for Homebound Individuals (*not included in this report)*. Although not yet implemented, this program will pay for home-based primary care services for Medicaid-eligible individuals who are homebound, have functional limitations that make it difficult to access office-based primary care, or for whom routine office-based primary care is not effective due to their complex medical, social, and/or behavioral health conditions. This program aims to increase access and utilization of primary care services by those individuals who are homebound. At the present time, there are no plans to implement this program. Because this program has not yet been implemented, findings are not included in this evaluation report.

Modernizing the Preventive and Core Home- and Community-Based Services Benefit Package (*not included in this report)*. Because of an increase in the aging population and continued increase in total expenses for nursing homes, this program is intended to redesign home- and community-based services (HCBS) coverage. The proposed plan included four key parts: 1) eliminating selected HCBS that are no longer needed as they are now State Plan benefits, 2) broadening the range of needs-based Preventive and Core HCBS, 3) updating definitions of the existing benefits, and 4) instituting authority to cap the amount or duration of Preventive HCBS based on need and mandating cost-sharing for Preventive HCBS. This program was not ultimately implemented, as there were no new services under transitions that EOHHS will add given the language in the CMS-approved waiver.

Key Demonstration Components Addressing Substance Use Disorder

The Department of Behavioral Healthcare, Developmental Disabilities, and Hospitals (BHDDH) oversees substance use disorder (SUD) treatment services across the continuum of care in Rhode Island, including:

- Outpatient services
- Intensive outpatient care
- Medication-assisted treatment (MAT)
- Residential and inpatient care
- Medically supervised withdrawal management

BHDDH also oversees prevention and recovery-oriented services such as Peer Recovery Specialist services and grant-funded Recovery Centers and Housing. Rhode Island has made great progress in serving individuals with SUD and Opioid Use Disorder (OUD) through these services; however, the continuing opioid crisis in the state calls for greater access to prevention and treatment. The Rhode Island Overdose Prevention and Intervention Task Force created an action plan to address the state's overdose crisis focused on prevention, rescue, treatment and recovery, and public education/outreach to reduce stigma; however, work remains to ensure that Medicaid beneficiaries with SUD and mental health (MH) conditions receive the full continuum of care. Priority activities addressed in the waiver include:

- Increasing access to peer recovery specialists,
- Establishing Behavioral Health Link triage centers,
- Hotline and mobile outreach,
- Waiving the Institutions of Mental Disease (IMD) rule for SUD to increase capacity at residential facilities.

The SUD Implementation Plan details the strategic approach and project implementation activities associated with achieving the following milestones:

- **Milestone #1. Access to critical levels of care for OUD and SUD** including outpatient and intensive outpatient services, medication-assisted treatment (MAT), residential and inpatient settings, medically supervised withdrawal management
- **Milestone #2. Widespread use of evidence-based, SUD-specific patient placement criteria** including consistent, evidence-based assessment of SUD treatment needs and utilization management approaches
- **Milestone #3. Use of nationally recognized, evidence-based, SUD program standards to set residential treatment provider qualifications** including implementing a state process for reviewing providers to assure compliance and requiring residential treatment facilities offer MAT on-site or facilitate off-site access
- **Milestone #4. Sufficient provider capacity at each level of care, including MAT,** informed by an assessment of the availability of and gaps among providers enrolled in Medicaid and accepting new patients in critical levels of care
- **Milestone #5. Implementation of comprehensive treatment and prevention strategies to address opioid abuse and OUD**, including implementation of opioid prescribing guidelines, expanded coverage of and access to naloxone for overdose reversal, and implementation of strategies to improve prescription drug monitoring programs
- **Milestone #6. Improved care coordination and transitions between levels of care**, including implementation of policies to ensure residential and inpatient facilities link members with community-based services and supports following facility stays.

Impact of COVID-19 on Rhode Island's Medicaid Program and the Demonstration

Over 79 million Americans have contracted COVID, with approximately 973,451 deaths as of March 2022.[22] As of April 2022, Rhode Island has experienced 362,000 total positive cases and over 3,500 deaths.[23] The pervasive impact of COVID-19 on the nation's health care system and individuals' quality of life has been unprecedented. Negative impacts from COVID-19 have been disproportionately borne by some racial and ethnic minority groups due to underlying health and social inequities.[24] The importance of public health and social measures and community engagement in limiting the transmission of COVID-19 and reducing poor health and mortality outcomes has been well-established.[25]

Throughout the pandemic, the Medicaid program has monitored testing, case identification, hospitalizations and death among Medicaid members compared to the general population. The primary purpose of this initiative is to be sure that Medicaid members are being adequately tested and that positive cases are being referred to appropriate treatment. Overall, the adequacy of testing and case

identification among Medicaid members has been comparable to the general population. However, Medicaid members have experienced a disproportionate share of hospitalizations and deaths. In addition, vaccinations in Medicaid have lagged behind the general population.[26]

The Rhode Island Department of Health proactively established various policies and developed responsive resources to promote education, prevention, and treatment of COVID-19 in the community. For instance, a COVID-19 Informational Hotline was established to complement the department's dedicated COVID-19 website, which hosts relevant information and resources on topics such as vaccination requirements and treatment.[27] Rhode Island also demonstrated its commitment to equitable COVID-19 prevention and treatment across all individuals and communities. For instance, the state implemented a 'Hard-Hit Community Vaccination Strategy' to address disparities in vaccination rates in certain geographies and developed a COVID-19 Risk Assessment Protocol based on CDC guidance to measure risk on a county basis.

In March 2020, EOHHS submitted a request for an amendment to the existing Comprehensive Demonstration to ensure that Medicaid members continued to receive medically indicated Medicaid-covered services while minimizing COVID-19 exposure for patients and staff. Overarching goals of the waiver included: limiting in-person meetings for person-centered care to reduce transmission; facilitating access to necessary institutional and home- and community-based care; and increasing access to COVID-19 testing and treatment. The goals and elements of this Demonstration amendment are described in more detail below.[28]

- Prevent transmission of COVID-19 to workers and vulnerable Medicaid members by a) limiting in-person meetings and care, b) extending level of care authorizations, and c) modifying level of care determination assessment procedures.
- Facilitate access to COVID-19 testing and treatment while reducing exposure to health care workers and beneficiaries by covering telephone triage for COVID-19 treatment.
- Utilize limited staff resources to focus on the most medically fragile members by a) extending the time for 12-month reviews of person-centered plans, and b) limiting non-emergency medical transportation (NEMT) to only appointments that are critical to the member's health.

During the COVID-19 pandemic, EOHHS continued normal processes for the Medicaid under the Demonstration, resources permitting. However, shifts in priorities and staffing occurred due to the required work to address the pandemic and its effect on the Medicaid program. Across the state, resources were redirected to address the pandemic and support state public health efforts. The COVID-19 pandemic also had discernible impacts on several Demonstration programs, including: 1) delaying meetings or activities, 2) shifting state public health communication priorities, and 3) affecting SUD technical assistance and training content for providers to include a primary focus on COVID-19. As of March 18, 2020, Rhode Island reimbursed for clinically appropriate, medically necessary covered services to be provided via telehealth, including behavioral health services under fee-for service and managed care. These reimbursable telehealth services included services provided by phone as well as non-HIPAA compliant videoconferencing services (e.g., Apple FaceTime, Google Hangouts) to enable greater access to care during the pandemic.[29] Due to the widespread impact of the COVID-19 pandemic on individuals, providers, health care systems, and communities, it is not possible to assess the direct

impact of COVID-19 on Demonstration goals or individual outcome measures. In our evaluation, we highlight the importance of understanding contextual factors and incorporate consideration of the impact of COVID-19 on communities, individuals, and providers in the interpretation of our findings. Given the disproportionate share of the disease burden among Medicaid patients, extensive oversight and monitoring initiatives were implemented with the MCO to address service gaps in the Medicaid population. See Chapter 2 for additional methodological updates we made to account for the COVID-19 pandemic.

1.3 Overview of Independent Evaluation

In the years since the approval of the Demonstration's extension to 2023 and the renewed focus on the four principles set forth in the Reinventing Medicaid Act of 2015, Rhode Island has continued to focus on the principles and goals outlined in its initial vision. This is a pivotal time for Rhode Island and one which highlights the critical importance of a rigorous and comprehensive evaluation. An evaluation provides the tools to enable ongoing feedback that informs improvements to the program and fosters sustainability for the long-term benefit of the State and its population.

5 Demonstration Programs are Included in NORC's Interim Evaluation Report:

- Accountable Entities Program
- Behavioral Health Link
- Dental Case Management Pilot
- Waiver of the Institutions of Mental Disease Exclusion
- Peer Recovery Specialist and Family/Youth Support Partners Programs

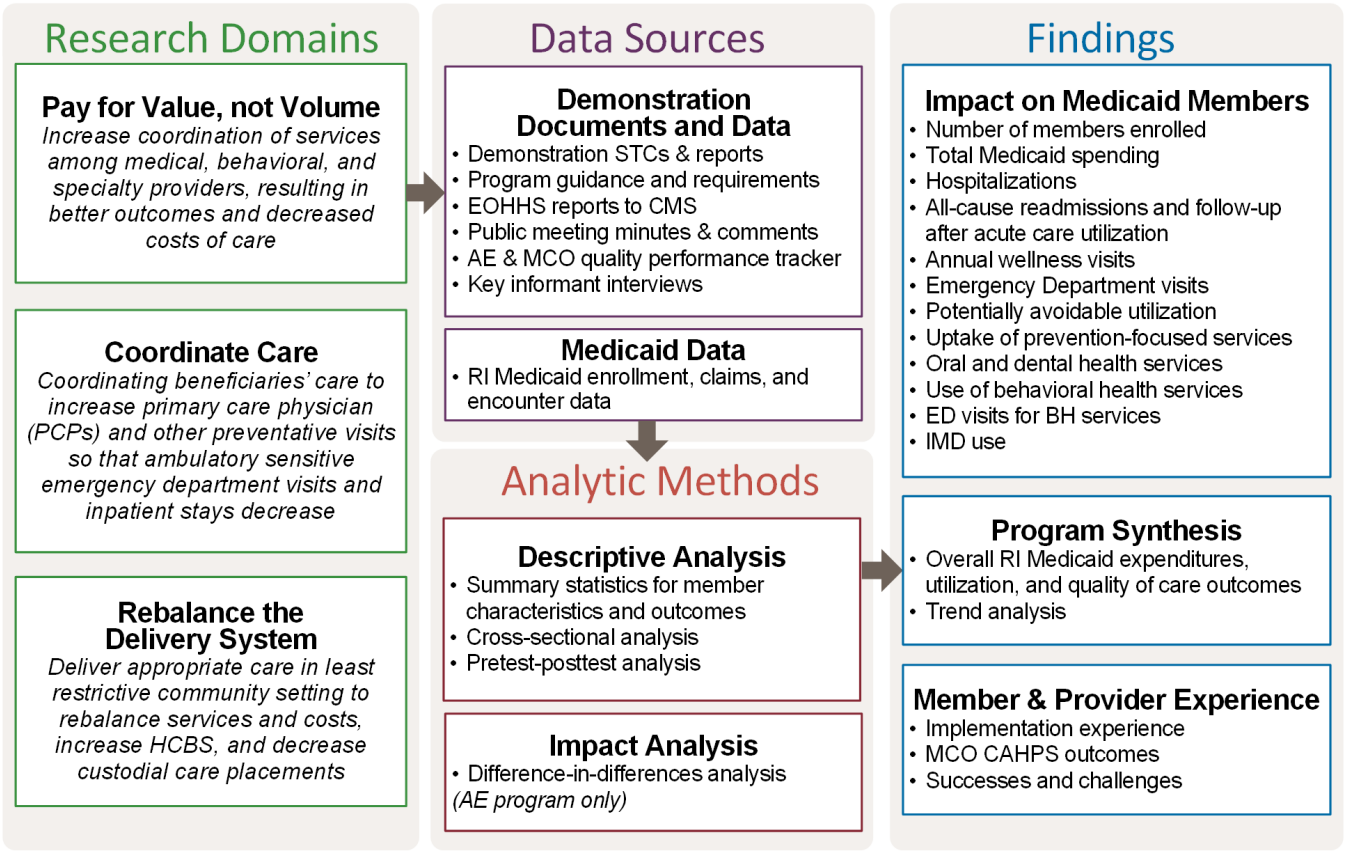
The evaluation of this Demonstration waiver extension is primarily focused on assessing three of the four principles of transformation upon which this Demonstration is based:

- Pay for value, not volume
- Improve coordination of physical, behavioral, and long-term health care
- Rebalance the delivery system away from high-cost settings.

The fourth principle (promote efficiency, transparency, and flexibility) is outside the scope of NORC's evaluation. These three principles guide the framing of the research questions and the selection of data sources, measures, analytic approaches, and other aspects of this evaluation design plan. We will indirectly address the state's goal to promote efficiency, transparency, and flexibility by assessing the three primary outcome domains.

Rhode Island submitted a draft evaluation design for the overall Demonstration to CMS in June 2019 and received CMS comments in October 2019. Rhode Island responded to comments and submitted revised versions of the evaluation design to CMS in November 2019. This was followed by one additional round of CMS feedback (received January 2020) and submission of a revised evaluation design (February 2020). The final evaluation design, which was approved by CMS on April 15, 2020, can be accessed directly through the Medicaid website.[30] **Exhibit 1.3.1** presents an overview our evaluation approach to addressing these three research domains, including data sources, analyses, and categories of key findings.

Exhibit 1.3.1. Evaluation Approach Overview



Evaluation Questions

Exhibit 1.3.2 presents evaluation hypotheses and research questions aligned with each Demonstration principle. Program-specific evaluation hypotheses and research questions, alongside additional information about the programs such as program-specific goals, relevant performance metrics, and descriptions of the target population, can be found in each program's dedicated chapter (Chapters 3-7).

Exhibit 1.3.2. Evaluation Hypotheses and Research Questions, by Demonstration Principle

Principle 1: Pay for value, not volume	
Evaluation Hypothesis	*The Demonstration will reduce utilization and overall Medicaid spending while maintaining quality of care for RI Medicaid members*
Research Questions	▪ What percentage of Medicaid members are attributed to each Demonstration program? ▪ What are the trends in spending, utilization, and quality of care for members in each Demonstration program? ▪ What are the trends in spending, utilization, and quality of care for all Medicaid members in the Demonstration? ▪ What is the impact on spending, utilization, and quality of care for AE-attributed members? ▪ What is the experience of care for members receiving services under the Demonstration? Are they satisfied with their care?
Principle 2: Improve coordination of physical, behavioral, and long-term health care	

Evaluation Hypothesis	*The Demonstration will increase coordination among different care types, leading to better health outcomes for RI Medicaid members*
Research Questions	▪ Does better care integration reduce high-cost care for members? ▪ To what extent has the Demonstration integrated BH and SUD care into medical care? How has this affected health outcomes and BH/SUD treatment uptake for RI Medicaid members? ▪ Does the Demonstration increase uptake of prevention-focused resources into routine medical care for high-cost/high-need RI Medicaid members?
Principle 3: Rebalance the delivery system away from high-cost settings	
Evaluation Hypothesis	*The Demonstration will shift care away from high-cost settings (e.g., the ED), reducing spending while increasing utilization in lower-cost settings.*
Research Questions	▪ What are the trends in ED visits and IMD service use for members accessing behavioral health services?

Evaluation Methods

We used secondary data to capture the characteristics of the demonstration programs, characteristics of members served, and the impact on health and quality outcomes. First, we conducted extensive document reviews, using waiver documentation, program documents (where available), and benchmark data from EOHHS to understand the complex demonstration programs that were funded and implemented in this waiver. We also conducted a limited number of in-person and virtual interviews with the EOHHS, BHDDH, and other relevant AE administrators to provide an overview of the state's existing programs and initiatives, including implementation challenges and facilitators. The goals of these interviews were to review progress on established SUD milestones, determine the priorities of each initiative, and contextualize SUD implementation activities within the broader health care environment.

To assess the demonstration programs' impact on cost, quality, and utilization, we used Rhode Island Medicaid eligibility files, claims, and encounter data. Impacts on key outcomes were measured at the program level as well as across the Demonstration. We also integrated EOHHS' MCO/AE quality performance tracker data and MCO-level CAHPS findings to identify contextual trends beyond what is captured in claims and encounter data. Although we used a similar process to evaluate each of the five waiver programs, we tailored the evaluations to reflect the specific attributes of each program as described in the Methodology section. The interim evaluation resulted in a synthesis of findings across programs including an analysis of overall trends in Medicaid spending, utilization, and quality of care before and after the waiver implementation dates, which takes into consideration the sum effect of all programs on Rhode Island Medicaid.

1.4 Overview of Interim Evaluation Report

This Interim Evaluation Report provides an overview of the evaluation methodology as well as detailed results across the five programs assessed. Chapter 2 provides a detailed description of the methodology applied to evaluate the Rhode Island Comprehensive Demonstration programs, including: 1) quantitative and qualitative data sources, 2) measurement time points and quasi-experimental

approaches applied, 3) analytic approaches to produce descriptive and impact assessment findings, and 4) project limitations. Chapters 3 through 7 present program-specific evaluation design information and findings, including evaluation hypotheses and outcomes, analytic strategy, empirical results, and a discussion of the results and implications contextualized broadly within the waiver program. Chapter 8 presents results and outcomes for the entire Medicaid population. Chapter 9 describes our future plans for the evaluation of Rhode Island's Comprehensive Demonstration, to be presented in the Summative Evaluation Report.

Chapter 2: Evaluation Methodology

In this chapter, we discuss NORC's evaluation approach, including data sources, analytic populations, descriptive assessments, impact assessments, evaluation measures, and limitations associated with our evaluation design. Throughout this report, we draw on data from the waiver documentation and associated data sources, claims and encounter datasets, and semi-structured in-person and virtual interviews with key informants. The report's evaluation approach is based on three key Demonstration principles (described in more detail in Chapter 1) that the Executive Office of Health and Human Services (EOHHS) has established as priorities, including:

- Pay for value, not volume
- Coordinate physical, behavioral, and long-term health care
- Rebalance the delivery system away from high-cost settings

These principles guide the framing of the research questions and the selection of data sources, measures, analytic approaches, and other aspects of NORC's evaluation of this waiver extension. The team also seeks to indirectly address a fourth principle: the state's goal to promote efficiency, transparency, and flexibility through the three key principles above. **Exhibit 2.1** provides a summary of the evaluation hypotheses and research questions, along with relevant outcome measures and analytic approaches, grouped under each of the three Demonstration principles that guide this evaluation.

Exhibit 2.1. Research Questions, Outcome Measures, and Analytic Approach

Research Question		Outcome Measures	Analytic Approach
Demonstration Principle 1: Pay for value, not volume			
Evaluation Hypothesis 1: The demonstration will reduce utilization and overall Medicaid spending while maintaining quality of care for Rhode Island Medicaid members			
1	What percentage of Medicaid members are attributed to each Demonstration program?	▪ Percent of RI Medicaid members enrolled	▪ Descriptive analysis
2	What are the trends in spending, utilization, and quality of care for Medicaid members in each Demonstration program?	▪ Total Medicaid spending ▪ Hospitalizations ▪ Readmissions ▪ ED Visits	▪ Descriptive trend analysis ▪ Pretest-posttest analysis ▪ Cross-sectional analysis
3	What are the trends in spending, utilization, and quality of care for all Medicaid members in the Demonstration?	▪ Total Medicaid spending ▪ Hospitalizations ▪ Readmissions ▪ ED Visits ▪ SUD-related Medicaid spending ▪ Annual wellness visits	▪ Descriptive trend analysis ▪ Difference-in-differences analysis

Research Question		Outcome Measures	Analytic Approach
4	What is the impact on spending, utilization, and quality of care for AE-attributed members?	▪ Spending, utilization, and quality measures	▪ Difference-in-differences
5	What is the experience of care for AE-attributed members? Are they satisfied with their care?	▪ MCO CAHPS measures	▪ Descriptive analysis
Demonstration Principle 2: Coordinate physical, behavioral, and long-term care			
Evaluation Hypothesis: The demonstration will increase coordination among different care types, leading to better health outcomes for RI Medicaid members.			
6	Does better care integration reduce high-cost care for members?	▪ Potentially avoidable ED use ▪ ED use among members with mental illness ▪ MCO CAHPS measures	▪ Descriptive analysis ▪ Difference-in-differences ▪ Pretest-posttest analysis ▪ Cross-sectional analysis
7	To what extent has the demonstrations integrated BH and SUD care into medical care? How has this affected health outcomes and BH/SUD treatment uptake for Medicaid members?	▪ Access to preventative/ambulatory health services ▪ Use of BH services ▪ ED visits for BH services ▪ Follow-up after ED visit for mental illness	▪ Descriptive analysis ▪ Pretest-posttest analysis ▪ Cross-sectional analysis
8	Does the demonstration increase uptake of prevention-focused resources into routine medical care for high-cost/high-need Medicaid members?	▪ Frequency of dental case management code usage ▪ Dental services	▪ Descriptive analysis ▪ Cross-sectional analysis
Demonstration Principle 3: Rebalance the delivery system away from high-cost settings			
Evaluation Hypothesis: The demonstration will shift care away from high-cost settings, reducing spending while increasing utilization in lower-cost settings.			
9	What are the trends in ED visits and IMD service use for members accessing behavioral health services?	▪ IMD service use ▪ Use of BH services ▪ ED visits for BH services	▪ Descriptive analysis ▪ Pretest-posttest analysis ▪ Cross-sectional analysis

NOTES: AE = Accountable Entity; BH = Behavioral Health; CAHPS = Consumer Assessment of Healthcare Providers and Systems ; ED = Emergency Department; IMD = Institutions of Mental Disease; MCO = Managed Care Organization; OUD = Opioid Use Disorder; SUD = Substance Use Disorder.

2.1 Data Sources

For this evaluation, we used three main data sources: Demonstration documentation and data, Medicaid claims and encounter data, and key informant interviews (**Exhibit 2.1.1**). Each of these sources are described in more detail below.

Exhibit 2.1.1. Evaluation Data Sources and Uses

Source	Uses
Demonstration documentation and data	▪ Identify Demonstration aims, drivers, implementation strategies, and areas of focus for Demonstration programs ▪ Characterize Demonstration programs and participants ▪ Assess AE and MCO quality performance over time ▪ Provide context for claims-based findings

Medicaid claims and encounter data	▪ Identify Rhode Island Medicaid members participating in waiver programs ▪ Describe sociodemographic characteristics for Medicaid members ▪ Assess claims-based outcomes of cost, utilization, and quality
Key informant interviews	▪ Understand early implementation of the AE program ▪ Conduct a mid-point assessment of Rhode Island's SUD programs included in the Demonstration ▪ Identify challenges associated with piloting the AE program and behavioral health/SUD programs ▪ Provide context for claims-based findings

Demonstration Documentation & Data

Demonstration documents detail state authority and program commitments for each program. Regulatory documents are available publicly on CMS' Medicaid page dedicated to the Rhode Island Comprehensive Demonstration, and AE program resources are publicly available on EOHHS' website.[31,32] The sources we identified included:

- Special Terms and Conditions (STCs) for Rhode Island's Comprehensive Section 1115 Demonstration (2013-2018)
- EOHHS' request Health System Transformation Program Demonstration Application (June 2016) and approval (April 2017)
- Rhode Island's Demonstration extension application (July 2018), approval (December 2018), and technical corrections (November 2019)
- Quarterly and annual operations reports submitted to CMS by EOHHS
- Quarterly budget neutrality reports submitted to CMS by EOHHS
- Demonstration amendments responding to the COVID-19 pandemic
- AE applications and application instructions
- AE documentation (attribution guidance, certification standards, incentive program requirements, total cost of care requirements, technical guidance, quality and outcome implementation manual)
- AE Implementation Manual and Roadmap
- AE pilot recommendation report
- AE guidance on social determinants of health
- Agendas and minutes from AE Stakeholder meetings and Health System Transformation Plan (HSTP) AE Advisory Committee meetings
- MCO CAHPS data, 2020-2021
- Quality performance tracking data for AEs, 2018-2020
- Public comments submitted in response to AE Roadmap and requirements documents
- Public presentations made by EOHHS and the Department of Behavioral Health, Developmental Disabilities, and Hospitals (BHDDH)
- Public documentation of behavioral health/SUD program resources and services

The NORC team conducted a comprehensive document review of these Demonstration documents to develop a better understanding of the aims, drivers, implementation strategies; areas of focus of each Demonstration program; characterizations of the programs and participants; additional context on AE

quality performance over time, and context for the claims-based findings. Our extensive document review provided a deeper understanding of the state's ongoing efforts and implementation of the Demonstration programs evaluated in this report.

Medicaid Claims & Encounter Data

NORC used Rhode Island's Medicaid enrollment, claims, and encounter data to assess the Demonstration's impact on health outcomes. Because Rhode Island expanded its Medicaid program in January 2014, this report includes post-expansion data from July 2014 through September 2021, although the evaluation of each Demonstration program applied a timeline specific to that program (see Chapters 3 through 7 for additional details).

Key Informant Interviews

As part of the evaluation work, NORC conducted two sets of key informant interviews. For each set of interviews, NORC collaborated with EOHHS and other Rhode Island agencies to develop the list of key informants and semi-structured interview guides for each stakeholder. **Exhibit 2.1.2** summarizes the stakeholders with which we conducted key informant interviews.

Exhibit 2.1.2. Stakeholder Interviewees

Agency	Stakeholders
Department of Behavioral Health, Developmental Disabilities, and Hospitals (BHDDH)	▪ Behavioral Health (BH) Division Director ▪ BH and Substance Use Disorder (SUD) Administrator ▪ Peer Recovery Specialist Project Manager ▪ Director of Healthcare Workforce Transformation ▪ Associate Director of Strategy and Financing ▪ Administrator of Research, Data Evaluation and Compliance ▪ Chief Human Services Policy & Systems Specialist
Executive Office of Health and Human Services (EOHHS)	▪ Medicaid Director ▪ Medicaid Accountable Entity Program Director ▪ Director of Managed Care ▪ Director of Policy & Delivery System Reform ▪ Associate Chief Financial Officer (CFO) ▪ Director of Community Investments ▪ Executive Director ▪ Project Manager ▪ HSTP Consultant
Rhode Island Department of Health (RIDOH)	▪ Communications Manager

The first set of interviews, conducted in February 2019 with EOHHS leadership and the AE program team, focused on the early implementation experience of HTSP program activities, particularly for AEs. These interviews focused on establishing an overview of the development of the HSTP and its goals,

the program structure (e.g., AE certification requirements, population-based accountability, and value-based purchasing), and key implementation challenges.

The second set of interviews, conducted from March to May 2020, focused specifically on implementation progress for the Demonstration's SUD programs, and were conducted with key staff at EOHHS, BHDDH, and other relevant stakeholders. Interviews were conducted both in-person and virtually (either via telephone or on Zoom, depending on the preference of the interviewee). The goals of each interview were to review progress on established milestones, determine the priorities of each initiative, and contextualize SUD implementation activities within the broader health care environment.

2.2 Analytic Populations

In this report, we evaluated select measures of Medicaid spending, utilization, and access to care. More information on the timeline and treatment and comparison group construction by program can be found below.

Baseline & Performance Periods

The baseline (pre-intervention) and performance period (post-intervention) varied based on the program. For our analysis of all Medicaid members, we used a three-year baseline (2016 through 2018) to capture trends in the years leading up to the Demonstration. For the AE program, we established a two-year baseline period beginning in July of 2014, but excluded the AE pilot period as an implementation ramp-up period. For other Demonstration programs where it was feasible to establish a baseline, we used two full years of pre-implementation data to balance recency of data with sample size considerations. **Exhibit 2.2.1** provides an overview of the baseline and performance period by program.

Exhibit 2.2.1. Baseline and Performance Years for Demonstration Programs

	2014	2015	2016	2017	2018	2019	2020	2021
AE Program		**Baseline** *Q3 2014 – Q2 2016*		**AE Pilot Period** *Q3 2016 – Q2 2018*		**Performance** *Q3 2018 – Q3 2021*		
DCM Pilot						**Performance** *2019*		
BH Link							**Performance** *Q1 2020 – Q3 2021*	
PRS/FYSP					**Baseline** *Q3 2017 – Q2 2019*		**Performance** *Q3 2019 – Q2 2021*	
IMD Excl. Waiver					**Baseline** *Q3 2017 – Q2 2019*		**Performance** *Q3 2019 – Q3 2021*	
All Medicaid Members				**Baseline** *Q1 2016 – Q4 2018*			**Performance** *Q1 2019 – Q3 2021*	

NOTES: AE = Accountable Entity; DCM = Dental Case Management; BH = Behavioral Health; PRS = Peer Recovery Specialists; FYSP = Family/Youth Support Partner; IMD = Institutions of Mental Disease. The AE Program is analyzed using a difference-in-differences design; BH Link and the DCM Pilot are analyzed using a cross-sectional design (performance period only), and PRS/FYSP and the IMD Exclusion Waiver are analyzed using a pretest-posttest design (no comparison group).

Treatment Group Identification

The identification of the treatment group is an important first step in the analysis of each program. Using each program's attribution rules and/or target population definitions, we defined program-specific treatment group members in the evaluation as participants who were enrolled in the corresponding program for each performance quarter and year. For the AE program, we used the MCO-provided flags in the Medicaid enrollment data, which indicate which of their members are attributed to an AE, to identify the AE treatment group. For all other programs, Rhode Island Medicaid members who received services from a particular program were identified from the claims based on documentation (e.g., diagnosis codes, visits to participating providers) provided by EOHHS. More details on the treatment groups by program and baseline or performance year can be found in **Exhibit 2.5**, and in each Demonstration program's dedicated chapter.

Comparison Group Construction

Based on sample size and target populations, it was possible to construct comparison groups for three of the five Demonstration programs in this report (the AE Program, BH Link, and the Dental Case Management pilot). To define inclusion and exclusion criteria for these program-specific comparison groups, we considered factors including sample size, data availability, and the comparability of the proposed comparison group to the target population based on observable characteristics. Due to the limited scope, broadly defined eligibility criteria, and the small number of participating enrollees the evaluation team, NORC, in collaboration with EOHHS, determined that comparison groups for the PRS and IMD exclusion waiver were not feasible. Additional details on the comparison group construction by program can be found in **Exhibit 2.2.2**.

Exhibit 2.2.2. Treatment and Comparison Group Definitions, by Demonstration Program

Program	Baseline Years	Performance Years
AE Program		
Treatment Group	▪ Rhode Island Medicaid-only members flagged as being in an AE by an MCO. ▪ Limited to members in expansion, Rite Care, and RHP populations, who were **attributed to an AE during the performance period**.	
Comparison Group	▪ Rhode Island Medicaid-only members in managed care, limited to members in expansion, Rite Care, and RHP population, who were **never attributed to an AE during the performance period**. ▪ Members enrolled in Rhody Health Options and who were ever attributed to an AE are excluded. Members treated by AE providers but not attributed to an AE are included.	
Dental Case Management		
Treatment Group	N/A	▪ Adult (ages 18+) Rhode Island Medicaid members in the FFS Medicaid dental delivery system, **seen by participating providers** in the performance period who **received services under**

		the 4 dental case management Current Procedural Terminology (CPT) codes.
Comparison Group	N/A	▪ Adult (ages 18+) Rhode Island Medicaid members in the FFS Medicaid dental delivery system, **seen by participating providers** in the performance period and who **did not receive services under the 4 dental case management CPT codes**.
BH Link		
Treatment Group	N/A	▪ Adult (ages 18+) Medicaid members **treated through the Behavioral Health Link triage center** during the performance period.
Comparison Group	N/A	▪ Adult (ages 18+) Medicaid members with one or more behavioral health conditions or diagnosed SUDs who were **not treated through the BH Link triage center** during the performance period.
PRS/FYSP Programs		
Treatment Group	▪ Medicaid members who accessed PRS or FYSP services during the performance period.	▪ Medicaid members accessing PRS or FYSP services during the performance period.
IMD Exclusion Waiver		
Treatment Group	▪ Medicaid members ages 21 to 64 years accessing IMDs for SUD treatment during the baseline period.	▪ Medicaid members ages 21 to 64 years accessing IMDs for SUD treatment during the performance period.
All Medicaid Members		
Treatment Group	▪ Members enrolled in Medicare for one or more months during the three years preceding the current Demonstration.	▪ Members enrolled in Medicare for one or more months during the current Demonstration period.

Addressing Selection Bias. Because enrollment in Demonstration programs is non-random, we assumed that members in the treatment group may be systematically different from those in the comparison group, a phenomenon known as selection bias. To obtain unbiased estimates from our analyses with comparison groups (the AE Program, BH Link, and the DCM Pilot), we addressed selection bias using propensity score weighting. First, we estimated the propensity score as the predicted probability of a member being in the treatment group using a logit model. Next, we computed propensity score weights for members in the treatment and comparison groups as the relative predicted probability of a member being in the treatment group. Members in the treatment group received a weight of $1/PS_i$, and members in the comparison group received a weight of $1/(1-PS_i)$, where PS_i is the predicted probability of the member being in the treatment group, given a set of observed covariates. The propensity score model included member-level sociodemographic characteristics and health status indicators, zip code-level community characteristics, and county-level COVID-19 burden. **Exhibit 2.3.2** summarizes the propensity score covariates used in each program's evaluation. In the Summative Evaluation Report, we will consider inclusion of additional covariates, including a variable indicating homelessness/housing status of Medicaid members.

Exhibit 2.2.3. Covariates Used to Estimate Propensity Scores and Risk-Adjusted Models

Variable	Definition	Source	AE	BH Link	DCM
Age	Member age	RI Medicaid enrollment data	X	X	X
Sex	Member self-reported sex	RI Medicaid enrollment data	X	X	X
Race/ethnicity	Member race/ethnicity	RI Medicaid enrollment data	X	X	X
Diabetes flag	Member diagnosis of diabetes in prior year	RI Medicaid claims and encounter data	X	X	X
Stroke/Transient Ischemic Attack (TIA) flag	Member diagnosis of stroke/TIA in prior year	RI Medicaid claims and encounter data	X	X	X
Acute Myocardial Infarction (AMI) flag	Member diagnosis of AMI in prior year	RI Medicaid claims and encounter data	X	X	X
Median household income	Median household income in member's zip code	ACS	X	X	X
Less than high school education	Percentage of member's zip code with less than a high school education	ACS	X	X	X
Percent under 100% federal poverty line	Percentage of member's zip code living below the federal poverty line	ACS	X	X	X
Receipt of SSI, TANF, SNAP in the Last 12 Months	Percent of households in member's zip code receiving SSI, SNAP, or Cash Public Assistance in the last 12 months	ACS	X	X	X
Unemployment rates	Percentage of enrollee's zip code that is currently unemployed	ACS	X	X	X
COVID-19 cases	Average number of cases in county per 1,000 (2020-2021 only)	PVI	X	X	X
COVID-19 deaths	Total number of deaths in county per 1,000 (2020-2021 only)	PVI	X	X	X
PVI score	Average PVI score in county (2020-2021 only)	PVI	X	X	X
Case fatality rate	Average case fatality rate in county (2020-2021 only)	PVI	X	X	X
Vaccinated rate	Percentage of county population vaccinated (2021 only)	PVI	X	X	X
BH diagnosis	Flag for behavioral health diagnosis	Medicaid claims and encounter data	X		
MCO	Categorical indicator for MCO enrollment	Medicaid claims and encounter data	X		
Line of business	Categorical indicator for Medicaid line of business	Medicaid claims and encounter data	X		
Integrated health home enrollment	Flag for enrollment in an integrated health home^	Medicaid claims and encounter data	X	X	

Variable	Definition	Source	AE	BH Link	DCM
SUD diagnosis	Flag for SUD diagnosis	Medicaid claims and encounter data		X	

NOTES: ACS = American Community Survey; PVI = Pandemic Vulnerability Index; SNAP = Supplemental Nutrition Assistance Program; SSI = Social Security Income; TANF = Temporary Assistance for Needy Families. ^The integrated health home flag does not include Medicaid members receiving assertive community treatment (ACT), which is provided for members with the most acute behavioral health conditions, outside of an integrated health home. Since only approximately one percent of Medicaid members in an integrated health home were also receiving ACT, this flag may not capture members with the most acute behavioral health needs.

2.3 Descriptive Assessments

To evaluate Rhode Island's Comprehensive Demonstration, the NORC team first conducted descriptive analyses for all five waiver programs, focusing on characterizing members in each program (and each program's comparison group and/or baseline period, as applicable), as well as trends in unadjusted (raw) spending, utilization, and quality outcomes. Summary statistics (e.g., means, frequencies) between the groups were compared using chi-squared tests for categorical variables and t-tests for continuous variables. The summary statistics characterize the members in each Demonstration program and informed the development of our impact analyses.

For BH Link, the DCM Pilot Program, the IMD Exclusion Waiver, and the PRS/FYSP Programs, we conducted additional descriptive analysis to characterize the performance on spending and utilization outcomes.‡ For these programs, we concluded that based on the program design and number of members in each program, it was not feasible to construct either a meaningful baseline period (BH Link, DCM) or an appropriate comparison group (PRS/FYSP program, IMD exclusion waiver). Due to these limitations, we performed cross-sectional analysis in the performance period or conducted a pretest-posttest analysis to explore the performance of the Demonstration programs. Each analysis was conducted in a risk-adjusted framework, accounting for key sociodemographic, health status, and area-level covariates. The methods used to conduct these analyses are summarized in **Exhibit 2.3.1** and described below. Results of our descriptive analyses are presented in tables and visuals in Chapters 3 through 7 for each program. All analyses were conducted using R version 4.1.2 and Stata version 17.0.

Exhibit 2.3.1. Descriptive Assessment Methods for Four Demonstration Programs

Program	Analysis Method	Level
BH Link	Cross-sectional analysis with treatment and propensity score-weighted comparison group	Member-quarter
DCM	Cross-sectional analysis with treatment and propensity score-weighted comparison group	Member-year
PRS/FYSP Programs	Pretest-posttest analysis (no comparison group)	Member-year
IMD Exclusion Waiver	Pretest-posttest analysis (no comparison group)	Member-quarter

‡ For the AE program, we were able to conduct impact analyses; see Section 2.4 for more details.

All Medicaid Members	Pretest-posttest (no comparison group)	Member-quarter

For each Demonstration program, we assessed six core outcomes: 1) percent of members participating, 2) total Medicaid spending, 3) hospitalizations, 4) annual wellness visit, 5) emergency department visits, and 6) all-cause readmissions. Additionally, we assessed a selected number of program-specific outcomes determined in collaboration with EOHHS. We synthesized findings from these analyses with additional findings from our review of Demonstration documents and data, key informant interviews, and quality performance data provided by EOHHS to contextualize the claims-based outcomes and discussed the overall impact of the Demonstration programs.

Cross-Sectional Analysis

For BH Link and the DCM pilot Demonstration programs, we conducted cross-sectional analyses to assess core and program-specific outcomes for the treatment and comparison groups in the performance (post-intervention) period. For BH Link, the performance period is from January 2020 through September 202; for the DCM pilot, the performance period is only calendar year 2019. For BH Link, the sample size allowed us to conduct quarterly cross-sectional analyses in the performance period (i.e., a serial cross-sectional analysis). Due to the small sample size in the DCM treatment group and the limited span of the performance period (one year), we were only able to conduct analysis aggregated to the member-year level.

Average outcomes in the performance period were estimated with a multivariate model, allowing comparisons between the treatment and comparison groups. We used multivariate generalized linear model regressions to describe changes in each outcome measure for the demonstration populations using the following equation:

$$g[(Y_{ijk})] = \beta_0 + \beta_1 Treat_j + \gamma Member_{ijk} + \pi Area_k$$

Where:

- Y_{ijk} is the outcome for the member *i* in treatment or comparison group *j*, in area *k* in the treatment or comparison group g *t*. We modeled Y_{ijk} with the appropriate distributional form and link function g(●), based on the distribution indicated by the Modified Park Test.
- $Treat_j$ is the binary indicator for the treatment group. The coefficient β_1 captures the mean of the difference between the treatment and comparison groups in the performance period.
- $Member_{ijk}$ and $Area_k$ are sets of member-level and area-level characteristics with coefficient sets γ and π, respectively.

Pretest-Posttest Analysis

For the PRS/FYSP programs and IMD exclusion waiver, we conducted a pretest-posttest analysis that allowed us to observe the outcomes among members in each program in a two-year baseline period (July 2017 through June 2019) before these Demonstration programs went into effect. No comparison groups are included in the pretest-posttest analyses. Pretest-posttest analyses allow us to compare the outcomes for members covered under the PRS/FYSP programs and the IMD Exclusion waiver program

before and assess improvements in performance over those time periods. We used multivariate generalized linear model regressions to characterize changes in each outcome measure using the following equation:

$$g[(Y_{ikt})] = \beta_0 + \beta_1 Post_t + \gamma Member_{ikt} + \pi Area_k$$

Where:

- Y_{ikt} is the outcome for the member *i* in area *k* and time period (baseline or performance) *t*. We modeled Y_{ijt} with the appropriate distributional form and link function g(●), based on the distribution indicated by the Modified Park Test.
- $Post_j$ is the binary indicator for the performance (post-intervention) time period. The coefficient β_1 captures the mean of the difference between the baseline and performance periods for the treatment group.
- $Member_{ijkt}$ and $Area_k$ are sets of member-level and area-level characteristics with coefficient sets γ and π, respectively.

2.4 Impact Assessments

The AE Program, the program with the largest number of members attributed each quarter, is the only Demonstration program for which it was feasible to conduct an impact analysis. After conducting descriptive analyses for the AE Program, we assessed its impact using a difference-in-differences (DID) design, focusing on the six core Demonstration measures as well as five additional outcomes that align with the AE Program's goals. The DID analysis was conducted in a risk-adjusted framework, accounting for key sociodemographic, health status, and area-level covariates. Additional details on the DID methodology are described below.

Difference-in-Differences Analysis

We used a DID model to conduct impact analyses for the AE Program. The DID design adjusts for time-invariant characteristics of intervention and control groups, or factors that vary over time and affect both groups in the same manner. For each outcome measure, we chose the appropriate model specification based on the observed distribution of the outcome, using the modified Park test.[33] Next, we used generalized linear models to estimate the impact of AEs, including relevant covariates based on our empirical model of causality, and adjusting standard errors to account for clustering of observations within AEs. We used DID regressions to estimate the effect of the AE Program on each outcome measure using the following equation:

$$g[(Y_{ijkt})] = \beta_0 + \beta_1 AE_j + \delta_t Quarter_t + \theta AE_j \bullet Quarter_t \bullet Post + \gamma Member_{ijkt} + \pi Area_k$$

Where:

- Y_{ijt} is the outcome for the member *i* in AE or comparison group *j*, in area *k* and quarter *t*. We modeled Y_{ijt} with the appropriate distributional form and link function g(●), based on the distribution indicated by the Modified Park Test.

- AE_j is the binary indicator for a member attributed to an AE in either a baseline or performance quarter. The coefficient β_1 captures the mean of the difference between the AE and comparison group that remains constant over time.
- $Quarter_t$ represents fixed effects for calendar quarter. The coefficients δ_t capture changes in the AE and comparison group over time, before and after the implementation of the AE Program. For the AE Program analysis, the pilot period (July 2016 – June 2018) is considered an implementation ramp-up period and is excluded from both baseline and performance periods.
- The coefficient θ represents the DID estimate for the $AE_j \bullet Quarter_t \bullet Post$, the binary indicator for a member who is in the AE group in a given performance (post-intervention) quarter.
- $Member_{ijkt}$ and $Area_k$ are sets of member- and area-level characteristics with coefficient sets γ and π, respectively.

Examining Parallel Trends for the DID Model. An assumption of the DID approach is that the impact of the treatment can be inferred because the treatment and comparison group in the baseline had constant and parallel trajectories. In other words, the rate of change observed in the baseline is the same for the AE and comparison groups and would hold constant in the post period in the absence of the intervention. To address these challenges, we employed a flexible DID framework that allowed groups to have differing baseline trends for outcomes. The flexible DID framework allowed us to relax the parallel trends assumption that is required for producing unbiased DID impact estimates. Instead, this approach assumes that the differential trends in the baseline period take a linear form and that they would have continued to persist in the absence of the AE Program.

Sensitivity Analyses. To test the robustness of the total Medicaid spending impact estimate, we conducted a sensitivity analysis that accounts for the cap on total cost of care for an individual member in a single year included in the AE Program's TCOC methodology. For this sensitivity analysis, the total Medicaid spending outcome is capped at the following values, based on state fiscal year (SFY):

- SFY 2019 (July 1, 2018 – June 30, 2019): $104,800
- SFY 2020 (July 1, 2019 – June 30, 2020): $109,800
- SFY 2021 (July 1, 2020 – June 30, 2021): $113,500
- SFY 2022 (July 1, 2021 – June 30, 2022): $119,600

Subgroup Analyses. Individual responses to the AE Program may differ from the average treatment effect for a variety of reasons; therefore, it is important to examine whether the effect of a program varies across member subgroups. We used multivariate generalized linear models to estimate the risk-adjusted means for spending and utilization outcomes in the performance period for subgroups of AE and race/ethnicity (defined as white/non-White due to sample size constraints), which allows us to descriptively assess the performance of the AE program across these groups.

2.5 Evaluation Measures

Using Rhode Island Medicaid claims and encounter data, we constructed measures to describe the Demonstration program member populations and assess the Demonstration's impact on cost,

utilization, and quality of care outcomes. To estimate the impact of the Demonstration program, we assessed a standard set of six core measures for each program, as well as additional program-specific measures as data and resources allowed.

Descriptive Measures

We used Rhode Island's Medicaid enrollment, claims, and encounter data to characterize members and outcomes in each of the Demonstration programs. **Exhibit 2.5.1** lists the descriptive measures in three domains (sociodemographic characteristics, zip code-level characteristics, and COVID-19 county-level characteristics) that we assessed for each program, contingent on data availability and sample size.

Exhibit 2.5.1. Descriptive Measures Used to Assess Demonstration Programs

Sociodemographic Characteristics	**Health Status**

▪ Age
▪ Sex
▪ Race/ethnicity
  ▪ White, not Hispanic
  ▪ Black, non-Hispanic
  ▪ Hispanic
  ▪ Multiple/other non-Hispanic
  ▪ Unknown
	▪ COVID-19 diagnosis
	▪ Chronic conditions^
	  ▪ Diabetes
	  ▪ Stroke/transient ischemic attack
	  ▪ Acute myocardial infarction

Zip Code-Level Characteristics	
▪ Under 100% of federal poverty level ▪ Less than a high school education ▪ Unemployment rate ▪ Median household income	▪ Receiving supplemental security income, temporary assistance for needy families, or supplemental nutrition assistance program
COVD-19 County-Level Characteristics	
▪ Number of cases per 1,000 population ▪ Average case fatality rate per 1,000 population ▪ Total percentage of population vaccinated	▪ Number of deaths per 1,000 population ▪ Average Pandemic Vulnerability Index score

NOTE: ^Selected based on priority conditions identified by EOHHS. A broader set of chronic conditions will be included in the Summative Evaluation Report (pending data availability).

Outcome Measures

Using Rhode Island Medicaid claims and encounter data, we constructed seventeen outcome measures to assess the Demonstration's impact on cost, utilization, and quality of care outcomes for members in the five Demonstration programs (**Exhibit 2.5.2**). We developed a standard set of six core measures applied across programs (highlighted in orange), with eleven additional program-specific measures relevant to key Demonstration program goals.

Exhibit 2.5.2. Claims-Based Outcome Measures, Specifications, and Stewards

Number of members enrolled

Description	Number of Rhode Island Medicaid members enrolled and/or engaged in each of the Demonstration programs (definition of enrolled will vary by program criteria) ***All Medicaid members, all Demonstration programs***
Steward	N/A
Total Medicaid spending	
Description	Total Medicaid spending per Rhode Island Medicaid member. Includes all Medicaid medical spending on all claims and encounter data through attribution end date and excludes spending on prescription drugs. ***All Medicaid members, all Demonstration programs***
Steward	N/A
Hospitalizations	
Description	Number of all-cause acute care inpatient stays per 1,000 Rhode Island Medicaid members. In the case of a hospital-to-hospital transfer, only one stay is counted. ***All Medicaid members, all Demonstration programs***
Steward	N/A
Annual Wellness Visit	
Description	Number of annual wellness visits with providers per 1,000 Rhode Island Medicaid members. Members must have been continuously enrolled for the entire year to be included in this measure. ***All Medicaid members, all Demonstration programs***
Steward	N/A
Emergency Department visits	
Description	Number of emergency department (ED) visits and observation stays per 1,000 Rhode Island Medicaid members not resulting in a short-term inpatient hospitalization. The ED admission date in a baseline or performance year determines inclusion in this outcome. ***All Medicaid members, all Demonstration programs***
Steward	N/A
All-cause readmissions	
Description	Occurrences of unplanned hospitalization within 30 days of discharge from hospital, per 1,000 Rhode Island Medicaid members. This analysis will be done only for members with an index hospitalization, as those *without* an index hospitalization cannot subsequently have a 30-day readmission. ***All Medicaid members, all Demonstration programs***
Steward	NCQA
Potentially avoidable ED visits	
Description	Count of potentially avoidable ED visits per 1,000 Rhode Island Medicaid members, calculated using the "patched" NYU algorithm[34] ***AE Program only***
Steward	NYU
Breast cancer screening	
Description	Number of Rhode Island Medicaid members 50-64 years of age who had a mammogram to screen for breast cancer, per 1,000 members (members less than age 65 are eligible for the AE Program; adapted the HEDIS specifications to align with that age restriction). ***AE Program only***
Steward	Adapted HEDIS
Follow-up after hospitalization for mental illness	
Description	Number of follow-up visits with a mental health provider within 7 and 30 days after hospitalization for selected mental illness conditions, per 1,000 Rhode Island Medicaid members.[35] ***AE Program only***
Steward	NCQA
Dental case management code use	
Description	Number of dental claims for Rhode Island Medicaid members that include new dental case management codes (D9991, D9992, D9993, D9994), seen at participating Pilot providers.

	DCM Pilot only
Steward	N/A
Dental services	
Description	Number of dental services per 1,000 Rhode Island Medicaid adult (18+) members enrolled in fee-for-service Medicaid.[36] ***AE Program only***
Steward	HEDIS
Access to preventative/ambulatory health services	
Description	Number of Rhode Island Medicaid members who had an ambulatory or preventative care visit, per 1,000 members.[37] ***PRS/FYSP, BH Link only***
Steward	HEDIS
Use of behavioral health (BH) Services	
Description	Number of Rhode Island Medicaid members using behavioral health services, per 1,000 members. ***PRS/FYSP, BH Link, IMD Exclusion only***
Steward	N/A
Emergency department (ED) visits for behavioral health (BH) services	
Description	Number of ED visits related to behavioral health (mental health, substance use disorder, or opioid use disorder), per 1,000 Rhode Island Medicaid members. ***PRS/FYSP, BH Link, IMD Exclusion only***
Steward	N/A
Follow-up after ED visit for mental illness	
Description	Number of Rhode Island Medicaid members with a follow-up visit to a provider within 7 or 30 days of an ED visit with a primary diagnosis of mental health condition or an alcohol/drug dependence, per 1,000 members. ***BH Link, IMD Exclusion only***
Steward	NCQA
IMD Service Use	
Description	Number of Rhode Island Medicaid members who received services in a residential IMD for substance use disorder, per 1,000 members. ***PRS/FYSP, BH Link, IMD Exclusion only***
Steward	N/A
Rate of overdose deaths	
Description	Rate of overdose deaths per 1,000 members ***IMD Exclusion only***
Steward	N/A
SUD-related Medicaid spending	
Description	Total per member Medicaid spending for members diagnosed with an SUD ***Total Medicaid population only***
Steward	CMS

NOTE: The timeframe for each measure depends on the level of analysis for each program; see **Exhibit 2.3.1**.

2.6 Limitations

There are several important limitations to our analyses. First the initial set of claims-based findings are limited by the partial implementation period for each program, which ranges from one year to three years. As such, our evaluation reflects only the timeframes for which claims and administrative data were available, and not the entirety of the Demonstration. Results may change as Demonstration

programs continue and/or more data become available, as state agencies and participating providers have additional time to implement each program and refine their operations.

In addition to a limited implementation period, the small number of members participating in some of the Demonstration programs limited our ability to conduct impact assessments. For instance, the Dental Case Management program served less than 70 Rhode Island Medicaid members in its entire performance period, making it difficult to interpret any findings about members receiving those services. Similarly, use of PRS/FYSP program services has increased starting in late 2020, but prior to that, fewer than 85 members utilized those services in each quarter. Due to these small sample sizes, conducting a quarterly analysis for these two programs was not feasible; for both, we aggregated data to the year-level and conducted an annual analysis (for the Dental Case Management pilot, this meant there was only one time point in the cross-sectional analysis). Our team heavily relied upon descriptive assessments for measures to gain a better understanding of outcomes in these two programs.

The COVID-19 pandemic also posed challenges for conducting key informant interviews about implementation the Demonstration's behavioral health programs (BH Link, PRS/FYSP, and the IMD Exclusion Waiver) in Spring 2020, potentially leading to an incomplete picture of the current state of implementation of these programs. State agencies, health care systems, and MCOs understandably focused their attention and priorities on quickly responding to Medicaid members' needs in the pandemic environment. Interviewees from EOHHS, BHDDH, and RIDOH noted that the state's resources were being redirected to address the pandemic and support state public health efforts. After discussion with EOHHS, the decision was made to not reach out to MCO representatives for interviews, as their efforts were focused on the statewide COVID-19 response at that time. Additionally, the scope and timeframe for our key informant interviews were limited to two narrow topics (early AE program implementation progress in 2019; implementation updates on behavioral health programs in Spring 2020), which does not capture updates current to the date of report submission, or the broader scope of this Demonstration evaluation.

As such, while we have developed an overall understanding of existing program implementation and noted in the program-specific chapters when activities have shifted to focus on COVID-19, we were not able to assess the impact of COVID-19 on the Demonstration overall. We were also unable to distinguish any mechanisms of action through which COVID-19 affected the evaluation outcomes. Due to the myriad factors that contribute to the impact of COVID-19 in Rhode Island at the individual and community levels, we are unlikely to fully capture the impact of the COVID-19 pandemic on Demonstration programs, even when accounting for individual-level COVID-19 diagnoses and county-level pandemic statistics. Where possible, we have attempted to consider drivers of Demonstration program outcomes in light of the ongoing COVID-19 pandemic.

Chapter 3: Accountable Entity Program

3.1 Accountable Entity Program Background

Building off work by the Working Group to Reinvent Medicaid, Rhode Island received funding under the 2013 Comprehensive Demonstration, and subsequently under the 2018 Demonstration extension, to implement the Health System Transformation Project (HSTP) to support the transformation of the Medicaid program. Since that time, Rhode Island has been working diligently to implement the HSTP to advance the state's "path toward achieving the transformation to an accountable, comprehensive, integrated cross-provider health care delivery system for Medicaid enrollees."[38] The core component of the HSTP is the creation of Accountable Entities (AEs), the integrated provider organizations responsible for the total cost of care, health care quality, and outcomes among an attributed population. This new infrastructure builds on the strengths of the current managed care organization (MCO) model to create partnerships between AEs and MCOs, enhancing MCO capacity to serve high-risk populations by increasing delivery system integration and improving information exchange and clinical integration across the continuum.

AEs serve as the main driver and coordinator of long-term health system transformation in Rhode Island. Two distinct AE programs were developed: the Comprehensive AE Program and a "specialized" AE program, the Long-Term Services and Supports Alternative Payment Methodology (LTSS APM) Program. The Comprehensive AE Program promotes change in alignment with the Demonstration's transformation activities by encouraging interdisciplinary partnerships of providers centered around primary care. The Comprehensive AE program began as a limited pilot (the "AE Coordinated Care Pilot Program") in July 2016; this pilot was a precursor to the full, statewide AE Program, which was launched in July 2018 and is expected to run through June 2024.[39] The LTSS APM, which launched in July 2022, aims to help eligible and aging populations reside in their communities, improve equitable access to home and community-based services to prevent institutional LTSS, and foster a sustainable network of high-quality home- and community-based providers.[40] In both the Comprehensive AE Program and the LTSS APM program, the providers will be accountable for members' care and are "expected to enhance MCO capacity to serve high-risk populations by increasing delivery system integration and improving information exchange/clinical integration across the continuum."[38]

Goals, Objectives, and Priorities

The partnership between AEs and MCOs in the HSTP provides the framework for restructuring the state's Medicaid program, moving from fee-for-service (FFS) at the point of delivery to value-based purchasing and increased focus on total cost of care (TCOC). In the spring of 2019, EOHHS began a strategic planning process to formulate a set of strategic goals to govern Rhode Island's Medicaid managed care program and the AE Program that are specified in the state's Medicaid Program Accountable Entity Roadmap document for Program Year 5. As noted in the roadmap, the goals and priorities of the AE Program include:

Partnerships and collaboration between MCOs and AEs are a key feature of the AE program's design.

MCOs are responsible for **identifying members** who are attributed to AEs, **establishing AE benchmarks** (in partnership with EOHHS), and **executing shared savings** contracts.

AEs are responsible for **coordination and management of care** for their attributed population, via implementation of

- Maintaining and expanding on Rhode Island Medicaid's record of excellence in delivering high-quality care
- Substantially transitioning the Medicaid payment system away from FFS to alternative payment models
- Structuring delivery system accountability with the goals of enhancing quality, increasing member satisfaction, improving health outcomes, and reducing TCOC
- Improving care delivery for individuals with complex health care needs and enabling vulnerable populations to live successfully in the community
- Developing provider relationships that apply data capabilities to refine and enhance care management, pathways, coordination, and timely responsiveness to emergent needs
- Improving health equity and efforts to address and incorporate social determinants of health and behavioral health into care
- Ensuring access to high-quality primary care and encouraging interdisciplinary care coordination

Anticipated AE Program effects on health care costs and utilization include:

- Decreased readmission rates, hospitalizations, and emergency department (ED) visits
- Improvements in the balance of long-term care utilization and expenditures, away from institutional and into community-based care
- Improved coordination of medical, social, and behavioral health services
- Increased numbers of Medicaid members who choose or are assigned to a primary care practice that functions as a patient-centered medical home
- Targeted reductions in expenditures related to high and rising risk populations by increasing delivery system integration and improvement of information exchange/clinical integration.

Phases of AE Program Implementation

The AE Program is being implemented in a phased approach, with the Comprehensive AE and LTSS APM programs implemented independently in discrete phases (**Exhibit 3.1.1**). This evaluation includes findings for the Comprehensive AE program only, as LTSS APM Program implementation was initiated

on July 1, 2022. More details about the two programs and their phases are included in the following sections.

Exhibit 3.1.1. Timeline for Comprehensive AEs and LTSS APM

AE Program	Pilot	Full Program
Comprehensive AE Program	July 2016 – June 2018	July 2018 – June 2024
LTSS APM Program	July 2022 – December 2023	January 2024 – December 2027

Phase 1: Comprehensive AE Program

The Comprehensive AE is an interdisciplinary partnership of providers with a strong primary care base that ensures coordinated access to other services including specialty care, behavioral health care, and social support services. The AE Pilot was designed to function as an initial starting point prior to the initiation of the full Comprehensive AE Program under HSTP. During the two-year pilot, providers gained experience working under a value-based payment model and were able to test the experience of participating in the AE Program without concern related to potential financial penalties. Many AEs participated in the AE Pilot to prepare for the full program, and five out of six initial pilot AEs applied for and became Comprehensive AEs under the full program in 2018.

AEs **integrate behavioral and physical health** care and **address social determinants of health** by applying a population health approach that is:

- Population-based
- Data-driven
- Evidence-based

The Comprehensive AE Program launched on July 1, 2018. To participate in the program, prospective Comprehensive AEs were required to demonstrate that they met the AE Certification Standards issued by EOHHS. The AE certification standards and the corresponding application and approval process were intended to promote the development of new forms of organization, care integration, payment equity, and accountability.[41] Certification standards for Comprehensive AEs are organized into two categories and eight domains (**Exhibit 3.1.2**). To receive certification from EOHHS, AEs were required to demonstrate specific compliance in each domain or identify how they would achieve compliance and provide a timeline for doing so.

Exhibit 3.1.2. Comprehensive AE Program Certification Domains

Category 1: Readiness
Domain 1: Breadth and Characteristics of Participating Providers
An AE is required to have a minimum number of partner or affiliated providers in relation to the population that the AE serves. This group of providers must be interdisciplinary in nature to provide the care required of the AE in addressing the following categories: primary care, behavioral health, substance use services, and social determinants of health.
Domain 2: Corporate Structure and Governance

The intent of these requirements is: ▪ To ensure multi-disciplinary providers are actively engaged in a shared enterprise and have a stake in both financial opportunities and decision-making of the organization ▪ To ensure that assets and resources intended to support Rhode Island Medicaid are appropriately allocated, protected, and retained in Rhode Island ▪ To ensure that the mission and goals of the new entity align with the goals of EOHHS and the needs of the Medicaid population ▪ To ensure a structured means of accountability to the population served.
Domain 3: Leadership and Management
The AE should have a clear organizational framework that allows them to both address the key operational and management areas required of them; and model how the AEs structure will foster a coordinated system of care.
Category #2: System Transformation
Domain 4: IT Infrastructure – Data Analytic Capacity and Deployment
The AE will utilize comprehensive health assessment and evidence-based systems that integrate patient information to forge system connections that go beyond traditional medical claims and eligibility systems.
Domain 5: Commitment to Population Health and System Transformation
The AE will have a clearly defined strategy on how it proposes to impact care and health outcomes from a population health and system transformation perspective. In particular, the AE will describe how it plans to organize resources to address all subpopulations and the most complex needs within the state.
Domain 6: Integrated Care Management
The AE will demonstrate its approach to integrating care across life domains, particularly for at-risk populations, to address clinical, behavioral, and social determinants of health across the care continuum.
Domain 7: Member Engagement and Access
The AE must have defined strategies to maximize effective member contact and engagement, including the ability to effectively outreach to and connect with hard-to-reach, high-need target populations.
Domain 8: Quality Management
The AE will maintain an ongoing Quality Committee that reports to the Governing Board of a multiple entity AE or to the Governing Committee of a single entity AE.

Once certified, AEs must be re-certified by EOHHS annually. In the initial years of the program, AEs focused on fulfillment of the AE Certification Standards in the Readiness category (Domains 1 – 3). As AEs mature and grow in later program years, they will concentrate progressively more on System Transformation advancements (Domains 4 – 8). As a part of the application and/or re-certification process, EOHHS requires that AEs submit certification applications including project plans that identify specific activities and performance milestones to help AEs achieve system transformation under Domains 4 – 8.[38]

Five Comprehensive AEs were certified and entered into contracts with MCOs in Program Year 1 (July 2018 – June 2019); by Program Year 4, there were seven AEs in total. **Exhibit 3.1.3** presents the AEs, their networks, the year that they joined as a Comprehensive AE, and the number of attributed members. In total, 190,995 Medicaid members were attributed to AEs as of the beginning of PY4 (August 2021).[42] In PY4, all AEs have contracts with one or both of Rhode Island's two MCOs participating in the AE Program, Neighborhood Health Plan of Rhode Island (NHPRI) and United Healthcare Community Plan (UHCCP-RI). Tufts Health Public Plans (currently Point32Health)

participated in the AE Program in PY2 only, with three AEs. As of August 2021, approximately 63 percent of all AE-attributed members are enrolled in NHPRI, with 37 percent enrolled in UHCCP-RI.

Exhibit 3.1.3. Participation among Comprehensive AEs, Program Years 1 Through 4

AE Name	MCO Contracts	Type	Year Joined	Attributed Members as of PY4
Blackstone Valley Community Health Care	▪ NHPRI	Federally Qualified Health Center (FQHC)	PY1 (2018)	13,707
Coastal Medical	▪ NHPRI ▪ UHCCP-RI ▪ Tufts^	Physician group	PY2 (2019)	13,859
Integra Community Care Network	▪ NHPRI ▪ UHCCP-RI ▪ Tufts^	Network of hospital systems and medical practices	PY1 (2018)	50,577
Integrated Healthcare Partners	▪ NHPRI ▪ UHCCP-RI	FQHCs and community mental health centers	PY1 (2018)	29,092
Prospect Health Services Rhode Island	▪ NHPRI ▪ UHCCP-RI ▪ Tufts^	Network of hospital systems and medical practices	PY1 (2018)	20,817
Providence Community Health Centers	▪ NHPRI ▪ UHCCP-RI	FQHC	PY1 (2018)	52,547
Thundermist Health Center	▪ NHPRI ▪ UHCCP-RI	FQHC	PY4 (2021)	24,103

NOTE: NHPRI = Neighborhood Health Plan of Rhode Island; UHCCP-RI = United Healthcare Community Plan of Rhode Island. ^Tufts Health Plan only participated in the AE Program in PY2.

Phase 2: Specialized AE: LTSS APM Program

The LTSS APM Program aims to:

- Encourage and enable LTSS eligible and aging populations to live successfully in their communities
- Improve and ensure equitable access to home- and community-based services (HCBS) that prevent LTSS eligible populations from needing institutional LTSS
- Foster a sustainable network of high quality HCBS providers that are equipped to meet the diverse needs of LTSS members

The specialized focus of the LTSS APM program required that EOHHS actively involve stakeholders in the design, refinement, and implementation of the model. Initially, EOHHS held a series of stakeholder meetings in the spring and summer of 2017 that began informing the development of the program. Planning continued through 2019 but was interrupted due to the COVID-19 pandemic. Throughout the summer and fall of 2021, EOHHS reconvened stakeholders in discussions to inform the program design for the LTSS APM model, including publishing a Request for Comment answered by Neighborhood Health Plan of Rhode Island and UnitedHealthcare Community Plan of Rhode Island.

Following those conversations and additional feedback from CMS, EOHHS published the LTSS APM Program Requirements for Program Year 1 on December 15, 2021. EOHHS will continue to seek public input and comment on the LTSS APM model throughout the program development and implementation process. In the Summative Evaluation Report, we will report on progress for the LTSS APM program and, if sample size permits, estimate the impact of the program relative to a similar comparison group.

In July 2020, EOHHS received an extension of its Medicare-Medicaid Program through 2023, and also executed contracts with two Dual Eligible Special Need Plans. Both programs are managed care programs targeted for the dually eligible population. EOHHS has an opportunity to pilot the LTSS APM Program through the Medicare-Medicaid Program and, depending on initial results, extend the pilot offering to Dual Eligible Special Need Plans in Rhode Island. Currently, the pilot program will only be available through EOHHS integrated managed care programs for dual eligible members through the Medicare-Medicaid Program. Home care agencies providing homemaker and certified nursing assistant services are eligible to participate in the LTSS APM pilot program. Any home care agency contracted with participating managed care programs can enter into an agreement with that managed care entity to participate in the LTSS APM. There is no minimum membership threshold for participating agencies.

MCO Reporting Standards and Quality Performance Measurement

EOHHS has developed a series of quality metrics and reporting standards for the Comprehensive AE Program to 1) ensure compliance with AE Program guidelines, 2) monitor the extent to which AEs are providing coordinated care, and 3) determine whether AEs' efforts have led to improvements in population health. **Exhibit 3.1.4** describes the type and frequency of reporting to EOHHS that must be completed by MCOs for each Comprehensive AE with which they contract.[38] In order to monitor the quality of care that AE-attributed members are receiving from MCOs, EOHHS requires MCOs to provide annual reports with quality performance data on the AE Common Measure Slate.[§]

Exhibit 3.1.4. MCO Reporting Requirements for Comprehensive AE Program

Reported by MCO	Description	Frequency
AE population extract	List of all Medicaid MCO members attributed to each AE	Monthly
AE provider roster	List of current practitioners in the AE's provider network	Monthly
AE quality measure report	Results for the set of clinical and quality outcomes used to determine the quality multiplier for TCOC	Annual
Clinical data exchange implementation reports	Status of clinical data exchange efforts with each AE	Monthly
MCO/AE milestone performance reports	Demonstrate compliance with MCO and AE incentive reward programs	Quarterly

[§] Quality performance data are collected for the following measures: breast cancer screening, adult BMI assessment (through PY3 only), weight assessment and counseling for nutrition and physical activity (through PY4 only)developmental screening in the first three years of life, adult BMI assessment, child and adolescent well-care visits (12-17 years; 18-21 years; total 12-21 years), tobacco use screening and cessation intervention, comprehensive diabetes care (HbA1c control; eye exam), controlling high blood pressure, follow-up after hospitalization for mental illness (7 and 30 days), screening for clinical depression and follow-up plan, social determinants of heath (SDOH) infrastructure development (through PY3 only), SDOH screening.

Outcome metric reports	Performance data on three identified outcome measures; used to calculate HSTP incentive amount	Quarterly & Annual
TCOC historical base data	Data to support the development of the TCOC benchmark for the subsequent PY	Annual
TCOC performance report	Data to support the development of TCOC report	Quarterly & Annual
AE base contract checklist	Confirmation of elements required in the AE-MCO contract	Annual
Final return on investment (ROI) project report	Documentation of findings for "ROI Project" through which adding funds can be earned (available to FQHCs only)	Annual

Attribution Methodology

The overall population eligible for attribution to a comprehensive AE consists of Medicaid-only members enrolled in managed care, and members may only be attributed to a single AE. Attribution occurs in two steps. The first step is member selection or assignment by the MCO to a primary care provider (PCP) affiliated with an AE at the time of member's enrollment with the MCO. The second step is quarterly attribution reconciliation based on claims-based utilization analysis and member-requested changes to an assigned PCP. This reconciliation is done based on member use of qualifying primary care services and associated AEs. While MCOs are required to use EOHHS-approved methodology to attribute members to AEs, PCP assignment methods vary slightly across MCOs. Additionally, on a monthly basis, MCOs submit electronic lists of attributed members to AEs and EOHHS, so that AEs can review the members they are accountable for and track changes in member Medicaid eligibility, member PCP requests, and quarterly reconciliation. HSTP incentive fund pools for each AE are developed using an estimate of the number of months that members will be attributed to each AE, based on prior numbers of AE-attributed MCO members in the preceding performance year. Annual incentive fund pools are determined based on attribution of members to an AE in April of the year preceding the start of the next state fiscal year/program year, quality performance measurement is based on attribution of members to an AE in December of the quality performance year, and total cost of care (TCOC) analyses are measured based on attribution for each member in that member's final month of Medicaid managed care during the state fiscal year.[43]

Total Cost of Care Methodology

One of the key innovations of the AE Program is the application of a TCOC methodology to evaluate quality and performance and to inform the distribution of shared savings. EOHHS established the following goals for its Comprehensive AE TCOC methodology:

- Provide opportunity for a sustainable business model
- Create financial flexibility for AEs
- Be fiscally responsible for all participating parties
- Specifically recognize and address the challenge of small populations
- Incorporate quality metrics related to increased access and improved member outcomes
- Require timely data exchange and performance improvement reporting between MCOs and AEs
- Define and establish a progression toward meaningful AE risk

The TCOC methodology uses a projected historical baseline cost of care, adjusted to the relative market average to calculate a TCOC expenditure target for the performance period. The TCOC expenditure target is compared to actual costs during the performance period to determine a potential shared savings or risk pool. The shared savings pool is then adjusted based on an overall quality score, generated through an assessment of the AE's performance relative to a set of quality measures. Additionally, certain qualified AEs must demonstrate a progression towards meaningful downside shared risk within three years of program participation. Downside risk incentivizes AEs to invest in care management and other services to address member needs and reduce duplication of services, which is expected to yield better health outcomes and lower costs.[44,45]

AE Program Design Modifications in response to COVID-19

To respond to the impacts of the COVID-19 pandemic on the health care system, EOHHS adjusted program requirements for the AE program, making several changes with effects on total cost of care, quality performance, and capacity for quality reporting. Key design modifications are described in **Exhibit 3.1.5**.

Exhibit 3.1.5. AE Program Modifications in Response to the COVID-19 Pandemic

Total Cost of Care Methodology
▪ Removed the requirement for downside risk for non-FQHC AEs in PY3. ▪ Maintained the requirement for AEs taking on downside risk in PY3 to complete the Risk-Based Provider Organization certification process with the Rhode Island Office of the Health Commissioner.
Quality Performance Measurement
▪ Extended re-certification deadlines for PY3 for AEs from March 20, 2020, to April 17, 2020. ▪ Used the PY2 Quality Score methodology instead of PY 3 methodology, except for those measures that are common to both PY2 and PY3 for MCOs. ▪ Recommended that MCOs use the best outcomes from measures common to both PY2 and PY3 (i.e., where PY2 performance is better, MCOs use PY2 and where PY3 performance is better, MCOs use PY3). ▪ Required that MCOs must report performance on new PY3 measures to EOHHS, but do not need to include the results in the Overall Quality Score calculation.
Incentive Funding
▪ Required AEs to submit an updated pandemic safety and preparedness plan that addresses health equity, social determinants of health, and use of technology such as telehealth. This milestone was worth 5% of Incentive Funds and was due August 3, 2020. ▪ AEs had the opportunity to earn 10% of Incentive Funds by either providing evidence of risk-based provider organization certification per the Office of the Health Insurance Commissioner or executing an EOHHS-qualified APM contract with an MCO (which need not include downside risk). ▪ Incentive payments for outcome measure reporting implemented on a pay-for-reporting basis, contingent on AEs submitting a description and self-evaluation of implemented plans to improve each of the three measures: All-Cause Readmissions, Potentially Avoidable ED Visits, and ED Utilization for Individuals Experiencing Mental Illness.

3.2 Evaluation Hypotheses and Outcomes

AE performance will be evaluated with a focus on efforts towards meeting the established goals of the program and improving relevant performance metrics. As described in the **Exhibit 3.2.1**, the evaluation design examines whether the demonstration reduces utilization and overall Medicaid spending while maintaining quality of care and whether the demonstration increases coordination among different care types and lead to better health outcomes for RI Medicaid enrollees. The two evaluation hypotheses will be tested by addressing several targeted research questions examining the percentage of Medicaid patients attributed to the program, trends in and impact of the program on spending, utilization, and quality of care, the experience of care for members, and whether care integration reduces high-cost care.

Exhibit 3.2.1. Overview of AE Program Goals, Evaluation Hypotheses, Research Questions, Target Population, and Metrics

Goals	▪ Transition the Medicaid payment system away from FFS to alternative payment models ▪ Drive delivery system accountability to improve quality, member satisfaction and health outcomes, while reducing cost of care ▪ Develop targeted provider partnerships that apply emerging data capabilities to refine and enhance care management, pathways, coordination, and responsiveness to emergent needs ▪ Improve health equity and address social determinants of health and behavioral health by building on a strong primary care foundation to develop interdisciplinary care capacity that extends beyond traditional health care providers ▪ Enable vulnerable populations to live successfully in the community
Target Population	▪ The population eligible for attribution to an AE consists of Medicaid-only members enrolled in managed care; members may only be attributed to a single AE.
Evaluation Hypotheses	▪ The AE Program will reduce utilization and overall Medicaid spending while maintaining quality of care for Rhode Island Medicaid members ▪ The AE Program will increase coordination among different care types, leading to better health outcomes for Rhode Island Medicaid members
Research Questions	▪ What percentage of Medicaid members are attributed to an AE? ▪ What are the trends in spending, utilization, and quality of care for AE-attributed members? ▪ What is the impact on spending, utilization, and quality of care for AE-attributed members? ▪ What is the experience of care for AE-attributed members? Are they satisfied with their care? ▪ Does better care integration reduce high-cost care for members?
Performance Metrics	▪ Potentially avoidable ED visits ▪ Breast cancer screening ▪ Follow-up after hospitalization for mental illness

3.3 Analytic Approach

The below section details our approach to evaluating the AE Program's impact, including baseline and performance periods, identification of treatment and comparison groups, key outcomes, and our analytic approach. All analyses for the AE Program are conducted with Rhode Island Medicaid members in an MCO who received full Medicaid benefits for all three months in the calendar quarter.

Baseline and Performance Periods. The baseline period for the AE Program analysis is July 2014 – June 2016, and the performance period is July 2018 – September 2021. We excluded data from the period during which the Comprehensive AE Pilot was implemented (July 2016 – June 2018), as that was considered an implementation ramp-up period for the full program implementation and inclusion of those years may attenuate the observable impacts of the AE Program in a difference-in-differences framework. For this report, we analyzed data through September 2021 based on current availability of complete data for that period; in the Summative Evaluation Report, we will analyze data through the end of the AE program period (currently June 2024).

Baseline Period for AE Program analysis
July 2014 – June 2016

Performance Period for AE Program analysis
July 2018 – September 2021

Treatment Group Identification. To identify members who were enrolled in an AE in the performance period, we used the flags in Medicaid enrollment data from MCOs that indicate members who were attributed to an AE on a monthly basis. Members who were indicated as enrolled in an AE for all three months of the calendar quarter were considered attributed for that quarter of the analysis. To identify AE members in the baseline, we included all members who were attributed to an AE in any quarter of the performance period.

Comparison Group Identification. The comparison group for the AE Program analyses comprises Medicaid-only members who are in an MCO but were *not* attributed to an AE during the performance period. In discussions with EOHHS, we determined that this was the most appropriate comparison group because these are members who are eligible to be attributed to an AE and may be in the future. Thus, spending and utilization patterns among these groups are likely to be similar in the baseline period (i.e., before AEs were implemented), and the key difference in the performance period is that some members are attributed to an AE, which may be driving differences we see in the observed impacts from our analyses. To identify comparison group members in the baseline, we included members that were never attributed to an AE during the performance period and who were younger than 65 years and not dually eligible for Medicare.

Outcomes. For the AE Program, we focused our analysis on six core claims-based metrics (i.e., metrics that are measured for each demonstration program) as well as four additional metrics that are specific to the AE Program and its mechanisms of transformation (**Exhibit 3.3.1**). Additionally, we assessed

aggregate metrics from AE quality performance data and MCO Consumer Assessment of Healthcare Providers and Systems (CAHPS) data in order to provide context for the claims-based outcomes.

Analytic Approach. We conducted the following analyses to characterize the AE-attributed members and estimate the impact of the AE program:

- **Descriptive analyses of member characteristics** to understand the members that AEs are serving, and how many members they are serving over time
- **Descriptive analyses of AE quality performance data and MCO CAHPS data** to provide additional context to the claims-based outcomes we observe
- **Unadjusted analyses of outcomes** to identify trends in the nine key outcomes in the baseline and performance periods, for the AE and comparison groups
- **Risk-adjusted difference-in-differences (DID) analyses** to compare the experience of members in the AE and comparison groups in the baseline and performance period, which will allow us to estimate the impact of the AE program on each of the nine outcomes. DID analyses control for member-level sociodemographic characteristics and health status indicators, zip code-level community characteristics, and county-level COVID-19 burden.

Exhibit 3.3.1. AE Program Outcomes for Evaluation

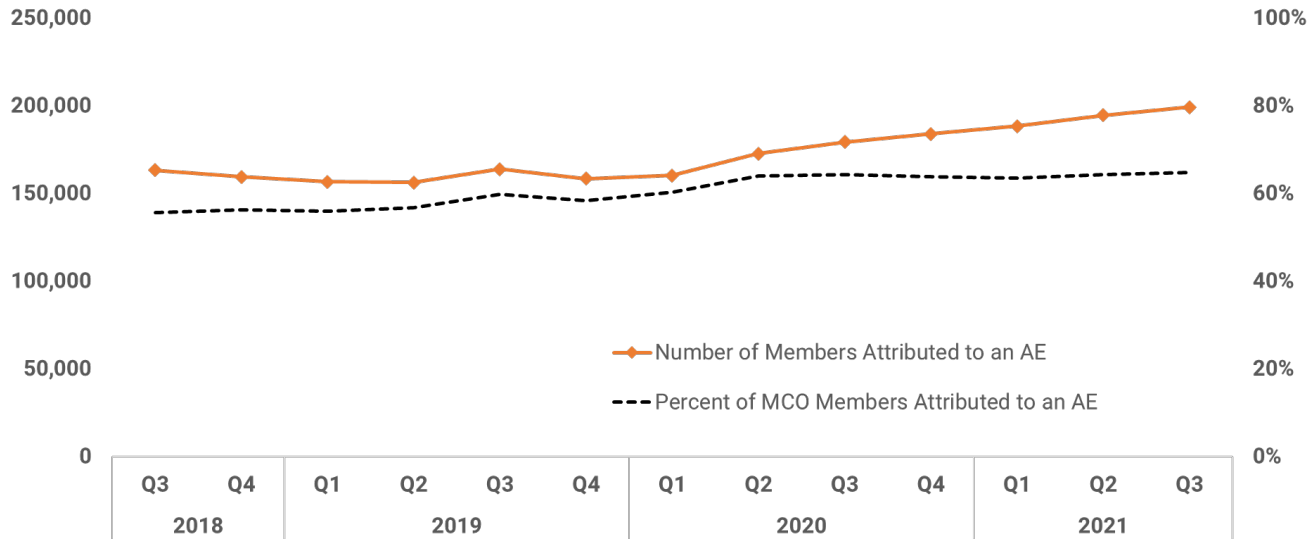
Core Demonstration Outcomes
▪ Number of members attributed to an AE ▪ Hospitalizations ▪ Emergency department visits ▪ Annual wellness visit ▪ All-cause readmissions ▪ Total Medicaid spending
AE Program Outcomes
▪ Potentially avoidable ED visits ▪ Breast cancer screening ▪ Follow-up after hospitalization for mental illness

3.4 Findings

Descriptive Assessments

Member attribution. Over the course of the AE Program, 270,092 unique Rhode Island Medicaid members have been attributed to an AE. As shown in **Exhibit 3.4.1**, the number of members attributed to AEs has risen over time, from 163,125 in July 2018 (55.6 percent of Medicaid members in MCOs) to 199,154 in September 2021 (64.7 percent of Medicaid members in MCOs). Member attribution to AEs stayed relatively constant from July 2018 to March 2020, with slight fluctuations in the number of attributed members from quarter to quarter. Starting in April 2020, the number of members attributed to an AE has risen every quarter while the percent of AE-attributed among eligible members (i.e., members in an MCO) has remained steady. This reflects the overall increase in Medicaid enrollment due to the Medicaid continuous enrollment requirement enacted in the Families First Coronavirus Response Act, wherein CMS requires state Medicaid agencies to retain members enrolled in the Medicaid program from January 2020 through the end of the declared public health emergency.[8]

Exhibit 3.4.1. Members Attributed to AEs (July 2018 – September 2021)



SOURCE: NORC analysis of Rhode Island Medicaid enrollment data.

Sociodemographic characteristics. Sociodemographic and area-level characteristics of both the AE-attributed and propensity-weighted comparison groups were similar and consistent across the baseline and performance periods (**Exhibit 3.4.2**). Most AE-attributed and comparison members in the performance period were female (53.2 percent for both groups) and white** (40.4 percent and 40.5 percent, respectively), and slightly over one-quarter in both groups were Hispanic.††

** Race and ethnicity are measured separately, therefore there is overlap between the white and Hispanic groups.

†† The decrease in the "Unknown" race category during the performance period reflects increased efforts around collecting and recording race/ethnicity data for Medicaid members in recent years.

Exhibit 3.4.2. Sociodemographic Characteristics of AE-Attributed and Comparison Members, Baseline (July 2014 – June 2016) and Performance (July 2018 – September 2021) Periods

	Baseline Period (July 2014 – June 2016)		Performance Period (July 2018 – September 2021)		
	AE-Attributed Members	Comparison Group	AE-Attributed Members	Comparison Group	Difference
Unique members	100,704	219,533	270,092	233,178	N/A
Sociodemographic Characteristics					
Age (%)					
<18 years	41.4	41.3	39.7	39.8	-0.13
18-34 years	26.4	26.7	27.3	27.4	0.17
35-54 years	22.8	22.8	22.6	22.6	-0.05
55-64 years	9.3	9.1	10.2	10.2	-0.15*
65+ years	0.1	0.0	0.2	0.0	N/A
Female (%)	53.5	53.6	53.2	53.2	0.13
Race/Ethnicity (%)					
White, not Hispanic	27.2	26.8	40.4	40.5	-0.46***
Black, not Hispanic	6.3	6.4	9.4	9.5	-0.07
Hispanic	16.9	16.9	26.8	26.7	0.15
Multiple/Other, not Hispanic	3.8	3.7	7.1	7.0	-0.09*
Unknown	45.9	46.3	16.3	16.3	0.47***
Chronic conditions (%)[†]					
Diabetes	5.3	5.4	5.6	5.6	0.09
Stroke/TIA	0.6	0.6	0.7	0.7	0.03

	Baseline Period (July 2014 – June 2016)		Performance Period (July 2018 – September 2021)		Difference
	AE-Attributed Members	Comparison Group	AE-Attributed Members	Comparison Group	
AMI	0.1	0.1	0.2	0.2	0.00
Any COVID diagnosis (%)	N/A	N/A	0.8	0.8	N/A
Zip Code-Level Characteristics					
Median household income	$50,524	$50,429	$59,079	$59,043	-$59
Less than a high school education (%)	81.2	81.2	85.0	85.0	0.01
Under 100% of federal poverty line (%)	18.4	18.4	16.3	16.3	0.01
Receiving SSI, TANF, or SNAP (%)	63.2	63.2	48.7	48.7	0.00
Unemployment rate (%)	10.1	10.1	6.4	6.4	0.01
COVID County-Level Characteristics					
Average # cases	N/A	N/A	12.9 per 1,000 residents	12.9 per 1,000 residents	-0.01
Total # deaths	N/A	N/A	0.2 per 1,000 residents	0.2 per 1,000 residents	0.00
Average PVI score	N/A	N/A	0.3	0.3	0.00
Average case fatality rate	N/A	N/A	11.5 per 1,000 residents	11.5 per 1,000 residents	-0.02
Total population vaccinated (%)	N/A	N/A	11.8	12.0	-0.20

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.
NOTES: *p<0.05; **p<0.01; ***p<0.001. † Selected based on priority conditions identified by EOHHS. Zip code-level characteristics represent the average across all zip code tabulation areas where Rhode Island Medicaid members in the group reside. County-level characteristics represent the average across all counties where Rhode Island Medicaid members in the group reside; data is from March 2020 onward. Difference column represents the standardized difference between the four groups. AMI = Acute Myocardial Infarction; SNAP = Supplemental Nutrition Assistance Program; SSI = Social Security Income; TANF = Temporary Assistance for Needy Families; TIA = Transient Ischemic Attack; PVI = Pandemic Vulnerability Index.

Unadjusted trends in spending and utilization outcomes. Exhibit 3.4.3 outlines the unadjusted outcomes from the baseline and performance periods for the AE-attributed group and comparison members. Before adjusting for covariates and in both periods, total Medicaid spending and all-cause readmissions were slightly lower in the AE group than the comparison group, and hospitalizations and ED visits were slightly higher for the AE group. Both the AE and comparison groups showed an increase in 30-day follow-up after hospitalization for mental illness.

Exhibit 3.4.3. Unadjusted Means for Spending and Utilization Outcomes for AE-Attributed and Comparison Members, Baseline (July 2014 – June 2016) and Performance (July 2018 – September 2021) Periods

	Baseline Period (July 2014 – June 2016)		Performance Period (July 2018 – September 2021)	
	AE	Comparison	AE	Comparison
Core Demonstration Outcomes				
Total Medicaid spending	$1,794	$1,858	$1,243	$1,303
Hospitalizations	35.5	31.9	30.5	28.1
All-cause readmissions	196.7	219.7	205.6	224.9
ED visits	262.8	220.0	257.6	206.9
Annual wellness visits	114.1	109.1	124.6	117.8
AE Program Outcomes				
Potentially avoidable ED visits	88.4	62.5	87.4	65.1
Breast cancer screening	92.9	101.1	104.3	98.3
7-day follow-up after hospitalization for mental illness	62.4	56.0	51.8	91.1
30-day follow-up after hospitalization for mental illness	156.2	147.9	166.2	188.8

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.
NOTES: Total Medicaid spending is presented per member per quarter; all other outcomes are presented as per 1,000 members per quarter.

Risk-adjusted performance of the AE Program across individual AEs. Looking at the risk-adjusted means in outcomes across AEs in the performance period, we observe a great deal of AE-specific variation that is contributing to the overall impact estimates (**Exhibit 3.4.4**).‡‡ Total quarterly Medicaid spending ranges from $1,177 (BVCHC) to $1,404 (Coastal); however, there is no clear utilization driver among the Core Demonstration or AE Program outcomes to which this difference may be attributed. Coastal had the lowest rates of ED visits (99.9 per 1,000 members), hospitalizations (17.3 per 1,000), potentially avoidable ED visits (51.1 per 1,000 members), and the highest rates of annual wellness visits (175.6 per 1,000) and breast cancer screening (152.5 per 1,000 members).

‡‡ We are unable to estimate impact using a DID model for each AE because comparison beneficiaries lack assignment to an AE, which would be required in the DID framework.

Exhibit 3.4.4. Risk-Adjusted Means for Spending and Utilization Outcomes for AE-Attributed Members in the Performance Period (July 2018 – September 2021), by AE

	Risk-Adjusted Mean and Standard Error						
	BVCHC	**Coastal**	**IHP**	**Integra**	**PCHC**	**Prospect**	**Thundermist**
Core Demonstration Outcomes							
Total Medicaid spending	$1,177 ($19)	$1,404 ($26)	$1,237 ($9)	$1,354 ($11)	$1,271 ($13)	$1,265 ($13)	$1,210 ($39)
Annual wellness visits	90.4 (0.7)	175.6 (1.2)	93.3 (0.4)	137.9 (0.4)	105.5 (0.4)	142.0 (0.8)	92.2 (2)
Hospitalizations	21.7 (0.4)	17.3 (0.4)	21.9 (0.2)	20.0 (0.2)	24.4 (0.2)	19.5 (0.3)	21.7 (0.9)
All-cause readmissions	93.0 (7.1)	97.4 (8.4)	105.3 (2.7)	114.2 (3.5)	126.4 (3.9)	93.1 (4.3)	119.1 (14.1)
ED visits	119.0 (1.2)	99.9 (1.5)	141.4 (0.8)	122.4 (0.7)	139.1 (0.9)	133.2 (1.2)	144.2 (3.5)
AE Program Outcomes							
Potentially avoidable ED visits	59.7 (0.6)	51.1 (0.8)	69.4 (0.3)	62.3 (0.4)	65.3 (0.3)	67.8 (0.5)	70.1 (1.8)
Breast cancer screening	98.6 (3.4)	152.5 (4.3)	93.3 (1.5)	107.3 (1.8)	100.5 (1.8)	114.5 (2.1)	82 (6.8)
7-day follow-up after hospitalization for mental illness	71.8 (38.8)	N/A	88.9 (15.9)	93.3 (22.4)	107.2 (19.2)	78.1 (29.5)	118.5 (98.7)
30-day follow-up after hospitalization for mental illness	91.3 (42.9)	N/A	176.2 (21.7)	208.9 (30.9)	216 (26.3)	238.4 (48.6)	135.2 (101.9)

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.
NOTES: Total Medicaid spending is presented per member per quarter; all other outcomes are presented as per 1,000 members per quarter. Sample size for Coastal would not allow analysis for follow-up after hospitalization for mental illness. Risk-adjusted means were estimated using a multivariate generalized linear model regression.

Risk-adjusted performance of the AE Program across white and non-white members. Except for all-cause readmissions, we observe that white members attributed to AEs had lower spending and utilization in the performance period than non-white members attributed to AEs (**Exhibit 3.4.5**). The largest difference among acute outcomes is for ED visits (125.5 per 1,000 for white members; 140.9 per 1,000 for non-white members). The adjusted means do not reflect the impact of the AE Program for white and non-white members; a DID analysis for race subgroups is planned for the Summative Evaluation Report if sample size allows.

Exhibit 3.4.5. Risk-Adjusted Means for Spending and Utilization Outcomes for AE-Attributed Members in the Performance Period (July 2018 – September 2021), by Race

	Risk-Adjusted Mean and Standard Error		
	White	**Non-White**	**Difference**
Core Demonstration Outcomes			

	Risk-Adjusted Mean and Standard Error		
	White	Non-White	Difference
Total Medicaid spending	$1,234 ($6)	$1,344 ($9)	-$110 ($11)***
Annual wellness visits	117.1 (0.3)	118.5 (0.3)	-1.4 (0.4)**
Hospitalizations	20.7 (0.1)	22.9 (0.2)	-2.1 (0.2)***
All-cause readmissions	109.9 (2.0)	109.3 (2.9)	0.6 (3.6)
ED visits	125.5 (0.5)	140.9 (0.7)	-15.4 (0.9)***
AE Program Outcomes			
Potentially avoidable ED visits	62.2 (0.2)	68.8 (0.3)	-6.6 (0.3)***
Breast cancer screening	101.0 (1)	110.0 (1.5)	-9.0 (1.9)***
7-day follow-up after hospitalization for mental illness	86.9 (11.3)	93.8 (16.2)	-6.8 (20.3)
30-day Follow-up after hospitalization for mental illness	162.5 (15.1)	230.4 (23.6)	-67.8 (29.3)**

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.
NOTES: *p<0.05; **p<0.01; ***p<0.001. Difference is calculated relative to white members; a negative value indicates a lower level for white members. Total Medicaid spending is presented per member per quarter; all other outcomes are presented as per 1,000 members per quarter. Risk-adjusted means were estimated using a multivariate generalized linear model regression. Hispanic ethnicity was measured separately and is not reflected in these subgroup analyses.

Impact Assessments

Risk-adjusted impact of the AE Program. Considering the AE Program relative to the baseline period and the comparison group with a difference-in-differences model adjusted for key covariates,[§§] we observed no significant impact on total Medicaid spending, and varying effects for utilization outcomes (**Exhibit 3.4.6**). In DID models, the AE Program is associated with a 26.4 fewer all-cause readmissions per 1,000 members, 29.8 more 7-day follow-ups after hospitalization for mental illness per 1,000 members, and 26.8 more breast cancer screenings per 1,000 members, potentially driven by the increased focus on care coordination and population health by AEs. However, AE-attributed members also saw an increase of 7.4 hospitalizations per 1,000 members and an increase of 4.6 potentially avoidable ED visits per 1,000 members, as well as a decrease of 68.6 30-day follow-up after hospitalization for mental illness per 1,000 members.

Results of the sensitivity analysis in which total Medicaid spending was capped for individual members (see Chapter 2 for capped dollar amounts for each year) were very similar to the main analysis, showing an estimated non-significant increase of $9 (95% confidence interval -$11, $29).

[§§] We adjusted the DID models for member-level sociodemographic characteristics and health status indicators, zip code-level community characteristics, and county-level COVID-19 burden. See **Exhibit 2.3.2** for additional details about covariates.

Exhibit 3.4.6. Risk-Adjusted Impact of AE Program on Spending and Utilization Outcomes

	Risk-Adjusted DID Estimate	95% Confidence Interval
Core Demonstration Outcomes		
Total Medicaid spending	$37	-$45, $119
Annual wellness visits	12.6	-3.8, 28.9
Hospitalizations	7.4***	5.6, 9.3
All-cause readmissions	-26.4***	-32.3, -20.5
ED visits	3.1	-6.1, 12.2
AE Program Outcomes		
Potentially avoidable ED visits	4.6*	0.1, 9.2
Breast cancer screening	26.8***	16.7, 36.9
7-day follow-up after hospitalization for mental illness	29.8***	13.8, 45.8
30-day follow-up after hospitalization for mental illness	-68.6***	-97.4, -39.8

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.
NOTES: *p<0.05; **p<0.01; ***p<0.001. Total Medicaid spending is presented per member per quarter; all other outcomes are presented as per 1,000 members per quarter.

3.5 Discussion

Since the inception of the AE Program in July 2018, member attribution to AEs has grown from 163,125 to 199,154 members as of September 2021[***], representing 64.7 percent of the eligible population (i.e., Medicaid members in MCOs). During the COVID-19 pandemic, attribution to AEs increased proportionally to the overall increase in Rhode Island Medicaid members.

Overall, we did not observe a statistically significant impact of the AE Program on total Medicaid spending in our risk-adjusted DID analyses. Both the AE and comparison groups saw reductions in total spending between the baseline and performance periods. The overall effect of the AE Program on quality and utilization metrics was mixed. AE-attributed members saw lower rates of all-cause readmissions and improved rates of 7-day follow-ups after hospitalizations for mental illness. However, AE-attributed members also saw increases in hospitalizations and potentially avoidable ED visits and lower rates of 30-day follow-ups after hospitalizations for mental illness, compared to their non-AE counterparts. Both the AE and comparison groups saw reductions in total spending between the baseline and performance periods; this likely reflects national trends in declines in utilization during the COVID-19 pandemic.[5,7,46]

[***] Measured quarterly; limited to members with full Medicaid enrollment each quarter.

It is important to note that the total spending measure presented here differs from the AE TCOC methodology in several ways, including differing approaches to risk adjustment, different populations (NORC's spending measure includes only member-quarters with three months of Medicaid coverage), and included costs (e.g., prescription drugs are included in TCOC but not the analysis here); the full technical guidance for TCOC calculations can be found on EOHHS' website.[32] In TCOC data for PY3 obtained from EOHHS, AE-specific spending trends differ from patterns observed in the DID results for total Medicaid spending. TCOC ranged from $993.27 per member-quarter (BVCHC) to $1,532.07 per member quarter (IHP). For all AEs, TCOC expenditures remained below the risk-adjusted targets in PY3. PY3 TCOC expenditures for AE members ranged from 7.2% to 10.5% below the risk-adjusted targets for UHCCP-RI and 3.7% to 16.2% below targets for NHPRI. Expenditures for non-AE enrollees ranged from 3.5% below the risk-adjusted target for the UHCCP-RI and 5.7% below target for NHPRI. With one exception, AEs saw larger savings percentages the non-AE groups for both payers. However, the overall trends for AE and non-AE members were similar to DID estimates. Across all AEs, quarterly TCOC expenditures were $1,205.85 per member, compared to $1,326.38 for non-AE members.

Our finding that the AE Program was associated with increased rate of preventative care like breast cancer screening is consistent with MCO quality reporting. To provide additional context to the Interim Evaluation findings, we obtained quality performance tracking data for AEs from 2018 through 2020 collected for two of the three MCOs (NHPRI and UHCCP-RI). The AEs that partnered with these two MCOs reported increases in most measures between the CY 2018 performance year, and the first reporting period (CY 2019). For both NHPRI and UCCHP-RI, the AEs on average experienced a minor increase in members receiving a breast cancer screening, weight assessment and counseling for nutrition for adolescents, developmental screening in the first three years, screening and cessation intervention for tobacco use, and HbA1c control for diabetes care. Both MCOs experienced larger average increases in weight assessment and counseling for physical activity for adolescents (12.61% for NHPRI and 12.67% for UHCCP-RI), and UHCCP-RI AEs experience a significant increase in adult BMI assessments (11.98%) and controlling high blood pressure (16.49%). The only measures where MCOs on average experienced a steady increase from CY 2018 through the second reporting period (CY 2020) were developmental screening in the first three years, screening and cessation intervention for tobacco use, and follow-up after hospitalization for mental illness within 7 or 30 days. Finally, UHCCP-RI AEs also experienced a slight increase over time in screening for clinical depression and follow-up planning.

Due to a lack of data specific to AE-attributed members, we were not able to directly assess trends in consumer satisfaction for this group. However, the 2020 Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey results for all three MCOs indicate that most Medicaid adult members report that they usually or always receive needed care right away and scheduled check-up/routine appointments and specialist appointments as soon as needed. Most adult members also reported that their doctors always or usually communicated about care, listened, and showed them respect, that customer service treated them with courtesy and respect and coordination of care. Exhibit 3.5.1 shows 2020 CAHPS survey results for each MCO, as well as the 2020 Quality Compass benchmarks. For child Medicaid members in two of the MCOs (NHPRI and UHCCP-RI), CAHPS survey results indicated that most participants report that their doctors usually or always explained things,

listened carefully, and showed respect. These rates for both adult and child Medicaid members generally align with national and regional benchmarks.[47,48,49,50]

Exhibit 3.5.1. Adult CAHPS Survey Results (2020), by MCO

Measure	NHPRI	Tufts Health Plan	UHCCP-RI	2020 Quality Compass Benchmark†
Usually or always receive needed care right away	88.14%	77.3%	81.4%	83.0%
Usually or always received coordination of care	84.32%	82.7%	75.0%	85.1%
Usually or always scheduled an appointment for a check-up or routine care as soon as needed	83.59%	72.4%	78.7%	79.8%
Usually or always scheduled an appointment for a specialist as soon as needed	85.71%	75.7%	80.0%	80.1%
Personal doctor usually or always explained things	91.76%	91.9%	92.4%	93.3%
Personal doctor usually or always listened carefully	92.74%	92.9%	90.3%	93.4%
Personal doctor usually or always showed respect	95.49%	94.9%	91.8%	94.7%

†Includes all Medicaid Adult samples that submitted data to NCQA in 2020.

Finally, we observed notable variation across subgroups of AE-attributed members, including AE-specific variation and variation between white and non-white members. Among non-white members, higher rates of all-cause ED visits coupled with the higher rate of potentially avoidable ED visits may indicate a higher level of unmet need and fewer ambulatory/preventative care options for this population. We aim to include further exploratory analyses assessing this variation in The Summative Evaluation Report.

Chapter 4: Behavioral Health Link

4.1 BH Link Overview

In response to rising overdose deaths and in acknowledgement of the high percentage of emergency department visits attributable to mental health conditions among Rhode Island Medicaid members, the Executive Office of Health and Human Services (EOHHS) developed the Behavioral Health Link (BH Link) Program. The program's goal is to provide better support and treatment for patients with mental health and substance use (misuse) concerns and provide an alternative to the emergency department offering specialized emergency behavioral health services.[30] As part of the 1115 Demonstration Extension Request, EOHHS requested the authority for the BH Link program, incorporating the BH Link Triage Center and the BH Link Hotline. Both the triage center and the hotline operate 24 hours a day, 7 days a week, with the goal of providing immediate assistance to individuals in crisis.

Primary Components of BH Link:
- BH Link Onsite Triage Center
- Mobile Outreach
- BH Link Hotline

BH Link began in January 2019 with the opening of the BH Link Triage Center, a 24/7 triage center designed to support crisis stabilization and short-term treatment for individuals experiencing mental health and/or substance use crises. The BH Link Triage Center is a licensed behavioral health care facility staffed by nurses, licensed physicians, certified peer recovery specialists, case managers, psychiatric clinical nurse specialists, psychiatrists, and qualified mental health professionals. The BH Link triage center provides services consistent with a licensed community mental health center, including comprehensive screening and evaluations, treatment, and crisis intervention. Services include:

- Physician services
- Medication prescription and management
- Skilled nursing
- Comprehensive assessment and triage
- Case management
- Discharge coordination, including warm hand-offs to community providers.

All services are available from staff on-site or via telemedicine. Additionally, to increase referrals to BH Link facilities and address areas not covered by the BH Link Triage Center, BH Link employs mobile outreach liaisons from community health centers to provide care throughout the community.

BH Link also incorporates the BH Link Hotline, which holds the contract for the Rhode Island National Suicide Hotline and incorporates other relevant call lines for the treatment center to serve as a one-stop, statewide 24/7 call-in center. The BH Link Hotline delivers telephonic triage services and information to connect people to relevant community services.

Reimbursement. At the time of the initial implementation of the program, BH Link services were reimbursed using existing traditional fee-for-service (FFS) codes. Beginning on January 29, 2020, CMS approved bundled rate billing for BH Link services. The bundled rate may be billed once daily per Medicaid member, and there are no restrictions on the number of times per month the bundled rate may be billed. **Exhibit 4.1.1** outlines the components of the bundled rate and provides a sample calculation for a bundled rate that might be billed for a member. [51] The methodology defined in **Exhibit 4.1.1** shows an average number of units expected per stay, but individual stays may have higher or lower numbers of units. As a result, when providers submit claims for the bundled rates, they must provide service-level details documenting how many units of each service were delivered. To trigger payment, providers must perform a crisis assessment, which is typically followed by additional services such as case management, monitoring, and potential psychiatric evaluation and medication management.

While the bundled rate is calculated by combining the projected costs for each service, the claim is paid at a single level, such that the individual component services do not receive a separate reimbursement. The bundled rate was established by EOHHS based on similar FFS rates paid to current community health centers and providers. The BH Link bundled rate will be continually reviewed and recalculated by EOHHS and approved by CMS as necessary to maintain efficiency and effectiveness of the program.

Exhibit 4.1.1. BH Link Triage Center Rate Composition, Sample Calculation[13]

Service	Rate/Unit	Duration	Projected Average Number of Units	Projected Average Total time	Cost
	Fixed Estimates		Variable Estimates Based on Patient Encounter		Calculated
Crisis Assessment	$150.00	60 minutes	1 unit	60 minutes	$150.00
Nursing/monitoring	$7.50	5 minutes	24 units	120 minutes	$180.00
Case Management	$21.25	15 minutes	7 units	105 minutes	$150.50
Psychiatrist (E&M)	$118	25 minutes	1 unit	25 minutes	$118.00
Total Bundled Rate for the Sample Patient					**$598.50**

SOURCE: Demonstration Special Terms & Conditions, Attachment CC (Behavioral Health Link Payment Methodology)
NOTES: E&M = Evaluation and Management

4.2 Evaluation Hypotheses and Outcomes

The BH Link Program was developed with the goal of delivering and expanding access to high-quality, more appropriate, and more affordable care and guidance for individuals in behavioral health and/or substance use crises. **Exhibit 4.2.1** lays out the explicit goals and target population of the BH Link

Program, as well as the associated evaluation hypotheses, research questions, and performance metrics for the evaluation.

Exhibit 4.2.1. Overview of BH Link Goals, Evaluation Hypotheses, Research Questions, Target Population, and Metrics

Goals	▪ Move to billing bundled rate for BH Link services on a per-member basis
Target Population	▪ Rhode Island Medicaid members who are in crisis due to substance use disorders, mental health disorders, or co-occurring mental health and substance use disorders
Evaluation Hypotheses	▪ The Demonstration will reduce utilization and overall Medicaid spending while maintaining quality of care for Rhode Island Medicaid members ▪ The Demonstration will increase coordination among different care types, leading to better health outcomes for Rhode Island Medicaid members ▪ The Demonstration will shift care away from high-cost settings (e.g., the ED), reducing spending while increasing utilization in lower-cost settings.
Research Questions	▪ What percentage of Rhode Island Medicaid members are attributed to this Demonstration program? ▪ What are the trends in spending, utilization, and quality of care? ▪ To what extent has the Demonstration integrated BH and SUD care into medical care? How has this affected health outcomes and BH/SUD treatment uptake for Rhode Island Medicaid members? ▪ What are the trends in ED visits and Institution of Mental Disease (IMD) service use for members accessing behavioral health services?
Performance Metrics	▪ Access to preventative/ambulatory health services ▪ Use of BH services ▪ ED visits for BH services ▪ Follow-up after ED visit for mental illness ▪ IMD service use

4.3 Analytic Approach

The below section details our approach to evaluating the BH Link Program, including identification of treatment and comparison groups in the performance period, key outcomes, and our analytic approach. All analyses are conducted with adult (ages 18 and older) Rhode Island Medicaid members who received full Medicaid benefits for each month in the calendar quarter and were eligible for treatment in the BH Link triage center during the performance period.

Performance Period for BH Link analysis
January 2020 – September 2021

Performance Period. The performance period for the BH Link Program analysis is January 2020 – September 2021. Although BH Link started in January 2019, we identified members using BH Link services with the bundled billing code that was established in January 2020, so we are only able to capture Medicaid

members who received services through BH Link after that time. Thus, our performance period is the timeframe in which we saw claims for BH Link encounters for Medicaid members after BH Link started providing services. We excluded a baseline period from our analyses, as it was not feasible to construct a meaningful baseline period. In this report, we analyze data through September 2021 based on current availability of complete data for that period; in the Summative Evaluation Report, we will analyze data through the end of the Demonstration (currently December 2024).

Treatment Group Identification. To identify members who were treated through the BH Link triage center in the performance period, we used the BH Link bundled rate billing Healthcare Common Procedure Coding System (HCPCS) code S9485, which indicates a per-diem BH Link encounter. Any member who received a service from BH Link in a quarter was flagged for inclusion in that quarter's analysis, and considered part of the treatment group for our cross-sectional analysis.

Comparison Group Identification. The comparison group for the BH Link Program analyses consists of all Medicaid-only members with one or more behavioral health conditions but who were *not* treated through the BH Link triage center during the performance period. Using Medicaid claims data, the team identified any beneficiaries with flags for substance use disorder (SUD) or serious mental illness diagnosis. Thus, the key difference in the performance period is that members in the treatment group received services from the BH Link triage center, which may indicate they may need more acute crisis care. This key distinction may be driving differences in outcomes we see between the treatment and comparison group.

Outcomes. For BH Link, we focused our analysis on six core claims-based metrics (i.e., metrics that are measured for each demonstration program) as well as four additional metrics that are specific to the BH Link program and its mechanisms of transformation (**Exhibit 4.3.1**).

Exhibit 4.3.1. BH Link Outcomes for Evaluation

Core Demonstration Outcomes
▪ Number of members using BH Link services ▪ Hospitalizations ▪ Emergency department visits ▪ Annual wellness visit ▪ All-cause readmissions ▪ Total Medicaid spending
BH Link Outcomes
▪ Access to preventative/ambulatory health services ▪ Use of behavioral health services ▪ ED visits for BH services ▪ 7-day follow-up after ED visit for mental illness ▪ 30-day follow-up after ED visit for mental illness ▪ Institutions for Mental Disease service use

Analytic Approach. We conducted the following analyses to characterize the members who received services from the BH Link triage center and estimate the impact of the BH Link program:

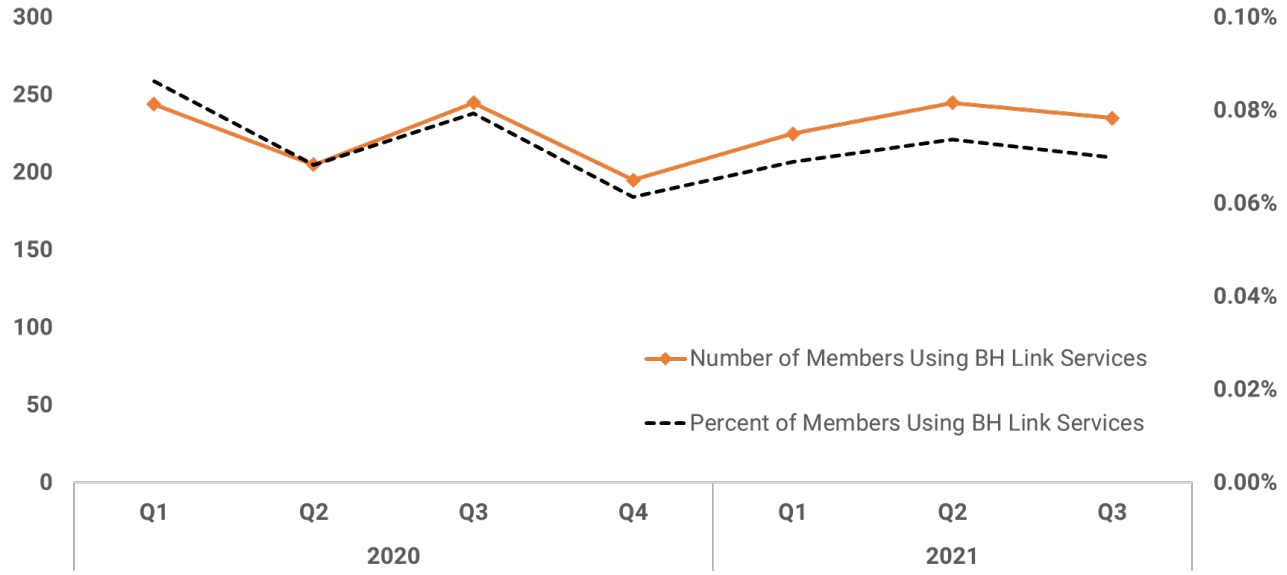
- **Descriptive analyses of member characteristics** to understand the members that the BH Link triage center is serving, and how many members they are serving over time
- **Unadjusted analyses of outcomes** to compare differences in the means of the nine key outcomes in the performance period (January 2020 – September 2021), for the BH Link and comparison groups
- **Risk-adjusted cross-sectional analysis** to compare the experience of members in the BH Link program and comparison groups in the performance period, which will allow us to descriptively

assess the effect BH Link program had on each of the nine outcomes. The cross-sectional analyses were adjusted for member-level sociodemographic characteristics and health status indicators, zip code-level community characteristics, and county-level COVID-19 burden.

4.4 Descriptive Findings

Member participation. Since BH Link started in January 2020, 1,232 unique Rhode Island Medicaid members have used BH Link triage center services. As shown in **Exhibit 4.4.1** below, the number of members using BH Link services has stayed relatively constant from the beginning of the program to September 2021, with slight (10-50 member) fluctuations in quarterly attribution.

Exhibit 4.4.1. Members Using BH Link Services (January 2020 – September 2021)



SOURCE: NORC analysis of Rhode Island Medicaid enrollment data.

Sociodemographic characteristics. Exhibit 4.4.2 presents the characteristics of members using BH Link services alongside the characteristics of the propensity score-weighted comparison member group, which consists of adult Rhode Island Medicaid members with one or more behavioral health conditions or diagnosed SUDs who were not treated through the BH Link triage center during the performance period. The majority of BH Link users were female (54.9 percent) and non-Hispanic white (57.5 percent), similar to the comparison group. More members who used BH Link services were Hispanic (24.8 percent), relative to the comparison group (16.3 percent). Five percent of BH Link users had a COVID diagnosis during the performance period, which was significantly higher than comparison members (2.9 percent). Overall, BH Link users lived in areas where a smaller percentage of the population was receiving Supplemental Security Income (SSI), Temporary Assistance for Needy Families (TANF), or Supplemental Nutrition Assistance Program (SNAP) benefits.

Exhibit 4.4.2. Sociodemographic Characteristics of Members Using BH Link Services and Comparison Group, Performance Period (January 2020 – September 2021)

	Members Using BH Link Services	Comparison Group Members	Difference
Unique members	1,232	87,030	N/A
Sociodemographic Characteristics			
Age (%)			
18-34 years	36.7	35.5	1.05
35-54 years	36.4	39.5	0.88
55-64 years	15.0	16.9	0.87
65+ years	11.9	8.1	1.53
Female (%)	54.9	59.2	0.84
Race/Ethnicity (%)			
White, not Hispanic	57.5	61.3	0.85
Black, not Hispanic	7.2	8.1	0.89
Hispanic	24.8	16.3	1.70**
Multiple/Other, not Hispanic	5.1	6.3	0.80
Unknown	5.4	8.1	0.65***
Chronic conditions (%)†			
Diabetes	13.3	14.4	0.91
Stroke/TIA	2.1	2.5	0.82
AMI	0.1	0.5	0.28*
Any COVID diagnosis (%)	5.0	2.9	1.79***
Zip Code-Level Characteristics			
Median household income	$62,118	$61,775	$343
Less than a high school education (%)	86.5	86.4	0.14
Under 100% of federal poverty line (%)	14.5	14.9	-0.46
Receiving SSI, TANF, or SNAP (%)	29.9	31.8	-0.02*
Unemployment rate (%)	6.0	6.0	-0.01
COVID County-Level Characteristics			
Average # cases per 1,000	25.0 per 1,000 residents	22.6 per 1,000 residents	2.45

	Members Using BH Link Services	Comparison Group Members	Difference
Total # deaths per 1,000	0.45 per 1,000 residents	0.4 per 1,000 residents	0.04
Average PVI score	0.50	0.51	0.01*
Average case fatality rate	21.2 per 1,000 residents	20.4 per 1,000 residents	0.79
Total population vaccinated (%)	19.8	21.3	-0.02

SOURCE: NORC analysis of Rhode Island Medicaid enrollment data.
NOTES: *p<0.05; **p<0.01; ***p<0.001. † Selected based on priority conditions identified by EOHHS. Zip code-level characteristics represent the average across all zip code tabulation areas where Rhode Island Medicaid members in the group reside. County-level characteristics represent the average across all counties where Rhode Island Medicaid members in the group reside; data is from March 2020 onward. AMI = Acute Myocardial Infarction; SNAP = Supplemental Nutrition Assistance Program; SSI = Social Security Income; TANF = Temporary Assistance for Needy Families; TIA = Transient Ischemic Attack; PVI = Pandemic Vulnerability Index

Unadjusted trends in spending and utilization outcomes. As shown in **Exhibit 4.4.3**, unadjusted outcomes indicate that members using BH Link services are higher utilizers of acute care, particularly for mental and behavioral health conditions, as aligns with BH Link's target population. Members using BH Link services had higher quarterly Medicaid spending than comparison members, which is likely driven by acute care, and also had higher rates of preventative/ambulatory health services and follow-up after an ED visit for mental illness. Members using BH Link had higher rates of hospitalizations, hospital readmission rates, ED visits (total and BH-specific), and IMD service use. These differences, while unadjusted, show that members accessing BH Link services have a high need for acute services, even when compared to other Medicaid members with behavioral health conditions.

Exhibit 4.4.3. Unadjusted Means for Spending and Utilization Outcomes for Members Using BH Link Services and Comparison Members, Performance Period (January 2020 – September 2021)

	Unadjusted Mean and Standard Error	
	Members Using BH Link Services	Comparison Members
Core Demonstration Outcomes		
Total Medicaid spending	$9,347 ($503)	$4,654 ($20)
Hospitalizations	504.7 (69.8)	100.8 (8.3)
All-cause readmissions	407.9 (33.5)	222.4 (3.6)
ED visits	1,292.2 (90.1)	297.3 (1.8)
Annual wellness visit	50.4 (10.8)	62.6 (4.3)
BH Link Outcomes		
Access to preventative/ambulatory health services	932.0 (10.9)	819.2 (0.7)
Use of behavioral health services	974.5 (2.8)	--

	Unadjusted Mean and Standard Error	
	Members Using BH Link Services	Comparison Members
7-day follow-up after ED visit for mental illness	78.9 (26.5)	73.0 (4.4)
30-day follow-up after ED visit for mental illness	208.3 (56.2)	147.3 (6.0)
IMD service use	112.8 (9.1)	21.8 (0.3)
ED visits for BH services	1,034.7 (86.4)	146.9 (1.4)

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.
NOTES: Use of behavioral health services was used to construct the comparison group, so is not a relevant metric for the comparison group. Total Medicaid spending is presented per member per quarter; utilization outcomes are presented per 1,000 members per quarter.

Risk-adjusted means for spending and utilization outcomes. When considering health outcomes for BH Link users, adjusting for key member- and area-level characteristics[†††] and comparing outcomes to Medicaid members with behavioral health conditions, it is clear that BH Link users are complex patients with acute health care needs (**Exhibit 4.4.4**). Among Core Demonstration outcomes, members using BH Link services have higher acute care utilization overall, including for hospitalizations (278.4 per 1,000 members), readmissions (96.4 per 1,000 members), total ED visits (1,236.0 per 1,000 members), ED visits related to BH (1,037.1 per 1,000 members), and IMD service use (270.0 per 1,000 members) than comparison members. This more frequent use of acute care also led to higher total Medicaid spending ($14,353 vs. $4,870 per member). However, members using BH Link services saw significantly higher rates of preventative/ambulatory health services (994.8 per 1,000 members) and 30-day follow-up for mental health-related ED visits (117.0 per 1,000 members).

Exhibit 4.4.4. Risk-Adjusted Means for Spending and Utilization Outcomes for BH Link Users and Comparison Members, Performance Period (January 2020 – September 2021)

	Risk-Adjusted Mean		Difference	95% CI
	BH Link	Comparison		
Core Demonstration Outcomes				
Total Medicaid spending	$14,353	$4,870	$9,483***	$8,695, $10,270
Hospitalizations	402.8	124.4	278.4***	255.2, 301.6
All-cause readmissions	222.9	126.5	96.4***	71.2, 121.6
ED visits	1,493.2	257.2	1,236.0***	1,080.2, 1,391.8
Annual wellness visit	45.8	55.2	-9.4	-19.6, 0.9
BH Link Outcomes				
Access to preventative/ambulatory health services	4,074.2	3,079.4	994.8***	816.3, 1,173.4

[†††] We adjusted the DID models for member-level sociodemographic characteristics and health status indicators, zip code-level community characteristics, and county-level COVID-19 burden. See **Exhibit 2.3.2** for additional details about covariates.

	Risk-Adjusted Mean		Difference	95% CI
	BH Link	Comparison		
Core Demonstration Outcomes				
7-day follow-up after ED visit for mental illness	100.1	75.8	24.3	-10.8, 59.5
30-day follow-up after ED visit for mental illness	276.3	159.3	117.0***	61.2, 172.9
IMD service use	333.9	63.9	270.0***	248.6, 291.3
ED visits for BH services	1,179.3	142.2	1,037.1***	901.5, 1,172.6

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data. NOTES: *p<0.05; **p<0.01; ***p<0.001. Total Medicaid spending is presented per member per quarter; utilization outcomes are presented per 1,000 members per quarter. Use of behavioral health services was used to construct the comparison group, so is not a relevant metric for estimating difference between the two groups.

4.5 Discussion

Despite numerous challenges since its January 2019 debut, BH Link has made substantial progress filling gaps in Rhode Island's mental health and substance use crisis care services, serving just over 1,200 members since January 2020. From our descriptive analyses, we observe that members accessing BH Link services also receive a high level of acute care, particularly for behavioral health conditions and SUD treatment. This is the population for which BH Link was designed, and the differences between BH Link users and the comparison members (all of whom also have one or more behavioral health conditions) indicate that BH Link is serving the most acute patients in need of crisis care. These differences are driving the overall increase in spending and acute care utilization seen in our risk-adjusted analyses; BH Link users overall incurred almost $10,000 more than the comparison group in a quarter when they access BH Link services. These higher levels of Medicaid spending and utilization among BH Link users may reflect both an increased need for these services, as well as increased service utilization as a direct result of seeking help from BH Link, since a key component of BH Link is to connect users directly to other types of care. The connections to follow-up care services in the community that BH Link can provide may be driving the higher rates of preventative/ambulatory health services and 30-day follow-up for BH-related ED visits relative to the comparison group. These findings are consistent with previous studies of similar initiatives, where increased utilization was seen after engagement in behavioral health-focused care management programs.[52,53]

Our evaluation of BH Link is limited by a number of factors, including our inability to construct a relevant baseline against which to measure spending and utilization outcomes, inability of the descriptive design to assess causality, and the near-complete overlap of the COVID-19 pandemic with the performance period. Additionally, as noted above, we captured BH Link users in this analysis at a particularly high-acuity and high-need time, which led to higher observed spending and utilization relative to the comparison group. While we weighted the comparison group to be similar to the members seeking BH Link services during the performance period, we were only able to account for *observable* characteristics that we can capture from Medicaid enrollment, claims, and encounter data. There may be additional differences in disease severity and use of services prior to the performance period which might contribute to the differences between BH Link users and comparison members. For instance, we were unable to capture many of the individual-level factors (e.g., access to and awareness

of BH Link, familial support or lack thereof, concerns related to COVID-19) that drive individuals' behavior and are likely more central in care-seeking decisions than sociodemographic and area-level characteristics that are included in our propensity weighting model.

Additionally, our evaluation is limited to members receiving services through the BH Link triage center and appearing in claims and encounter data under the HCPCS bundled rate code. This may contribute to the observed higher level of acuity of members using BH Link, as we are not capturing members needing lower-acuity services who access the BH Link Hotline or receive services from the BH Link Mobile Outreach program. In the Summative Evaluation Report, we hope to be able to conduct a deeper assessment of service utilization across all three primary components of BH Link, including the BH Link Hotline and the mobile outreach services.

Chapter 5: Dental Case Management Pilot Program

5.1 Dental Case Management Pilot Overview

Rhode Island's Medicaid program faces a number of challenges in providing adequate dental care to enrollees, including: 1) the small number of participating dental providers (19 percent as of 2018); 2) concerns from providers, including insufficient fee-for-service (FFS) reimbursement rates, high number of missed appointments among Medicaid patients, and patient non-compliance; and 3) the continued high costs of care and frequent use of the emergency department for dental health conditions.[54] Additionally, an increasingly diverse Rhode Island population is driving the need for more interpreters and expanded translation services, and Rhode Island's aging public transportation infrastructure renders public transit an increasingly unreliable option for patients who depend on it to travel to appointments. Given these challenges, Rhode Island implemented a program that aimed to increase provider participation in the adult Medicaid FFS dental program, increase dental service use by adult Medicaid members, and reduce costs to the Medicaid program overall. The program is designed to achieve these aims by creating mechanisms to offer more value to providers and members, and to improve the provider-patient relationship. Rhode Island's pilot builds on similar dental care management/coordination programs conducted in Vermont, New Jersey, Ohio, Georgia, Indiana, and Minnesota, all of which achieved positive outcomes.

In 2019, EOHHS implemented the Dental Case Management (DCM) Pilot, a year-long program that incentivized dental practices to offer case management services to Rhode Island adults enrolled in FFS Medicaid. The case management services in the DCM pilot were furnished via use of four Current Procedural Terminology (CPT) codes aimed at improving the social determinants of health (SDOH) that affect compliance, improve enrollee experience and oral health outcomes, and provider experience:[55]

- **D9991: Addressing Appointment Compliance Barriers.** Individualized efforts to assist a patient to maintain scheduled appointments by solving transportation challenges or other barriers.
- **D9992: Care Coordination.** Assisting in a patient's decisions regarding the coordination of oral health care services across multiple providers, provider types, specialty areas of treatment, health care settings, health care organizations and payment systems.
- **D9993: Motivational Interviewing.** Patient-centered, personalized counseling using methods such as Motivational Interviewing to identify and modify behaviors interfering with positive oral health outcomes.
- **D9994: Patient Education to Improve Oral Health Literacy.** Individual, customized communication of information to assist the patient in making appropriate health decisions designed to improve oral health literacy, explained in a manner acknowledging economic circumstances and different cultural beliefs, values, attitudes, traditions, and language preferences.

To participate in the DCM Pilot, providers were first required to attend the "Improving the Quality of Oral Healthcare through Case Management" webinar developed in collaboration with the Medicaid/Medicare CHIP Services Dental Association (MSDA).[56] Once their training completion was approved by the Executive Office of Health and Human Services (EOHHS) and the practice was officially enrolled in the pilot, providers were able to bill for reimbursement using the case management codes.‡‡‡ In order to receive reimbursement, providers were required to submit the DCM Progress and Outcomes Data Collection Form to EOHHS, as well as documentation of each patient's progress, challenges, and follow-up appointments.[13] EOHHS tracked data on code uptake and performance measures, stratified by provider and code use. Performance measures included: 1) broken appointments, 2) preventive dental services, 3) restorative dental services, 4) completed treatment plans, 5) utilization of emergency department for dental-related conditions, and 6) scores for health literacy and patient experience. EOHHS used these data from the DCM Pilot to help determine the utility and effectiveness of these additional case management codes, and whether positive behavior changes for patients were driven by the provision of case management services.[13]

Providers in the pilot received FFS Medicaid payments for these services at $22 per claim. Practices not participating in the DCM Pilot were not able to submit these codes for Medicaid reimbursement. This pilot was designed to be implemented in up to six dental practices across the state; however, due to challenges with practice recruitment only three practices had providers who completed the training.[13] At the end of the pilot, EOHHS determined they would not be extending the program beyond December 2019.

5.2 Evaluation Hypotheses and Outcomes

The DCM Pilot Program was implemented as a delivery system enhancement aligned with Principle 1 of the Demonstration (pay for value, not volume), with the objective of providing higher-quality and more coordinated care to Rhode Island Medicaid members. **Exhibit 5.2.1** lays out the explicit goals and target population of the DCM Pilot, as well as the associated evaluation hypotheses, research questions, and performance metrics for the evaluation.

Exhibit 5.2.1. Overview of DCM Pilot Goals, Evaluation Hypotheses, Research Questions, Target Population, and Metrics

Goals	▪ Increase use of preventive services ▪ Decrease broken appointments ▪ Improve the social determinants of health that affect compliance, member experience, health outcomes, and provider experience

‡‡‡ If a participating practice is a Federally Qualified Health Center (FQHC) and bills a case management service with another Medicaid-covered dental services, it will be covered by the typical prospective payment to the FQHC. For case management services provided by an FQHC over the phone, EOHHS reimburses the FQHC at $22 for each code billed on a FFS basis.

Target Population	▪ Rhode Island Medicaid members ages 18 and over in the traditional fee-for-service dental delivery system, seen at participating dental practices
Evaluation Hypotheses	▪ The Demonstration will reduce utilization and overall Medicaid spending while maintaining quality of care for Rhode Island Medicaid members ▪ The Demonstration will increase coordination among different care types, leading to better health outcomes for Rhode Island Medicaid members
Research Questions	▪ What percentage of Rhode Island Medicaid patients are attributed to this waiver program? ▪ What are the trends in spending, utilization, and quality of care? ▪ Does the Demonstration increase uptake of prevention-focused resources into routine medical care for high-cost/high-need Rhode Island Medicaid members?
Performance Metrics	▪ Use of dental case management codes ▪ Dental services

5.3 Analytic Approach

The below section details our approach to evaluating the DCM Pilot's impact, including the performance period, identification of treatment and groups, key outcomes, and our analytic approach. All analyses are conducted with adult (ages 18 and older) Rhode Island Medicaid members who received full Medicaid benefits for each month in the calendar quarter and were enrolled in Medicaid's fee-for-service dental coverage plan.

Performance Period for DCM analysis
January 2019 – December 2019

Performance Period. The performance period for the DCM Pilot is January 2019 – December 2019. It was not feasible to construct a meaningful baseline period, as these services were not covered by Medicaid in previous years. Due to the small sample size in the DCM treatment group and the limited timespan of the performance period (one calendar year), we were only able to conduct analysis aggregated to the member-year level. In this report, we analyze data through December 2019, the end of the pilot program period. Because the DCM Pilot was time-limited to 2019 and was not extended, we will not conduct any further analysis on this program in the Summative Evaluation Report

Treatment Group Identification. To identify members who participated in the DCM Pilot, we first identified providers who completed training and officially enrolled in the pilot, and who were eligible to submit claims for dental case management services to Medicaid members, throughout 2019. Any member enrolled in the Medicaid FFS dental plan and received dental case management services (CPT codes D9991 – D9994) in 2019 from a provider enrolled in the pilot were considered members of the treatment group for the member-year analysis.

Comparison Group Identification. The comparison group for the DCM Pilot analysis is comprised of members who were enrolled in the Medicaid FFS dental plan and were seen by providers enrolled in the DCM Pilot, but who did *not* receive services under the four dental case management CPT codes.

Outcomes. For the DCM Pilot, we focused our analysis on six core claims-based metrics (i.e., metrics that are measured for each Demonstration program), as well as two additional metrics that are specific to the DCM pilot and its mechanisms of transformation (**Exhibit 5.3.1**).

Analytic Approach. We conducted the following analyses to characterize the members receiving eligible services under the DCM Pilot assess performance for members receiving services under the program:

- **Descriptive analyses of providers participating in the DCM Pilot** to understand uptake of the pilot program, characteristics of providers, and patterns in use of dental case management codes.
- **Descriptive analyses of member characteristics** to understand the members served by the DCM Pilot, and how many members the pilot is serving over time.
- **Unadjusted analyses of outcomes** to compare differences in the mean outcomes in the performance period, for the DCM Pilot treatment and comparison groups.
- **Risk-adjusted member-year level cross-sectional case study analysis** to descriptively compare the experience of members in the DCM Pilot and comparison groups in the performance period. The serial cross-sectional analyses adjusted for member-level sociodemographic characteristics and health status indicators, zip code-level community characteristics, and county-level COVID-19 burden.

Exhibit 5.3.1. DCM Pilot Outcomes for Evaluation

Core Demonstration Outcomes
▪ Number of members receiving DCM ▪ Hospitalizations ▪ Emergency department visits ▪ Annual wellness visit ▪ All-cause readmissions ▪ Total Medicaid spending
DCM Pilot Outcomes
▪ Use of dental case management codes ▪ Dental services

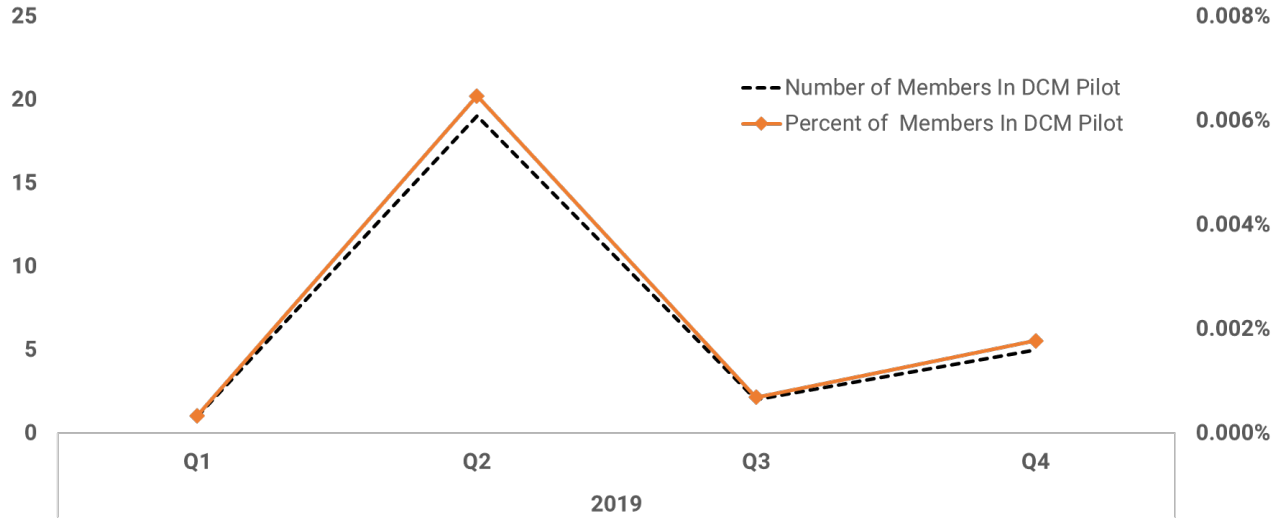
5.4 Descriptive Findings

Provider and practice participation. As described above, providers must be trained and certified by EOHHS to provide dental case management services to members to participate in the pilot. Over the course of DCM Pilot in 2019, 20 providers from three Rhode Island dental practices completed training and were enrolled in the program to provide dental case management services to Medicaid members. Although four dental practices completed the required training, only two remained enrolled throughout the entire pilot year and submitted claims for dental case management codes. Most providers at the two participating practices were trained in the first two quarters of the year, with only three providers trained in the second half of the year. No new practices were added after the second quarter of 2019.

Member participation. As summarized in **Exhibit 5.4.1** below, member participation in the DCM Pilot was limited, with only 25 total unique members participating in the pilot during the year-long performance period of January 2019 – December 2019. In Q1 2019, only one member received dental

case management services under the pilot program. The highest number of members participated in the pilot during Q2 2019, when 19 members participated. Participation in the pilot dropped to two members in Q3 2019; five members were enrolled in the final quarter of the pilot in Q4 2019.

Exhibit 5.4.1. Members Participating in the DCM Pilot (January – December 2019)



SOURCE: NORC analysis of Rhode Island Medicaid enrollment data.

Sociodemographic characteristics. The unique 25 DCM Pilot participants were compared to the propensity score-weighted comparison group of 4,689 Rhode Island Medicaid members enrolled in the FFS dental delivery system who did not receive DCM services. **Exhibit 5.4.2** outlines the sociodemographic characteristics of members participating in the DCM Pilot alongside the comparison group. Both groups were majority female, non-Hispanic white, and ages 18 to 34 years. The only significant difference observed between the two groups is that DCM Pilot participants lived in areas with a slightly higher unemployment rate (7.2 percent vs. 6.3 percent).

Exhibit 5.4.2. Sociodemographic Characteristics of Members Participating in the DCM Pilot and Comparison Members, Performance Period (January – December 2019)

	DCM Pilot Participant Characteristics	Comparison Group Characteristics	Difference
Unique members	25	4,689	N/A
Sociodemographic Characteristics			
Age (%)			
<18 years	35.2	42.9	0.72
18-34 years	31.1	36.0	0.80
35-54 years	22.9	13.5	1.90

	DCM Pilot Participant Characteristics	Comparison Group Characteristics	Difference
55-64 years	10.8	7.6	1.48
Female (%)	54.0	58.7	0.83
Race/Ethnicity (%)			
White, not Hispanic	42.8	47.0	0.84
Black, not Hispanic	6.6	8.8	0.74
Hispanic	28.2	23.8	1.26
Multiple/Other, not Hispanic	13.9	8.2	1.82
Unknown	8.5	12.3	0.66
Chronic conditions (%)†			
Diabetes	8.7	14.0	0.59
Stroke/TIA	0.0	1.9	N/A
AMI	0.0	0.3	N/A
Zip Code-Level Characteristics			
Median household income	$55,664	$59,588	-$3,924
Less than a high school education (%)	83.2	85.4	-2.20
Under 100% of federal poverty line (%)	17.0	15.7	1.39
Receiving SSI, TANF, or SNAP (%)	63.5	67.7	-0.04
Unemployment rate (%)	7.2	6.3	0.92*

SOURCE: NORC analysis of Rhode Island Medicaid enrollment data.
NOTES: *p<0.05; **p<0.01; ***p<0.001. † Selected based on priority conditions identified by EOHHS. Zip code-level characteristics represent the average across all zip code tabulation areas where Rhode Island Medicaid members in the group reside. County-level characteristics represent the average across all counties where Rhode Island Medicaid members in the group reside; data is from March 2020 onward. AMI = Acute Myocardial Infarction; SNAP = Supplemental Nutrition Assistance Program; SSI = Social Security Income; TANF = Temporary Assistance for Needy Families; TIA = Transient Ischemic Attack.

Use of dental case management codes. Over the course of the DCM Pilot in 2019, dental case management codes were rarely used (**Exhibit 5.4.3**). A total of 76 claims were recorded with the four pilot codes; 68 of those instances occurred in the second quarter of the year. Code D9994, Patient Education to Improve Oral Health Literacy, was used most often (60 out of the 76 code usages). No provider used code D9991, Addressing Appointment Compliance Barriers, during the DCM Pilot period, and only eight claims were

Exhibit 5.4.3. Dental Case Management Code Usage in the DCM Pilot Performance Period (January – December 2019)

	2019 Q1	2019 Q2	2019 Q3	2019 Q4
D9991	0	0	0	0
D9992	0	8	0	0
D9993	0	8	0	0
D9994	0	52	3	5

SOURCE: Annual Operations Report Rhode Island Comprehensive 1115 Waiver Demonstration, January 1, 2019 – December 31, 2019 (EOHHS)

recorded for both D9992 (Care Coordination) and D9993 (Motivational Interviewing). One provider (St. Joseph's Hospital) recorded the vast majority of claims with dental case management codes (68 of 76).

Unadjusted trends in spending and utilization outcomes. As highlighted in **Exhibit 5.4.4**, unadjusted outcomes from the DCM Pilot participants show marked differences in the outcomes of comparison members, some of which may be attributable to the small sample size. DCM Pilot participants overall had lower Medicaid spending and hospitalizations, but a higher rate of ED visits, annual wellness visits, and dental health services. One of the main goals of the DCM Pilot was to reduce barriers to dental care for patients; however, due to the small sample size we cannot determine if the DCM Pilot is driving the small increase we see in that measure.

Exhibit 5.4.4. Unadjusted Means for Spending and Utilization Outcomes for DCM Pilot Participants and Comparison Members, Performance Period (January – December 2019)

	Unadjusted Mean and Standard Error	
	DCM Pilot Participants	**Comparison Members**
Core Demonstration Outcomes		
Total Medicaid spending	$1,980 ($702)	$10,371 ($198)
Hospitalizations	44.6 (45.0)	73.2 (4.2)
All-cause readmissions	N/A	265.7 (41.7)
ED visits	310.8 (121.1)	266.7 (9.0)
Annual wellness visit	131.8 (84.1)	83.1 (3.1)
DCM Pilot Outcomes		
Dental services	1,918.8 (196.1)	1,557.1 (10.4)

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.
NOTES: Total Medicaid spending is presented per member per year; utilization outcomes are presented per 1,000 members per year.

Risk-adjusted means for spending and utilization outcomes. When considering outcomes for DCM Pilot participants and other adult Medicaid members seen in participating dental practices, we see much lower utilization and spending for DCM Pilot participants (**Exhibit 5.4.5**). Members in the DCM Pilot had significantly lower spending ($1,824 versus $22,744 per member), hospitalization (21.9 versus 79.2 per 1,000 members), and ED visit (329.1 versus 501.5 per 1,000 member) rates in the year than the comparison group after adjusting for key member- and area-level covariates.[§§§] Due to the small number of members who participated in the DCM Pilot, we were unable to compare the adjusted differences in dental services, which may be most relevant to this pilot program.

[§§§] We adjusted the cross-sectional models for member-level sociodemographic characteristics and health status indicators, zip code-level community characteristics, and county-level COVID-19 burden. See **Exhibit 2.3.2** for additional details about covariates.

Exhibit 5.4.5. Risk-Adjusted Means for Spending and Utilization Outcomes for DCM Pilot Participants and Comparison Members in the Performance Period (January – December 2019)

	Risk-Adjusted Mean		Difference	95% CI
	DCM Pilot	Comparison		
Core Demonstration Outcomes				
Total Medicaid spending	$1,824	$22,744	-$20,919***	-$29,998, -$11,841
Hospitalizations	21.9	79.2	-57.2***	-88.3, -26.2
ED visits	329.1	501.5	-172.4*	-344.1, -0.7
Annual wellness visit	134.9	138.0	-3.1	-93.8, 87.5

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data
NOTES: No results are shown for all-cause readmissions and dental services because those models did not converge due to sample size limitations. Total Medicaid spending is presented per member per year; utilization outcomes are presented per 1,000 members per year.

5.5 Discussion

EOHHS' goals for the DCM Pilot were broad and included: 1) increasing the use of preventative services, 2) decreasing the number of broken appointments, and 3) mitigating SDOH barriers for members. The limited scope of implementation of this pilot program (25 unique members) made it difficult to evaluate whether the Pilot made progress on these goals. The DCM Pilot was designed to make care more accessible to members who typically had barriers to accessing care, which may be reflected in the large gaps we see in utilization between the treatment and comparison groups. While we did observe that members receiving dental case management services under the Pilot incurred more unadjusted claims for dental services in the year, we cannot determine whether that was a result of the DCM Pilot activities. Unfortunately, due to the small sample size, we were not able to estimate the difference in risk-adjusted average dental services across the DCM Pilot participants and comparison members. In their 2019 Annual Operations Report to CMS,[57] EOHHS identified key challenges with the DCM Pilot that led to its limited uptake:

- **Low financial incentives for practices and providers to enroll and participate in the Pilot.** Providers participating in the pilot were compensated just $22 per claim with a dental case management code, reimbursed on a fee-for-service basis. EOHHS reported that this reimbursement rate was too low to incentivize providers to join this pilot program.
- **Insufficient resources to successfully market the DCM Pilot to practices.** EOHHS reported that despite multi-pronged practice recruitment strategies, their resources were limited and, ultimately, could not reach the goal of enrolling six practices in the DCM Pilot.
- **Lack of enrollment, especially among non-FQHC practices.** With only two practices participating fully in this pilot program, the sample size was too small for EOHHS to make determinations on programmatic success for the few individuals receiving services.

Additionally, with so few patients receiving services under the dental case management codes, it was not possible to conduct rigorous analyses on changes in outcomes in patients receiving this care. The reporting requirements were also sparingly reported; in EOHHS' 2019 Annual Operations Report, only one outcome metric (percent change in broken appointments) was included, and only for one practice. The practice reported decreases in the number of broken appointments among adult members in two quarters (four percent and three percent, respectively). However, claims data show that the practice also reported fewer than five instances of dental case management in those quarters, so it is not possible to assess whether that improvement is causally linked to the DCM Pilot. Per the Demonstration agreement, CMS also requires EOHHS to stratify outcomes by the four dental case management codes, which was not feasible due to the low uptake overall.

Providers may have found the additional reporting requirements for the DCM Pilot burdensome, [58] as they were required to submit multiple types of documentation to EOHHS beyond what could be captured in claims data:

- The DCM Progress and Outcomes Data Collection Form (online or paper)
- Scoring of patient behavior difficulty to assess progress over time
- Data on performance measures stratified by case management code
    - Number and percent of broken appointments
    - Preventive dental services
    - Ratio of preventive to restorative dental services
    - Number and percentage of completed treatment plans
    - Change in ED utilization for dental-related reasons

To reduce systemic barriers and observe a change in care utilization and billing practices, initiatives may need to be broader in scope and implemented for a longer duration than one calendar year.

Chapter 6: Institutions of Mental Disease Exclusion Waiver

6.1 IMD Exclusion Waiver Overview

As part of the Demonstration, the Executive Office of Health and Human Services (EOHHS) in collaboration with the Rhode Island Department of Behavioral Healthcare, Developmental Disabilities & Hospitals (BHDDH), requested a waiver (the "IMD exclusion waiver") of Section 1905(a)(29)(B) of the Social Security Act. This waiver would allow Medicaid coverage and federal financial participation for residential treatment services for Medicaid members with opioid use disorders (OUDs) and substance use disorders (SUDs) in Institutions for Mental Disease (IMD).[****] In Rhode Island, IMDs are defined as facilities with 16 or more beds and that are "primarily engaged in providing diagnosis, treatment, or care of persons with mental diseases," regardless of whether the facility is specifically licensed as such.[59] Facilities that primarily provide services for individuals with intellectual disabilities are not considered IMDs. Historically, federal financial participation excluded Medicaid coverage for adults under the age of 65 receiving inpatient OUD/SUD treatment in IMDs, even when an IMD was the most appropriate treatment location.[††††] This exclusion led to many complications for Medicaid members seeking care for OUD/SUDs, including: 1) Medicaid members being treated in hospital emergency departments (ED), which are more expensive and less prepared for mental health diagnoses and SUDs, 2) undermining continuity of care efforts, 3) limiting access to SUD treatment programs, and 4) constraining Medicaid-funded services and supports.

The Comprehensive Demonstration waives this IMD exclusion for OUD/SUD treatment and adds OUD/SUD treatment services provided in IMDs, including short-term residential services, to the benefits that Rhode Island Medicaid members receive. This allows Rhode Island to receive federal financial participation matching for members receiving OUD/SUD treatment services in IMDs who would otherwise be eligible for matching if they received those services in a non-IMD setting. In the Comprehensive Demonstration agreement, the target for average IMD length of stay was extended from 15 days in previous Section 1115 waivers to 30 days in the Comprehensive Demonstration to allow for additional flexibility in treatment courses and increase the probability of treatment success. Length of stay will continue to be assessed via quarterly monitoring reports to CMS, as well as in this evaluation. Rhode Island's key goals for the IMD Exclusion Waiver are:

[****] EOHHS also requested that the IMD Exclusion Waiver be extended to members with mental health diagnoses; however, CMS only approved the waiver for members with SUD but not those with mental health diagnoses. According to Kaiser Family Foundation's Medicaid Waiver Tracker, as of April 2022, 32 states have an approved IMD Exclusion Waiver for SUD treatment (5 states pending), while 8 states have an approved IMD Exclusion Waiver for mental health conditions (8 states pending).

[††††] Rhode Island uses the American Society of Addiction Medicine's criteria for treatment settings and placement for patients needing treatment for addiction. ASAM levels 3.1 through 3.5 reflect the levels of treatment indicated for an IMD placement.

- Allow Rhode Island providers to maintain and enhance Medicaid members' access to substance use treatment in the settings deemed clinically appropriate
- Increase the use of evidence-based, SUD-specific patient placement criteria
- Set standards for residential treatment providers to help mitigate barriers to accessing care, particularly for members who require residential treatment[13]

Under the IMD Exclusion Waiver, all Medicaid members have coverage for high-quality, evidence-based OUD/SUD treatment services during short-term residential treatment and inpatient stays in IMDs, including medication-assisted treatment (MAT), medically supervised withdrawal management, care coordination for physical and behavioral health diagnoses, and peer recovery services. As of the submission of BHDDH's SUD Implementation Plan as part of the Comprehensive Demonstration, there were 280 residential beds for SUD treatment in Rhode Island (186 men-only, 48 women-only, and 46 for men or women), with approximately 100 patients waiting for placement.[13] BHDDH anticipates that the greater potential for residential treatment reimbursement under the IMD Exclusion Waiver, along with targeted funding outside of the Demonstration, will attract new residential providers, increase the number of available beds, address the disparity in gender-specific beds, and eliminate or greatly decrease the waitlist for residential treatment in Rhode Island.

6.2 Evaluation Hypotheses and Outcomes

The IMD Exclusion Waiver and extended length of stay guidance in the Comprehensive Demonstration is one of the many delivery system enhancements intended to create better access to higher-quality and more appropriate SUD treatment services for all Medicaid members, regardless of the setting where a member received those services. **Exhibit 6.2.1** lays out the explicit goals and target population of the IMD Exclusion Waiver, as well as the associated evaluation hypotheses, research questions, and performance metrics for the evaluation.

Exhibit 6.2.1. Overview of IMD Exclusion Waiver Goals, Evaluation Hypotheses, Research Questions, Target Population, and Metrics

Goals	▪ Allow Rhode Island to maintain and enhance member access to behavioral health services in appropriate settings
Target Population	▪ Rhode Island Medicaid members aged 21 to 64 years with substance use disorders and a clinical need for residential treatment and the services and supports required to make a transition back into the community
Evaluation Hypotheses	▪ The Demonstration will reduce utilization and overall Medicaid spending while maintaining quality of care for Rhode Island Medicaid members ▪ The Demonstration will shift care away from high-cost settings, reducing spending while increasing utilization in lower-cost settings.

Research Questions	▪ What percentage of Rhode Island Medicaid members are attributed to this Demonstration program? ▪ What are the trends in spending, utilization, and quality of care? ▪ What are the trends in ED visits and IMD service use for members accessing behavioral health services?
Performance Metrics	▪ Use of BH services ▪ Follow-up after ED visit for mental illness ▪ IMD service use ▪ ED visits for BH services ▪ Rate of overdose deaths

6.3 Analytic Approach

Baseline Period for IMD Exclusion analysis
July 2017 – June 2019

Performance Period for IMD Exclusion analysis
July 2019 – September 2021

The below section details our approach to evaluating the IMD Exclusion Waiver's impact, including identification of the treatment group in the baseline and performance periods, key outcomes, and our analytic approach. All analyses are conducted with adult Rhode Island Medicaid members ages 21-64 who received full Medicaid benefits for each month in the calendar quarter.

Baseline and Performance Periods. The baseline period for the IMD Exclusion Waiver analysis is July 2017 – June 2019, and the performance period is July 2019 – September 2021. In this report, we analyze data through September 2021 based on current availability of complete data for that period; in the Summative Evaluation Report, we will analyze data through the end of the Demonstration (currently December 2024).

Treatment Group Identification. We used Medicaid claims and encounter data to indicate which members were between the ages of 21 and 64 years and accessed IMDs for residential SUD treatment during the baseline and/or performance period.

Comparison Group Identification. Due to the limited scope, broadly defined eligibility criteria, and the small number of participating enrollees in the IMD Exclusion Waiver, it was not feasible to identify an appropriate comparison group for the IMD Exclusion Waiver analysis. We instead conducted a pretest-posttest analysis of members receiving IMD services for residential SUD treatment before and after the Demonstration implementation period.

Exhibit 6.3.1. IMD Exclusion Waiver Outcomes for Evaluation

Core Demonstration Outcomes
▪ Number of members covered by IMD exclusion waiver ▪ Hospitalizations ▪ Emergency department visits ▪ Annual wellness visit ▪ All-cause readmissions ▪ Total Medicaid spending
IMD Exclusion Waiver Outcomes
▪ Use of BH services ▪ Follow-up after ED visit for mental illness ▪ IMD service use ▪ ED visits for BH services ▪ Rate of overdose deaths

Outcomes. For the IMD Exclusion Waiver, we focused our analysis on the six core claims-based metrics (i.e., metrics that are measured for each demonstration program) as well as four additional metrics that are specific to the IMD Exclusion Waiver and its mechanisms of transformation (**Exhibit 6.3.1**).

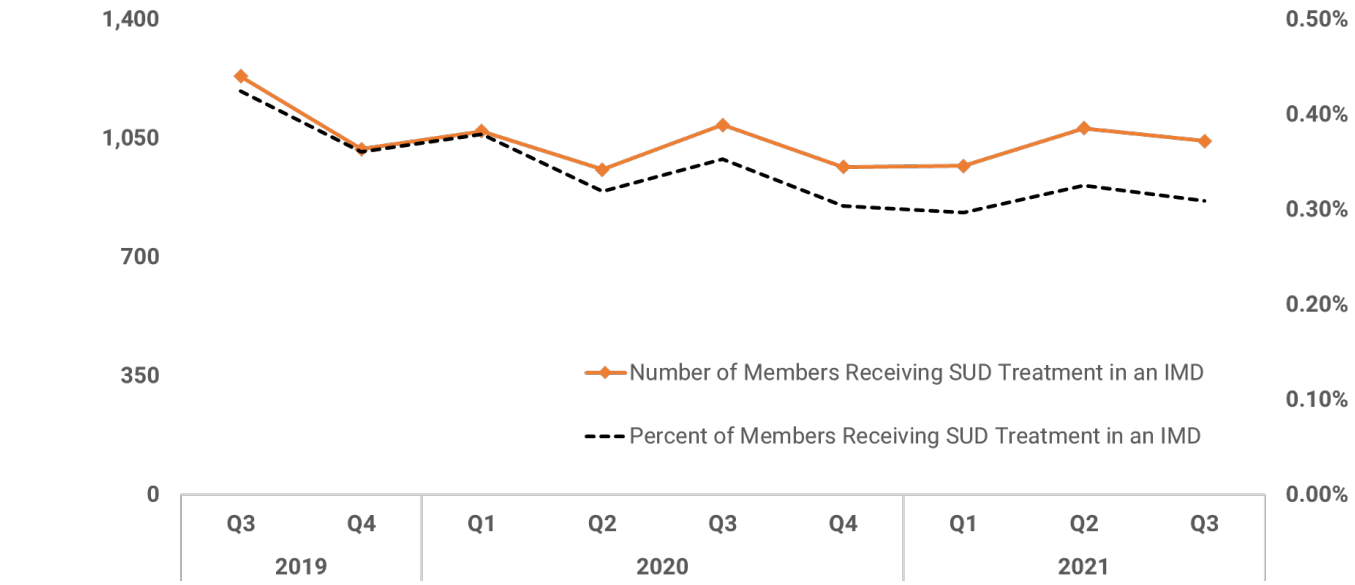
Analytic Approach. We conducted the following analyses to characterize the members who received residential treatment services for OUDs and SUDs in an IMD and estimate the impact of the IMD Exclusion Waiver:

- **Descriptive analyses of member characteristics** to understand the members aged 21 to 64 years who are accessing IMDs for SUD treatment, and how many members IMDs are serving over time
- **Unadjusted analyses of outcomes** to identify trends in the nine key outcomes in the baseline and performance periods, for Rhode Island Medicaid members using IMD services.
- **Risk-adjusted one-group pretest-posttest analyses** to compare the experience of members covered under the IMD Exclusion Waiver program in the baseline and performance period, which compares the outcomes for the IMD population before and after implementation. This approach, while adjusted for observable member- and area-level characteristics, does not permit a causal interpretation.

6.4 Descriptive Findings

Member participation. Over the course of this Demonstration, 4,895 unique Rhode Island Medicaid members received services under the IMD Exclusion Waiver. As displayed in **Exhibit 6.4.1**, the number of members using IMD services had a slight decrease from 1,232 members in Q3 to 1,018 in Q4 2019, then remained relatively constant over the rest of performance period, ending with 1,042 members using IMD services in Q3 2021. The number of members fluctuated slightly from Q4 2019 to Q3 2021, with a small amount of quarterly variation.

Exhibit 6.4.1. Members Using IMD Services in the Performance Period (July 2019 – September 2021)



SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.

Sociodemographic characteristics. Exhibit 6.4.2 summarizes the sociodemographic characteristics of members receiving residential SUD services in an IMD in the baseline and performance periods. A total of 5,136 unique members received these services in the baseline period, compared to 4,895 members in the performance period. The baseline and performance groups for this analysis are not mutually exclusive; 1,855 unique members received residential SUD services in an IMD in both the baseline and performance periods. Overall, the majority of members using IMD services in the performance period were male (65.0 percent) and non-Hispanic white (65.0 percent), and approximately half were 35-54 years of age. The overall sociodemographic and health characteristics of members accessing residential SUD service in an IMD did not change significantly between the baseline and performance periods.

Exhibit 6.4.2. Sociodemographic Characteristics of Members Receiving Residential SUD IMD Services, Baseline (July 2017 – June 2019) and Performance (July 2019 – June 2021) Periods

	Baseline Period (July 2017 – June 2019)	**Performance Period (July 2019 – September 2021)**
Unique members	5,136	4,895
Sociodemographic Characteristics		
Age (%)		
18-34 years	40.8	38.3
35-54 years	48.5	49.6
55-64 years	10.7	12.1
Female (%)	34.3	35.0
Race/Ethnicity (%)		
White, not Hispanic	61.1	65.0
Black, not Hispanic	7.9	8.3
Hispanic	10.2	10.0
Multiple/Other, not Hispanic	6.0	6.6
Unknown	14.8	10.1
Chronic conditions (%)[†]		
Diabetes	7.4	8.4
Stroke/TIA	1.9	2.5
AMI	0.5	0.7
Any COVID diagnosis (%)	N/A	5.3

	Baseline Period (July 2017 – June 2019)	Performance Period (July 2019 – September 2021)
Zip Code-Level Characteristics		
Median household income	$59,822	$62,212
Less than a high school education (%)	14.4	13.3
Under 100% of federal poverty line (%)	15.5	14.5
Receiving SSI, TANF, or SNAP (%)	68.5	40.4
Unemployment rate (%)	6.9	6.0
COVID County-Level Characteristics		
Average # cases	N/A	16.3 per 1,000 residents
Total # deaths	N/A	0.3 per 1,000 residents
Average PVI score	N/A	0.4
Average case fatality rate	N/A	16.2 per 1,000 residents
Total population vaccinated (%)	N/A	15.7

SOURCE: NORC analysis of Rhode Island Medicaid enrollment data.
NOTES: † Selected based on priority conditions identified by EOHHS. Zip code-level characteristics represent the average across all zip code tabulation areas where Rhode Island Medicaid members in the group reside. County-level characteristics represent the average across all counties where Rhode Island Medicaid members in the group reside; data is from March 2020 onward. AMI = Acute Myocardial Infarction; SNAP = Supplemental Nutrition Assistance Program; SSI = Social Security Income; TANF = Temporary Assistance for Needy Families; TIA = Transient Ischemic Attack; PVI = Pandemic Vulnerability Index.

Unadjusted trends in spending and utilization outcomes. As shown in **Exhibit 6.4.3**, unadjusted outcomes for members using IMD services show increased utilization and spending during the performance period, as compared to the baseline period. Members using IMD services in the performance period had total Medicaid spending and acute care utilization (hospitalizations, readmissions, ED visits, behavioral health services, and IMD service use). In the performance period, more members received follow-up services after an ED visit for a mental illness, slightly fewer had an ED visit for BH services, and the rate of overdose deaths was marginally higher among members using IMD services.

Exhibit 6.4.3. Unadjusted Means for Spending and Utilization Outcomes for Members Using Residential SUD IMD Services, Baseline (July 2017 – June 2019) and Performance (July 2019 – June 2021) Periods

	Unadjusted Quarterly Mean	
	Baseline Period (July 2017 – June 2019)	Performance Period (July 2019 – September 2021)
Core Demonstration Outcomes		
Total Medicaid spending	$12,091	$13,620

	Unadjusted Quarterly Mean	
	Baseline Period (July 2017 – June 2019)	**Performance Period (July 2019 – September 2021)**
Hospitalizations	794.1	926.9
All-cause readmissions	188.5	193.4
ED visits	1,431.1	1,355.9
Annual wellness visit	59.2	52.6
IMD Exclusion Waiver Outcomes		
Use of behavioral health services	18,967.2	22,526.1
7-day follow-up after ED visit for mental illness	75.3	84.8
30-day follow-up after ED visit for mental illness	5.6	185.4
IMD service use	4,680.1	6,291.6
ED visits for BH services	1,213.4	1,202.8
Rate of overdose deaths†	1.2	1.9

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.
NOTES: Medicaid spending is presented per member per quarter; utilization outcomes and rate of overdose deaths are presented per 1,000 members per quarter. † The baseline period used to establish the rate of overdose deaths was January 2018 through June 2019 due to historical data availability.

Risk-adjusted means for spending and utilization outcomes. In risk-adjusted pretest-posttest analyses, we observed statistically significant higher hospitalizations among members accessing residential SUD treatment services in an IMD (40.9 per 1,000 members more than baseline; **Exhibit 6.4.4**). This may be driving the higher total Medicaid spending per member ($12,121.38 in the baseline and $13,607.55 in the performance period). There were no statistically significant differences between the baseline and performance periods among the other utilization outcomes.

Exhibit 6.4.4. Risk-Adjusted Means for Spending and Utilization Outcomes for Members Using Residential SUD IMD Services, Baseline (July 2017 – June 2019) and Performance (July 2019 – June 2021) Periods

	Risk-Adjusted Mean			
	Baseline	**Performance**	**Difference**	**95% CI**
Core Demonstration Outcomes				
Total Medicaid spending	$12,121	$13,608	$1,486***	$875, $2,097
Hospitalizations	489.9	530.8	40.9***	18.3, 63.5
All-cause readmissions	191.6	191.1	0.4	-34.5, 34.1
ED visits	1,372.4	1,416.4	44.0	-36.5, 124.5

Annual wellness visit	57.5	53.5	-4.0	-14.5, 6.6
IMD Exclusion Waiver Outcomes				
7-day follow-up after ED visit for mental illness	77.3	83.6	6.2	-5.7, 7.0
30-day follow-up after ED visit for mental illness	201.3	192.0	-9.4	-10.7, 8.8
ED visits for BH services	1,200.7	1,215.5	14.8	-65.5, 95.0

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.
NOTES: *p<0.05; **p<0.01; ***p<0.001. Total Medicaid spending is presented per member per quarter; utilization outcomes are presented per 1,000 members per quarter. The 7- and 30-day outcome measures are limited to the population of members who had an ED visit for mental illness during a quarter. By design, all members in this analysis used behavioral health services and had IMD service use during the performance period; adjusted rates are not reported for these measures because the baseline and performance periods are not comparable. Rate of overdose deaths is not included in this table because the number of overdose deaths (N=35) in the baseline period was too low to estimate a stable risk-adjusted estimate.

6.5 Discussion

The changes to IMD reimbursement policies and length-of-stay guidelines under the Demonstration are designed to help address the increased need for SUD treatment services. However, the state still faces several challenges in providing appropriate and timely SUD/OUD care. For example, Rhode Island has seen a significant decrease in State Opioid Response (SOR) funding, which has resulted in the termination of funding for several projects. Further, while the state is working to increase capacity and use SOR funding to help new residential facilities open, they are unable to use federal grant funds for brick-and-mortar infrastructure. While there is political interest in developing these additional residential treatment facilities, there has historically been a lack of funding for those types of investments. However, in early 2022, the Rhode Island Attorney General announced settlement deals with four major opiate manufacturers and distributors for a total of $250 million over the next 18 years, as restitution for the companies' roles in driving the opioid epidemic.[60,61] These funds, distributed both to cities and towns as well as allocated for statewide initiative administered by EOHHS, will go directly to opioid use disorder prevention, treatment, and recovery.[62] With these funds, EOHHS may be able to provide more appropriate and timely care for Medicaid members accessing SUD/OUD care.

The IMD Exclusion Waiver is just one tool in Rhode Island's plan to address rising rates of SUD, which includes a wide range of other services and programming that focus on the prevention and treatment of SUD. A more comprehensive discussion of the role of Rhode Island's 1115 Demonstration in addressing the SUD crisis, including challenges related to the IMD Exclusion Waiver, can be found in the Rhode Island Substance Use Disorder Mid-Point Assessment.

In discussions, stakeholders noted that IMDs in Rhode Island have been seeing an increased demand for services, particularly for SUD. This increase is reflected in our descriptive analyses. While the total number of members accessing IMD services declined slightly (from 5,136 in the baseline to 4,895 in the performance period), the number of members accessing services in each quarter remained relatively stable, and members accessed more residential SUD services in IMDs in the performance period (4,680.1 residential SUD services per 1,000 members in the baseline compared to 6,291.6 per 1,000 members in the performance period). In our risk-adjusted analyses, we also observed a $1,486

increase in total Medicaid spending per member per quarter driven in part by a corresponding increase in inpatient hospitalizations.

The descriptive findings in this Interim Report should be interpretated with caution. Due to the lack of an appropriate comparison group, this analysis was limited to a pretest-posttest design and these results cannot be interpreted causally. In the Summative Evaluation Report, we will further explore patterns in the usage of residential SUD services in Rhode Island's IMDs by including additional timepoints in the analyses and assessing the feasibility of an interrupted time series design to characterize the impacts of the program.

Chapter 7: Peer Recovery Specialist and Family/Youth Support Partners Programs

7.1 PRS/FYSP Program Overview

As part of Rhode Island's ongoing efforts to coordinate physical and behavioral health care and rebalance the delivery system away from high-cost settings, the Comprehensive Demonstration allows Rhode Island to receive federal funding for two initiatives designed to provide more holistic and less costly care to Medicaid members with complex mental illnesses and/or substance use disorders (SUDs). The Peer Recovery Specialist (PRS) and Family/Youth Support Partners (FYSP) Programs, administered by the Department of Behavioral Health, Developmental Disabilities, and Hospitals (BHDDH) and the Rhode Island Department of Children, Youth, and Family (DYCF), respectively, aim to provide a peer support system for Medicaid members with behavioral and/or mental health conditions, developmental disabilities, and SUDs.[13,‡‡‡‡] These programs are "intended to inspire hope in individuals that recovery is not only possible but probable,"[63] and to mentor individuals through challenges drawing from the lived experience of the PRS/FYSP. Services for Medicaid members under the Comprehensive Demonstration began in late 2019, once the Medicaid billing certification process was finalized.

A PRS is a non-clinical "credentialed behavioral health care professional… who provides an array of interventions that promote socialization, long-term recovery, wellness, self-advocacy, and connections to the community" for individuals experiencing or at high risk for hospitalization, overdose, or homelessness, as well as individuals who were recently released from institutions (e.g., hospitals, prisons).[64] Similarly, a FYSP offers peer support services to children (under 21 years) with behavioral health or developmental disabilities and their caregivers or families, with the goal of the child continuing to live in a community-based setting with supports instead of in a residential treatment facility or inpatient setting. Both PRSs and FYSPs aim to "provide individuals with a support

Supports provided by peers in the PRS/FYSP program include:

- Using lived experience to help patients understand and develop the skills to address behavioral health conditions
- Serving as a key member of a patient's recovery and wellness team
- Providing tools and education to focus on health, wellness, and recovery
- Navigating state and local systems of care
- Fostering encouragement of personal responsibility and self-determination
- Growing skills to engage and communicate with providers and systems of care
- Educating and encouraging patients to be active advocates for themselves and for needed services
- Assisting in transitioning into and staying in the workforce

‡‡‡‡ The PRS program was introduced as an amendment to Rhode Island's Comprehensive Demonstration which was approved by CMS in February 2018. The FYSP program was included in the Comprehensive Demonstration as part of the waiver extension request approved in December 2018.

system to develop and learn healthy skills" and help stabilize patients in the community to keep out of more acute settings when possible.[13]

The PRS/FYSP program is designed to fill a gap in care coordination and management, drawing on the unique experience of individuals who have been successful at facing similar challenges in their lives. For instance, a parent who helped their child successfully addressed complex behavioral health challenges may serve as a FYSP to another parent in a similar situation, helping to navigate various health care and legal systems (e.g., psychiatric care, child welfare, juvenile justice) and provide direct support to tackle challenges.[13] Both PRS and FYSP peers are required to be certified by the Rhode Island Certification Board and/or DYCF[65] and work under a licensed health care provider.[§§§§] They must have a history of or currently be receiving treatment for a mental illness, addiction, chronic illness, or intellectual or developmental disability. Family members with experience navigating these conditions are also able to become a PRS or FYSP. The PRS/FYSP program takes a "Recovery Oriented Systems of Care" approach, which focuses on a patient's strengths and has a primary goal of achieving "sustained recovery and restoration."[13]

As of April 2020, there were 150 active PRS-certified individuals and six provider groups certified to provide services through the PRS/FYSP Programs, with only two provider groups billing Medicaid for PRS services. However, BHDDH has required each of the six community recovery centers in Rhode Island to become certified to bill for PRS services, with the aim of increasing opportunities to enroll and train PRS/FYSP peers.[66]

7.2 Evaluation Hypotheses and Outcomes

The PRS/FYSP Programs are two of the many delivery system enhancements intended to lead to better access to higher-quality and more appropriate SUD treatment services for all Medicaid members, coordinate physical and behavioral health care, and redirect patients away from acute care settings where possible. **Exhibit 7.2.1** lays out the explicit goals and target population of the PRS/FYSP Programs, as well as the associated evaluation hypotheses, research questions, and performance metrics for the evaluation.

Exhibit 7.2.1. Overview of PRS/FYSP Program Goals, Evaluation Hypotheses, Research Questions, Target Population, and Metrics

Goals	▪ To provide peer-to-peer mentoring supports that go beyond recovery navigation ▪ Provide individuals with a support system to develop and learn healthy living skills. ▪ Teaching families the skills necessary to improve coping abilities and positive parenting skills ▪ Developing and linking children, youth, and parents/caregivers with formal and informal support

[§§§§] A PRS may also work under the supervision of a non-clinical PRS Supervisor who is certified as a PRS and has at least two years of experience providing PRS services.

	▪ Helping families to secure basic needs, and access health insurance or social service benefits ▪ Improving socialization, long-term recovery, self-advocacy, connection to the community, and treatment of mental health and/or substance use disorders
Target Population	▪ PRS: Medicaid-eligible individuals experiencing or at risk of, hospitalization, overdose, homelessness or are in the hospital after an overdose, are homeless or are in a detox setting, or recently released from institutions such as hospitals and prison. ▪ FYSP: Parents and youth covered by Rhode Island Medicaid with complex behavioral health needs who are at risk of having to leave the home due to child welfare or juvenile justice involvement, or may need extended residential psychiatric treatment
Evaluation Hypotheses	▪ The Demonstration will reduce utilization and overall Medicaid spending while maintaining quality of care for Rhode Island Medicaid members ▪ The Demonstration will increase coordination among different care types, leading to better health outcomes for Rhode Island Medicaid members ▪ The Demonstration will shift care away from high-cost settings, reducing spending while increasing utilization in lower-cost settings.
Research Questions	▪ What percentage of Rhode Island Medicaid members are attributed to these Demonstration programs? ▪ What are the trends in spending, utilization, and quality of care? ▪ To what extent have the Demonstrations integrated BH and SUD care into medical care? How has this affected health outcomes and BH/SUD treatment uptake for Rhode Island Medicaid members? ▪ What are the trends in Emergency Department (ED) visits and Institution of Mental Disease (IMD) use for members accessing behavioral health services?
Metrics	▪ Access to preventative/ambulatory health services ▪ Use of BH services ▪ IMD service use ▪ ED visits for BH services

7.3 Analytic Approach

The below section details our approach to evaluating the PRS/FYRP Programs' impact, including baseline and performance periods, identification of treatment group, key outcomes, and our analytic approach. All analyses are conducted with Rhode Island Medicaid members who received full Medicaid benefits for each month in the calendar quarter.

Baseline and Performance Periods. The baseline period for the PRS/FYRP program analysis is July 2017 – June 2019, and the performance period is July 2019 – June 2021. In this report, we aggregated data to the year-level due to small sample size in each

Baseline Period for PRS/FYRP Program:
July 2017 – June 2019

Performance Period for PRS/FYRP Program:
July 2019 – June 2021

calendar quarter; thus, the analyses include data through only June 2021. In the Summative Evaluation Report, we will analyze data through the end of the Demonstration (currently December 2024).

Treatment Group Identification. To identify members who accessed PRS or FYRP services in both the baseline and performance periods, we used Medicaid claims and encounter data to indicate which members accessed PRS or FYRP services during performance period (July 2019 – June 2021) and identified those same members in the baseline period (July 2017 – June 2019) to construct the baseline treatment group.

Comparison Group Identification. Due to the limited scope, broadly defined eligibility criteria, and the small number of participating enrollees in the PRS/FYRP Programs, the identification of a comparison group for the PRS/FYRP program analysis was not feasible.

Outcomes. For the PRS/FYRP Programs, we focused our analysis on six core claims-based metrics (i.e., metrics that are measured for each demonstration program) as well as four additional metrics that are specific to the PRS/FYRP Programs and their mechanisms of transformation (**Exhibit 7.3.1**).

Exhibit 7.3.1. PRS/FYSP Program Outcomes for Evaluation

Core Demonstration Outcomes
▪ Number of members receiving PRS/FYSP services ▪ Hospitalizations ▪ Emergency department visits ▪ Annual wellness visit ▪ All-cause readmissions ▪ Total Medicaid spending
PRS/FYSP Outcomes
▪ Access to preventative/ambulatory health services ▪ Use of BH services ▪ IMD service use ▪ ED visits for BH services

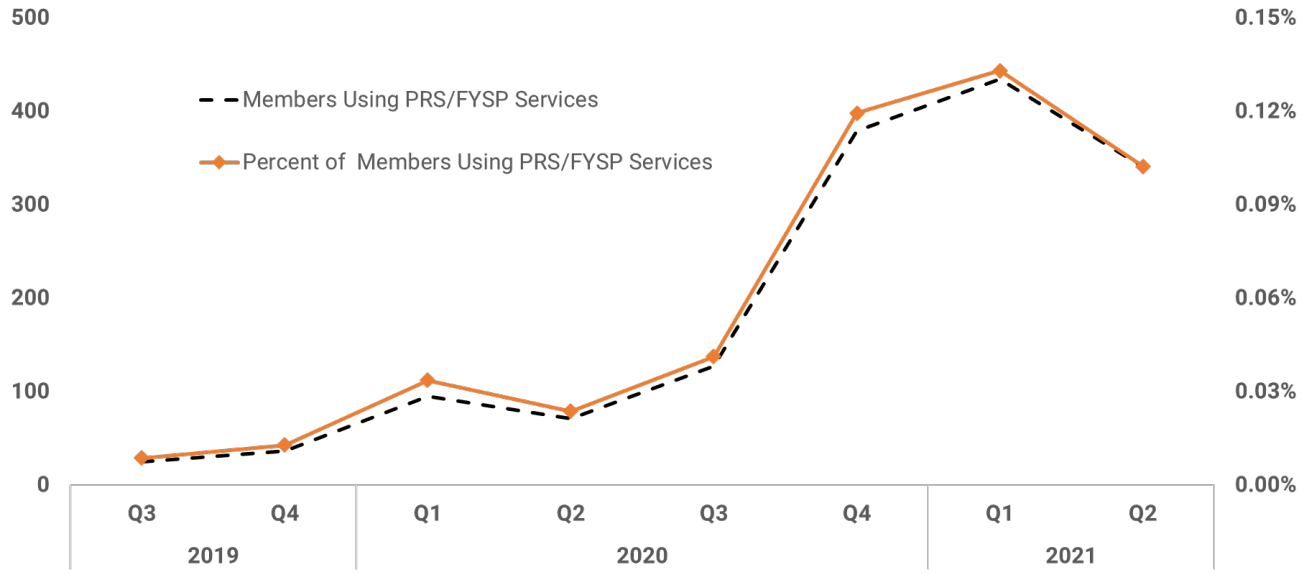
Analytic Approach. We conducted the following analyses to characterize the members who accessed PRS or FYRP services and estimate the impact of the PRS/FYRP Programs:

- **Descriptive analyses of member characteristics** to understand the members that are accessing PRS or FYPR services, and how many members PRS/FYRP are serving over time.
- **Unadjusted analyses of outcomes** to identify trends in the nine key outcomes in the baseline and performance periods, for Rhode Island Medicaid members using PRS/FYSP services.
- **Risk-adjusted one-group pretest-posttest analyses** to compare the experience of members covered under the PRS/FYRP Programs in the baseline and performance period, comparing outcomes for the study population before and after implementation of the PRS/FYRP. This approach compares member outcomes prior to and after receiving PRS services and does not permit a causal interpretation.

7.4 Descriptive Findings

Member participation. Over the course of the Demonstration, 917 unique Rhode Island Medicaid members have received services under the PRS/FYSP Programs. As shown in **Exhibit 7.4.1**, the number of members using PRS/FYP services rose steadily from an initial number of 25 members in Q3 2019 to a peak of 434 members in Q1 2021. After Q1 2021, the number of enrolled members decreased slightly to 340 in Q2 2021, the final quarter in the evaluation analysis.

Exhibit 7.4.1. Members Using PRS/FYSP Services (July 2019 – June 2021)



SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.

Sociodemographic characteristics. Most members using PRS/FYSP services were majority male (58.9 percent) and non-Hispanic white (63.6 percent), and approximately half were 35 to 54 years of age (**Exhibit 7.4.2**). A relatively small percentage of members using PRS/FYSP services had diabetes (11.9 percent), stroke/TIA (3.2 percent), or AMI (0.8 percent). On average, members lived in areas where 16.5 percent of the community is below the federal poverty line, and approximately 40 percent of the community received Supplemental Security Income (SSI), Temporary Assistance for Needy Families (TANF), or Supplemental Nutrition Assistance Program (SNAP) benefits.

Exhibit 7.4.2. Sociodemographic Characteristics of Members Using PRS/FYSP Services, Performance (July 2019 – June 2021) Period

	Performance Period (July 2019 – September 2021)
Unique members	917
Sociodemographic Characteristics	
Age (%)	
<18 years	0.1
18-34 years	32.4
35-54 years	51.4
55-64 years	15.3
>65 years	0.9

	Performance Period (July 2019 – September 2021)
Female (%)	41.1
Race/Ethnicity (%)	
White, not Hispanic	63.6
Black, not Hispanic	9.6
Hispanic	10.8
Multiple/Other, not Hispanic	6.2
Unknown	9.8
Chronic conditions (%)	
Diabetes	11.4
Stroke/TIA	3.2
AMI	0.8
Any COVID diagnosis (%)	6.9
Zip Code-Level Characteristics	
Median household income	$58,632
Less than a high school education (%)	14.9
Under 100% of federal poverty line (%)	16.5
Receiving SSI, TANF, or SNAP (%)	37.6
Unemployment rate (%)	6.4
COVID County-Level Characteristics	
Average # cases	26.2 per 1,000 residents
Total # deaths	0.4 per 1,000 residents
Average PVI score	0.5
Average case fatality rate	14.0 per 1,000 residents
Total population vaccinated (%)	28.9

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data
NOTES: † Selected based on priority conditions identified by EOHHS. The baseline period consists of the same members as the performance period and are thus not included in this table. Zip code-level characteristics represent the average across all zip code tabulation areas where Rhode Island Medicaid members in the group reside. County-level characteristics represent the average across all counties where Rhode Island Medicaid members in the group reside; data is from March 2020 onward. AMI = Acute Myocardial Infarction; PVI = Pandemic Vulnerability Index; SNAP = Supplemental Nutrition Assistance Program; SSI = Social Security Income; TANF = Temporary Assistance for Needy Families; TIA = Transient Ischemic Attack.

Unadjusted trends in spending and utilization outcomes. Exhibit 7.4.3 shows the unadjusted means for members who accessed PRS/FYSP services in the two years before the programs started (July

2017 – June 2019) and two years after the programs were implemented (July 2019 – June 2021). Due to the low number of members the PRS/FYSP Programs served during the performance period, we aggregated outcomes to the year level.

Unadjusted outcomes for members using PRS/FYSP services generally show decreased utilization and spending during the performance period, as compared to the baseline period. Members using PRS/FYSP services had lower total annual Medicaid spending and lower acute care utilization (hospitalizations, ED visits, and IMD service use), as well as lower use of preventative/ambulatory care and ED visits for BH services. However, members using PRS/FYSP services had slightly higher rates of readmissions in the performance period, and also used more behavioral health services.

Exhibit 7.4.3. Unadjusted Means for Spending and Utilization Outcomes for Members Using PRS/FYSP Services, Baseline (July 2017 – June 2019) and Performance (July 2019 – June 2021) Periods

	Unadjusted Mean	
	Baseline Period (July 2017 – June 2019)	**Performance Period (July 2019 – June 2021)**
Core Demonstration Outcomes		
Total Medicaid spending	$12,887	$10,541
Hospitalizations	606.2	556.0
All-cause readmissions	170.7	197.2
ED visits	1,957.4	1,316.7
Annual wellness visit	119.3	60.3
PRS/FYSP Outcomes		
Access to preventative/ambulatory health services	5,537.7	4,843.0
Use of behavioral health services	21,376.6	23,708.0
IMD service use	1,706.4	1,467.7
ED visits for BH services	1,256.8	1,067.9

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.
NOTES: Total Medicaid spending is presented per member per year; utilization outcomes are presented per 1,000 members per year.

Risk-adjusted means for spending and utilization outcomes. Exhibit 7.4.4 shows the risk-adjusted means for members who accessed PRS/FYSP services in the two years before the programs started (July 2017 – June 2019) and two years after the programs were implemented (July 2019 – June 2021). As with the unadjusted numbers above, we aggregated outcomes to the year level due to the low number of members the PRS/FYSP Programs served during the performance period. Members using PRS/FYSP services had significantly lower average annual Medicaid spending in the performance period ($8,603 versus $24,740 per member), driven by decreases in ED visits (1,456.1 versus 3,001.8 per 1,000 members), preventative/ambulatory health services (5,096.4 versus 8,693.9 per 1,000 members), and ED visits for BH services (1,963.0 versus 1,168.04 per 1,000 members) in the baseline

period. However, because most of the performance period coincided with the COVID-19 pandemic, which drove declines in care in all settings, we are unable to determine the extent to which these decreases are due to the supports provided under the PRS/FYSP Programs.

Exhibit 7.4.4. Risk-Adjusted Means for Spending and Utilization Outcomes for Members Using PRS/FYSP Services, Baseline (July 2017 – June 2019) and Performance (July 2019 – June 2021) Periods

	Risk-Adjusted Mean		Difference	95% CI
	Baseline	Performance		
Core Demonstration Outcomes				
Total Medicaid spending	$24,740	$8,603	-$16,137**	-$2,8127, $4,147
Hospitalizations	369.9	277.5	-92.4	-208.7, 23.9
ED visits	3,001.8	1,456.1	-1,545.7***	-2,167.2, -924.1
Annual wellness visit	166.4	73.4	-93.0*	-179.6, -6.4
PRS/FYSP Outcomes				
Access to preventative/ambulatory health services	8,693.9	5,096.4	-3,597.5***	-4,614.8, -2,580.2
IMD service use	4,361.5	1,653.8	-2,707.8***	-4,195.7, -1,219.8
ED visits for BH services	1,963.0	1,168.04	-794.9**	-1,335.1, -254.7

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.
NOTES: *p<0.05; **p<0.01; ***p<0.001. No results are shown for all-cause readmissions or 7- and 30-day follow-up for behavioral health ED visits because those models did not converge due to sample size limitations. All PRS/FYSP members used behavioral health services during the performance period; an adjusted rate is not reported because the baseline and performance periods are not comparable. Total Medicaid spending is presented per member per year; utilization outcomes are presented per 1,000 members per year.

7.5 Discussion

Looking across the baseline and performance periods, members using PRS/FYSP services showed decreased spending and utilization in the time after the PRS/FYSP Programs were implemented. However, most of the period when members were receiving PRS/FYSP services overlapped with the COVID-19 pandemic, which drove declines in service delivery and utilization across care settings, but particularly for behavioral health services.[6] Based on previous research, we hypothesize that members who more fully integrate peer and family support specialists into their care teams, develop meaningful relationships with their PRS, and who engage with their PRS more often will receive greater benefits from this program;[67,68] however, because we were unable to capture the intensity of engagement with program supports for individual members based on Medicaid claims and encounter data, we are limited in our ability to test that hypothesis. Relatedly, our evaluation of the PRS/FYSP Programs is also limited by our inability to conduct an impact assessment or determine causality on the fact that the COVID-19 pandemic overlaps almost completely with the measured performance period.

In our interviews with key stakeholders about the PRS/FYSP Programs, a number of key challenges emerged with implementation. First, because the PRS/FYSP Programs target providers in new service areas (i.e., peer support services) who may be new to Medicaid, some of the provider agencies and organizations had little experience billing Medicaid for services or using electronic medical records. While BHDDH worked closely with practices to establish the Medicaid billing certification process, it was a lengthy exercise which initially delayed broader uptake of the program.[69] Stakeholders noted that this was an especially challenging barrier for smaller providers with more limited funding and staffing resources to complete the administrative requirements for participation. To mitigate some of these concerns, BHDDH collected feedback from providers about this process and revised the trainings to directly address some of the challenges in future rounds of training.

Like many behavioral health programs, the PRS/FYSP has limited staff and resources to oversee them programs, particularly around the onset of the COVID-19 pandemic when many staff re-focused on mitigating the pandemic's effects. The COVID-19 pandemic also delayed some of the required in-person practical experience required for peer specialists trying to participate in the PRS/FYSP Programs, which posed a challenge during a time when even more supports were needed for members.

Some managed care organizations (MCOs) were already implementing a similar program to pay for peer recovery services, which may or may not be captured in claims. However, these plans are not restricted by the state's certification standards for the PRS/FYSP Programs, and may differ in some of the details of implementation. In the future, BHDDH is hoping to collaborate with the MCO programs to streamline and standardize program requirements and benefits.

Finally, stakeholders noted that the attitudes and understanding about the PRS/FYSP roles have posed challenges for integrating them into members' care networks and care teams. While there is little published evidence on the impact of these types of peer navigators and in what contexts their services are most effective, BHDDH is collecting data on how they are interacting with members and when members may be most open to engaging with a PRS/FYSP. Stakeholders reported reluctance on the part of patients to connect with a designated peer after an overdose or crisis situation, and BHDDH noted that they were exploring approaches to integrate peers into the care team at the hospital to ensure that patients are offered the services from the very beginning of their care and/or recovery journey. BHDDH noted that, in their own follow-up analyses, patients who engaged with a peer support were more likely to enter treatment than those who did not.

Chapter 8: Total Medicaid Population

8.1 Medicaid Program Overview

Approximately one-third of all Rhode Islanders are enrolled in Rhode Island's Medicaid program, and Medicaid program expenditures are the largest item in the state's annual budget and have continued to increase in recent years.[1] This number has increased in recent years due to the Medicaid eligibility expansion in 2014 under the Affordable Care Act (ACA), as well as the federal rules implemented via the Families First Coronavirus Response Act (FFRCA), which allows states that provide continuous enrollment to Medicaid members as of March 18, 2020, to receive additional federal funding.[2,70] In 2020, approximately 88 percent of Medicaid members were covered under managed care plans, with the remaining 12 percent in fee-for-service (FFS) Medicaid.[71] Currently, EOHHS contracts with three managed care organizations (MCOs) that serve Rhode Island Medicaid members: 1) the Neighborhood Health Plan of Rhode Island (NHPRI; approximately 185,000 members), 2) UnitedHealthcare (approximately 96,000 members), and 3) Point32Health (formerly Tufts Health Plan; approximately 16,000 members).[9,72] Our analyses for the total Medicaid population in this report focus on the current Demonstration, which started in January 2019 and ends in December 2023.

8.2 Evaluation Hypotheses and Outcomes

Exhibit 8.2.1 lays out the evaluation hypotheses, research questions, and performance metrics for the total Medicaid population.

Exhibit 8.2.1. Overview of Evaluation Hypotheses, Research Questions, Target Population, and Metrics for the Total Medicaid Population

Target Population	▪ Individuals receiving Medicaid benefits.
Evaluation Hypotheses	▪ The Demonstration will reduce utilization and overall Medicaid spending while maintaining quality of care for Rhode Island Medicaid members. ▪ The Demonstration will increase coordination among different care types, leading to better health outcomes for Rhode Island Medicaid members. ▪ The Demonstration will shift care away from high-cost settings, reducing spending while increasing utilization in lower-cost settings.

Research Questions	▪ What are the trends in spending, utilization, and quality of care for all Medicaid members in the Demonstration?
Metrics	▪ Total Medicaid spending ▪ SUD-related Medicaid spending ▪ Hospitalizations ▪ Readmissions ▪ ED Visits ▪ Annual wellness visits

8.3 Analytic Approach

The below section details our approach to analyzing the total Medicaid population, including baseline and performance periods, identification of treatment group, key outcomes, and our analytic approach. All analyses are conducted with Rhode Island Medicaid members who received full Medicaid benefits for each month in the calendar quarter.

Baseline Period for Total Medicaid Population Analysis:
July 2016 – December 2018

Performance Period for Total Medicaid Population Analysis:
January 2019 – September 2021

Baseline and Performance Periods. The current Demonstration started in January 2019, which we used as our anchor date for our trend analysis, with a two-year baseline period. The baseline period for the total Medicaid population analysis is January 2016 – December 2018, and the performance period is January 2019 – September 2021. In this report, we analyze data through September 2021 based on current availability of complete data for that period; in the Summative Evaluation Report, we will analyze data through the end of the Demonstration (currently December 2024).

Treatment Group Identification. We used Medicaid claims and encounter data to compare characteristics of the total Medicaid population during the performance period (July 2019 – June 2021) and the baseline period (July 2017 – June 2019).

Comparison Group Identification. Because the Demonstration was implemented statewide and included all Rhode Island Medicaid members, identification of an in-state comparison group for the program analysis was not feasible. No data for an out-of-state comparison group were available for analysis; thus, our analysis of the total Medicaid population does not use a comparison group.

Outcomes. For the Medicaid population, we focused our analysis on six core claims-based metrics (i.e., metrics that are measured for each demonstration program), as well as SUD-related Medicaid spending (**Exhibit 8.3.1**).

Exhibit 8.3.1. Program Outcomes for Evaluation of Entire Medicaid Population

Core Demonstration Outcomes
▪ Total Medicaid spending ▪ SUD-related Medicaid spending ▪ Hospitalizations ▪ Emergency department visits ▪ Annual wellness visit ▪ All-cause readmissions

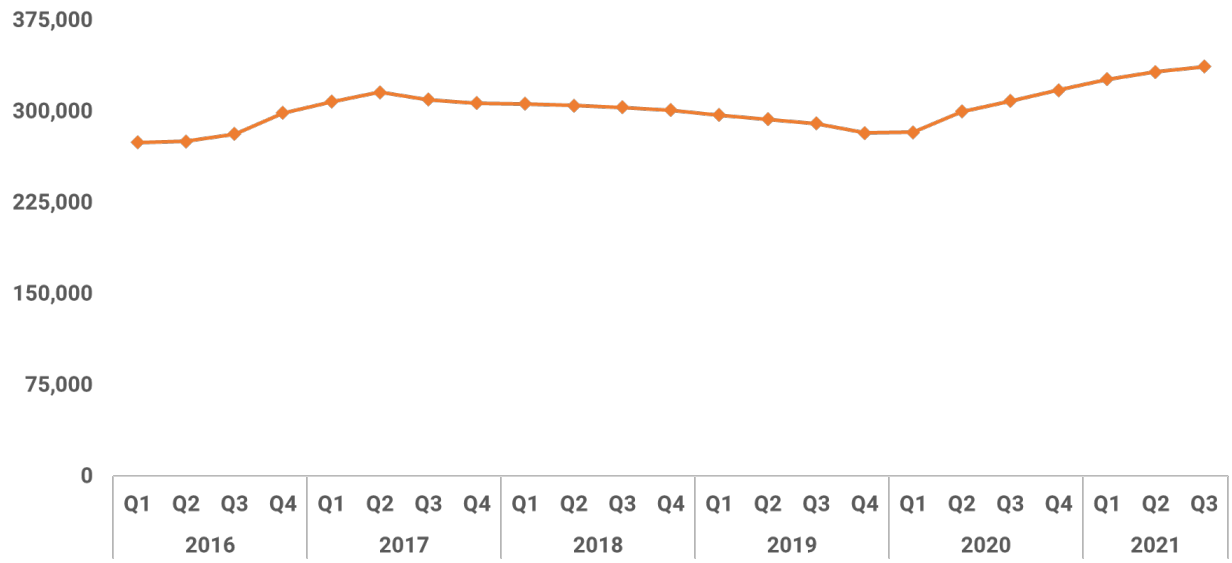
Analytic Approach. We conducted the following analyses to characterize the members who received Medicaid benefits:

- **Descriptive analyses of member characteristics** to understand the members that are receiving Medicaid benefits.
- **Unadjusted analyses of outcomes** to identify trends in the six key outcomes in the baseline and performance periods, for Rhode Island Medicaid members.
- **Risk-adjusted one-group pretest-posttest analyses** to assess the experience of Medicaid members in the baseline and performance periods on key spending, utilization, and quality of care outcomes. This approach compares members in the current Demonstration period to members in the two years prior to this Demonstration's start date and does not permit a causal interpretation.

8.4 Descriptive Findings

Member participation. Since the start of the current Demonstration in January 2019, 396,920 unique Rhode Island Medicaid members have received benefits under the Medicaid program. As shown in **Exhibit 8.4.1**, the number of Medicaid members was relatively steady between in the baseline period between 2016 and 2019 but increased after the onset of the COVID-19 pandemic in 2020. This increase was driven by the continuous enrollment requirement enacted in the Families First Coronavirus Response Act, wherein CMS requires state Medicaid agencies to retain members enrolled in the Medicaid program from January 2020 through the end of the declared public health emergency.[8]

Exhibit 8.4.1. Number of Rhode Island Medicaid Members (January 2016 – September 2021)



SOURCE: NORC analysis of Rhode Island Medicaid enrollment data.

Sociodemographic characteristics. A slight majority of Medicaid members were female (54.2 percent), 41.1 percent were non-Hispanic white, and more than half were below 35 years of age (**Exhibit 8.4.2**). A relatively small percentage of Medicaid members had diabetes (7.8 percent), stroke/TIA (1.2 percent), or AMI (0.2 percent). On average, members lived in areas where 16.1 percent of the community was below the federal poverty line, and approximately 46 percent of the community received Supplemental Security Income, Temporary Assistance for Needy Families, or Supplemental Nutrition Assistance Program benefits.

Exhibit 8.4.2. Sociodemographic Characteristics of the Total Medicaid Population, Performance (January 2019 – September 2021) Period

	Performance Period (January 2019 – September 2021)
Unique members	396,920
Sociodemographic Characteristics	
Age (%)	
<18 years	36.6
18-34 years	25.3
35-54 years	21.1
55-64 years	9.6
>65 years	7.3

	Performance Period (January 2019 – September 2021)
Female (%)	54.2
Race/Ethnicity (%)	
White, not Hispanic	41.1
Black, not Hispanic	9.3
Hispanic	26.6
Multiple/Other, not Hispanic	7.4
Unknown	0.0
Chronic conditions (%)	
Diabetes	7.8
Stroke/TIA	1.2
AMI	0.2
Zip Code-Level Characteristics	
Median household income	$59,644
Less than a high school education (%)	85.2
Under 100% of federal poverty line (%)	16.1
Receiving SSI, TANF, or SNAP (%)	45.7
Unemployment rate (%)	6.3
COVID County-Level Characteristics	
Average # cases	15.1 per 1,000 residents
Total # deaths	0.27 per 1,000 residents
Average PVI score	0.33
Average case fatality rate	13.5 per 1,000 residents
Total population vaccinated (%)	0.13

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data
NOTES: † Selected based on priority conditions identified by EOHHS. Zip code-level characteristics represent the average across all zip code tabulation areas where Rhode Island Medicaid members in the group reside. County-level characteristics represent the average across all counties where Rhode Island Medicaid members in the group reside; data is from March 2020 onward. AMI = Acute Myocardial Infarction; PVI = Pandemic Vulnerability Index; SNAP = Supplemental Nutrition Assistance Program; SSI = Social Security Income; TANF = Temporary Assistance for Needy Families; TIA = Transient Ischemic Attack.

Unadjusted trends in spending and utilization outcomes. Unadjusted outcomes for Medicaid members generally show slightly increased utilization and spending during the performance period (January 2019 – September 2021), as compared to the baseline period (July 2016 – December 2018) (**Exhibit 8.4.3**). Medicaid members under the current Demonstration had higher Medicaid spending and SUD-

related Medicaid spending, slightly higher acute care utilization (hospitalizations and readmissions), and higher use of preventative/ambulatory care. However, Medicaid members had lower rates of ED visits in the current Demonstration period.

Exhibit 8.4.3. Unadjusted Means for Spending and Utilization Outcomes for the Total Medicaid population, Baseline (January 2016 – December 2018) and Performance (January 2019 – September 2021) Periods

	Unadjusted Mean	
	Baseline Period (January 2016 – December 2018)	**Performance Period (January 2019 – September 2021)**
Total Medicaid spending	$2,858	$2,936
SUD-related Medicaid spending	$5,277	$6,110
Hospitalizations	48.6	49.1
All-cause readmissions	141.8	147.9
ED visits	241.1	202.1
Annual wellness visit	165.7	167.7

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.
NOTES: Total Medicaid spending total SUD-related Medicaid spending is presented per member per quarter. Utilization outcomes are presented per 1,000 members per quarter.

Risk-adjusted means for spending and utilization outcomes. Exhibit 8.4.4 shows the risk-adjusted means for Medicaid members in the baseline period (January 2016 – December 2018) and performance period (January 2019 – September 2021). Medicaid members had significantly higher average annual Medicaid spending in the performance period ($2,155 versus $1,914 per member) in the baseline period, a significant increase in annual wellness visits (169.5 versus 164.2 per 1,000 members), and slight increases in readmissions (143.6 versus 145.9 per 1,000 members). Total SUD-related Medicaid spending significantly increased in the performance period ($6,355 versus $5,134 per member) compared to the baseline period.

Exhibit 8.4.4. Risk-Adjusted Means for Spending and Utilization Outcomes for the Total Medicaid Population, Baseline (January 2016 – December 2018) and Performance (January 2019 – September 2021) Periods

	Risk-Adjusted Mean			
	Baseline	**Performance**	**Difference**	**95% CI**
Total Medicaid spending	$1,914	$2,156	$242***	$229, $255
SUD-related Medicaid spending	$5,134	$6,355	$1,222***	$1,103, $1,341
Hospitalizations	25.2	25.3	0.1	-0.3, 0.4
All-cause readmissions	143.6	145.9	2.3	-9.5, 14.2

ED visits	149.7	149.2	-0.5	-1.7, 0.7
Annual wellness visit	164.2	169.5	5.3***	3.9, 6.7

SOURCE: NORC analysis of Rhode Island Medicaid enrollment, claims, and encounter data.
NOTES: *p<0.05; **p<0.01; ***p<0.001. Total Medicaid spending is presented per member per quarter; utilization outcomes are presented per 1,000 members per quarter.

8.5 Discussion

Under the current Demonstration period, which started in January 2019, we see significantly higher spending (an increase of $242 per member per quarter) than in the two years prior, and a larger increase in SUD-related spending during that time ($1,222 per member per quarter). We also observed an increase in annual wellness visits over that time period.

Because this analysis focuses on the entire Medicaid population, we are limited in our interpretation of trends that may differ by sub-population. For instance, members with an SUD diagnosis have a much larger increase in Medicaid spending than the overall increase in total Medicaid, indicating that trends among members who need more complex care may be hidden by looking at overall trends in the Medicaid population. In other chapters of this report (see BH Link, Chapter 4), we saw increased spending and utilization for members accessing program services that connected them to needed health care services, which may be a key driver of the observed overall increases in spending. The COVID-19 pandemic exacerbated the mental illness and SUD crises (nationally and in Rhode Island) and worsened existing provider shortages, both of which may be contributing to Medicaid members needing more care and/or more acute services when they seek care.[73,74] Additionally, spending increases likely reflect legislatively mandated price increases to hospital and nursing home rates as well as an increase in the average acuity as members following the disenrollment of comparatively healthier members.[75]

The descriptive findings in this Interim Evaluation Report for the total Medicaid population should be interpreted with caution, given the influence of the COVID-19 pandemic on Medicaid members and the lack of a comparison group. In the Summative Evaluation Report, we will explore the feasibility of conducting an interrupted time-series design to better understand trends in spending, utilization, and quality of care for the Medicaid population during the entire Demonstration period (January 2019 – December 2024).

Chapter 9: Future Analysis & Evaluation

The Summative Evaluation Report, the final draft of which will be submitted to CMS in October 2026, will cover the entire Demonstration period (January 2019 through December 2024). The Summative Evaluation will build on the findings presented in this Interim Evaluation Report, applying similar methodology for each of the Demonstration programs and assessing similar outcomes over the full Demonstration period. In addition to the five programs evaluated in this report, we will also include any programs that are implemented and funded under the Demonstration in the future. This includes the second phase of the AE Program, the LTSS APM Program, which is planned to be implemented as a pilot program from July 2022 through June 2024. Data from the LTSS APM pilot will be included in the Summative Evaluation Report.

The Demonstration programs assessed in this Interim Evaluation Report were in the early stages of implementation during the period evaluated. The findings presented here represent an opportunity to assess the early trends in outcomes observed under each program. However, because most of the performance period for the five Demonstration programs overlapped entirely or meaningfully with the COVID-19 pandemic, we were limited in our ability to assess the effects of the program relative to the drastic shifts in care-seeking behavior and service utilization that occurred during the pandemic. In the longer evaluation timeframe allowed by the Summative Evaluation Report, we will be able to better assess the impact of the Demonstration programs in the "new normal" of health care service delivery.

In the Summative Evaluation Report, we will also consider an expanded set of analyses and additional measures. The extended evaluation timeframe will allow us to consider more rigorous evaluation designs, such as including additional timepoints in pretest-posttest analyses, and using an interrupted time-series design for programs with baseline period data instead of a pooled pretest-posttest analysis. We will also add selected measures to our analyses, including an SUD spending measure based on costs related to diagnosis and treatment of SUD for the total Medicaid population and ED visits for mental illness for members enrolled in the AE Program. We will also include additional information that will help readers better interpret the findings, including adding percentage increases from baseline in key outcomes, and risk-adjusted means in the performance and baseline period for the AE Program.

The availability of additional data will allow for the addition of new covariates, including housing status variables from Rhode Island's Homeless Management Information System. We will also assess the feasibility of additional exploratory analyses, including assessing Accountable Entity (AE)-specific variation and effects by member subgroups.

Finally, we will carry out an additional set of subgroup and sensitivity analyses for the Summative Report. Although we anticipate only the AE Program having the sample size for additional subgroup analysis, we plan to include descriptive subgroups of age, health status, and Medicaid enrollment category for the AE program, as well as an analysis of impact within subgroups of race/ethnicity for the AE Program (sample size permitting). One such sensitivity analysis will include testing the robustness of our findings under different attribution methodologies for AE-enrolled members. In primary analyses we will use the attribution lists generated by the MCOs, as we did for this Interim Report. In the Summative Report sensitivity analyses, we will apply a retrospective attribution algorithm based on utilization and compare the characteristics of the attributed populations and results from impact models to those in the primary models.

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