FINANCIAL ALIGNMENT INITIATIVE

Rhode Island Integrated Care Initiative: Third Evaluation Report

December 2023

FINANCIAL ALIGNMENT INITIATIVE
RHODE ISLAND INTEGRATED CARE INITIATIVE:
THIRD EVALUATION REPORT

By

Muskie School of Public Service
Kimberly Snow, MHSA

RTI International

Elizabeth Gattine, JD	Lauren Palmer, PhD
Kimberly Snow, MHSA	Angela Gasdaska, BS
Matt Toth, MSW, PhD	Kyra Neal, MPH
Amy Kandilov, PhD	Gerrit Boldt, MPP
Amy E. Chepaitis, MBA, PhD	Molly Frommer, BS
Giuseppina Chiri, PhD	Aaliyah Goodman, BA
Regina Rutledge, PhD	Emily Costilow, MA
Paul Moore, MA	Sunnie Hodge, BS
Marisa Morrison, PhD	Abla Manuella Messie, BA
Ben Huber, MPP	Noah D'Arcangelo, BA
Brittany D'Cruz, MPH	Wayne Anderson, PhD
Max Spiewak, MPH	Edith G. Walsh, PhD

Project Directors: Angela M. Greene, MS, MBA, and Zhanlian Feng, PhD

Federal Project Officer: Susannah Woodman, MSW, MPH

RTI International

CMS Contract No. HHSM-500-2014-00037i TO#7

December 2023

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Glossary of Acronyms

ACSC	Ambulatory care sensitive condition
ADL	Activities of daily living
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CMS	Centers for Medicare & Medicaid Services
CMT	Contract Management Team
CTM	Complaint Tracking Module
DinD	Difference-in-differences
D-SNP	Dual Eligible Special Needs Plan
ED	Emergency department
EOHHS	Executive Office of Health and Human Services
FAI	Financial Alignment Initiative
FFS	Fee-for-service
FIDE-SNP	Fully Integrated Dual Eligible Special Needs Plan
HCBS	Home and community-based services
HCC	Hierarchical Condition Category
HEDIS	Healthcare Effectiveness Data and Information Set
IHS	Initial Health Screen
ICI	Integrated Care Initiative
ICT	Interdisciplinary Care Team
IRE	Medicare Independent Review Entity
ITT	Intent-to-treat
LTSS	Long-term services and supports
MA	Medicare Advantage
MARx	Medicare Advantage Prescription Drug System

MDS	Minimum Data Set
MLR	Medical loss ratio
MLTSS	Managed long-term services and supports
MMCO	Medicare-Medicaid Coordination Office
MMP	Medicare-Medicaid Plan
MOU	Memorandum of Understanding
NHPRI	Neighborhood Health Plan of Rhode Island
NF	Nursing facility
PCP	Primary care physician or provider
PHE	Public Health Emergency
PMPM	per member per month
RHO	Rhody Health Options
RIPIN	Rhode Island Parent Information Network
SDRS	State Data Reporting System
SNF	Skilled nursing facility
SPMI	Serious and persistent mental illness

Executive Summary
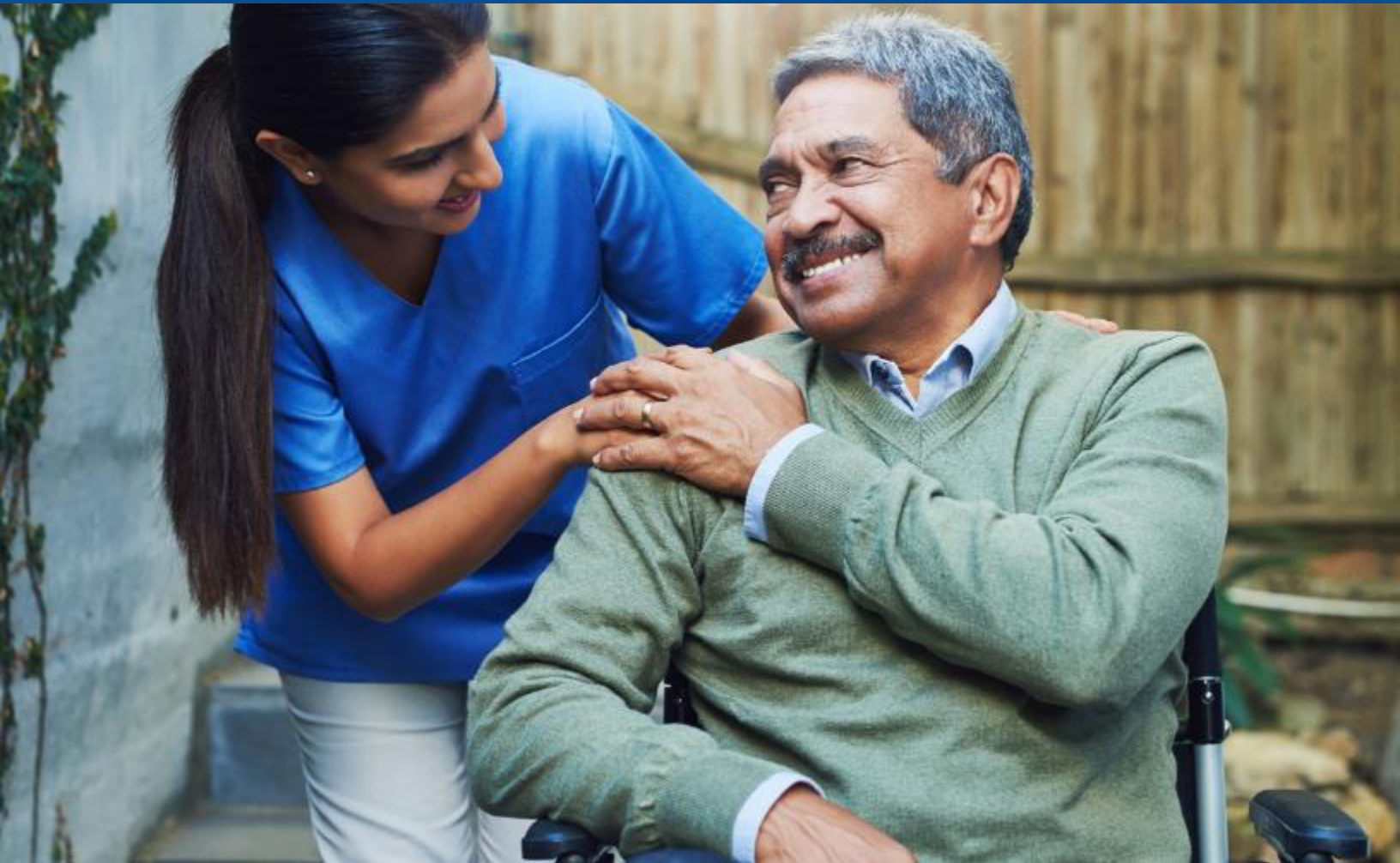
The Medicare-Medicaid Coordination Office (MMCO) and the Innovation Center at the Centers for Medicare & Medicaid Services (CMS) created the Medicare-Medicaid Financial Alignment Initiative (FAI) to test, in partnerships with States, integrated care models for dually eligible enrollees.

The Rhode Island demonstration launched in July 2016 as a capitated model demonstration with one participating Medicare-Medicaid Plan (MMP), Neighborhood Health Plan of Rhode Island (NHPRI). For purposes of this report, the demonstration is referred to as the Integrated Care Initiative (ICI) demonstration. We refer to the MMP as "the MMP," "the ICI plan," or by name. The ICI demonstration is governed by a three-way contract among CMS, Rhode Island and the MMP.

The Integrated Care Initiative (ICI) demonstration launched statewide in 2016 with one participating Medicare-Medicaid Plan (MMP). Based on implementation experience, modifications were made in operational requirements and processes, but these did not alter the fundamental design of the ICI demonstration's integrated model of care. Through passive enrollment and retention strategies, enrollment reached 13,000 in December 2021, representing 35 percent of the eligible population. Although typically over one-third of enrollees could not be reached within 90 days, the timeline for completing assessments, in 2021, the MMP restructured its processes to focus resources on contacting hard-to-reach enrollees to more effectively connect enrollees to care management.

Over time, the demonstration experienced changes in leadership and staff but support for an integrated care model for dually eligible beneficiaries remained unchanged. Notably, the State, MMP, and other stakeholders reported that the overall beneficiary experience under the demonstration has been positive and a key success of the demonstration. This favorable perception was also shared by Implementation Council members, the ICI ombudsman and beneficiaries in individual interviews and CAHPS responses.

Despite the widely perceived benefits of the demonstration for beneficiaries, cumulative demonstration impact analyses over demonstration years 1 through 4 show limited to no impact on service utilization and quality of care measures, except for an increase in evaluation and management visits, relative to the comparison group. The demonstration was associated with an increase in Medicare costs over the first four years of the demonstration.

The State plans to transition the ICI demonstration to a Fully Integrated Dual Eligible Special Needs Plan (FIDE-SNP) model following the end of the demonstration. The State viewed this as an opportunity to address financing and administrative challenges while retaining the person-centered, integrated care model, considered the centerpiece of the ICI demonstration.

The Rhode Island Executive Office of Health and Human Services (EOHHS) administers the demonstration in partnership with CMS. The MMP receives capitated payments from CMS and the State to finance all Medicare and Medicaid services. The MMP also provides care management[1] and flexible benefits. Adults over the age of 21 are eligible to participate in the demonstration if they have Medicare Parts A and B, are eligible for Part D, and have full Medicaid benefits. Beneficiaries who are receiving hospice at the time of enrollment, are residing in Tavares[2] or

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[1] "Care coordination" is referred to as "care management" in the Rhode Island demonstration. Demonstration enrollees who are not receiving long-term services and supports (LTSS) and are otherwise not identified as being at high-risk receive care management from a non-clinical care coordinator. Other demonstration enrollees receive care management from a care manager. For simplicity, we use the term "care manager" universally throughout this report.

[2] Tavares is an intermediate care facility serving people with intellectual disabilities.

Rhode Island Demonstration Coverage Area

Providence

Bristol

Kent

Newport

Washington

Counties of Operation (statewide)

Eleanor Slater Hospital[3] or an out-of-State hospital or are enrolled in the Sherlock Plan (health coverage for adults with disabilities who are working) are not eligible for the demonstration. The ICI demonstration operates statewide.

CMS contracted with RTI International to monitor demonstration implementation and to evaluate its impact on beneficiary experience, quality, utilization, and cost. The evaluation includes individual State-specific reports like this one. This third evaluation report for the Rhode Island ICI demonstration describes its implementation and includes an analysis of the demonstration's impacts on select outcomes. We include qualitative evaluation information for calendar years 2020 and 2021 (demonstration years 4 and 5) with brief updates covering 2022,[4] and quantitative results for July 2016 through December 2020 (demonstration years 1 through 4). Demonstration year 1 includes July 2016 through December 2017. Subsequent demonstration years include full single calendar years.

As specified in the three-way contract, the demonstration excluded those who met the medically needy criteria for Medicaid eligibility. In this analysis, we apply this exclusion to both the demonstration group and comparison group. *Section 5, Demonstration Impact on Service Utilization and Quality of Care* and *Section 6, Demonstration Impact on Cost Savings* describe in more detail the impact of these exclusions on the analytic sample. Previous evaluation reports did not apply these exclusions due to the lack of reliable Medicaid eligibility data for all years. Thus, the results reported here differ somewhat from those previously reported.

Highlights

Integration of Medicare and Medicaid	EOHHS, the MMP, and stakeholders continued to express support for an integrated system of care as the best option for providing care to dually eligible beneficiaries. Enrollees liked the convenience of having one insurance card and having one health plan coordinating both Medicare and Medicaid services.

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[3] Eleanor Slater Hospital is a State psychiatric hospital.

[4] Data sources for the 2022 updates include site visit calls; quarterly calls with the State and CMS; other monitoring of demonstration activities through, for example, demonstration websites; and individual beneficiary interviews. Although the individual interviews were conducted outside the reporting period, because this is the last evaluation report for this demonstration, the data were included to highlight the beneficiary experience with the demonstration.

Eligibility and Enrollment	Enrollment in the demonstration remained relatively stable in 2020 and 2021, with over one-third of eligible beneficiaries enrolled.
	The State and CMS began passive enrollment of 150 beneficiaries per month from the Medicaid fee-for-service system effective January 2021, to offset a decline in enrollment numbers.
Care Management	Care management connected enrollees to resources to address priority needs such as food insecurity and social isolation that emerged during the Public Health Emergency (PHE).
	In 2021, the MMP redesigned its processes for engaging new enrollees to more effectively connect beneficiaries to needed services and care management.
Stakeholder Engagement	The demonstration's Implementation Council transitioned to virtual meetings so it could continue to meet throughout the PHE and provide input to the State on the needs of beneficiaries.
	The Implementation Council was widely perceived as a strength of the demonstration. The State, the MMP, and other stakeholders expressed support for continuing this structure in future programming design.
Financing and Payment	In early 2021, the MMP reported positive trends and increased stability in its financial performance but by the next year, the MMP anticipated significant losses due to changes in the Medicaid rate setting methodology that decreased MMP rates for 2022. Due to the PHE, the MMP received 100 percent of its withheld amounts in 2020 based on full reporting of applicable quality withhold measures.

Quality of Care	In 2021, the MMP received 75 percent of the withhold payment based on the number of benchmarks met for CMS Core and State-specific quality measures.
	Medicare Healthcare Effectiveness Data and Information Set (HEDIS) performance data for the MMP showed improvement in 2021 from the prior year in several measures, including 30-day follow-up after hospitalization for mental illness, controlling HbA1c levels (blood glucose measure), medication review (one of the Care for Older Adults measures), and plan all-cause readmissions (ages 65+).
Beneficiary Experience	Findings from beneficiary and stakeholder interviews indicated a high level of beneficiary satisfaction with the ICI demonstration during the reporting period.
	In 2021, over three-quarters of Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey respondents rated the MMP as a 9 or 10, with 10 being the highest rating.
Demonstration Impact on Service Utilization and Quality of Care	As shown in *Table ES-1,* over the course of the first four demonstration years, the demonstration increased the monthly number of physician visits, relative to the comparison group. There were no demonstration impacts on the probability of any inpatient admission, skilled nursing facility (SNF) admissions, emergency department (ED) visit, or long-stay nursing facility use, or any quality of care measures.
	There were limited demonstration differences in the effect on users of long-term services and supports (LTSS) compared to those without LTSS use (see *Table ES-1*). The demonstration effect for those with LTSS use was a decrease in the probability of ED visits, relative to the demonstration effect for the non-LTSS population.

Demonstration Impact on Service Utilization and Quality of Care (Continued)	***Table ES-1*** shows the demonstration also impacted beneficiaries with serious and persistent mental illness (SPMI) differently than those without SPMI on a few measures. The demonstration effect for those with an SPMI was a decrease in SNF use, but an increase in ACSC admissions (overall) and 30-day readmissions, relative to the demonstration effect for those without an SPMI.[5]
Demonstration Impact on Cost Savings	As summarized in ***Table ES-2***, the demonstration was associated with an increase in Medicare Parts A and B costs over the first 4 demonstration years relative to the comparison group.[6]

Table ES-1 summarizes the cumulative effects of the Rhode Island demonstration on service utilization and quality of care outcomes over demonstration years 1 through 4 (demonstration start through 2020), relative to the comparison group. It also shows the difference in the demonstration effect for LTSS users relative to non-LTSS users, and for beneficiaries with SPMI relative to those without SPMI.

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[5] Caution should be used when interpreting these results. There were no statistically significant demonstration impacts on these measures independently for beneficiaries with an SPMI or those without an SPMI.
[6] We were not able to provide a regression or descriptive analysis of the Medicaid total cost of care due to significant data irregularities and other data quality issues in the Rhode Island Medicaid data.

Table ES-1
Summary of Rhode Island cumulative demonstration effects on service utilization and quality of care measures for demonstration period,
July 1, 2016–December 31, 2020

Measure	Demonstration effect (all eligible beneficiaries)	Difference in demonstration effect (LTSS versus non-LTSS)	Difference in demonstration effect (SPMI versus non-SPMI)
Monthly probability of any inpatient admission	NS	NS	NS
Monthly probability of any ambulatory care sensitive condition (ACSC) admission, overall	NS	NS	Increase[R]
Monthly probability of any ACSC admission, chronic	NS	NS	NS
Number of all-cause 30-day readmissions per 1,000 discharges	NS	NS	Increase[R]
Monthly probability of any emergency department (ED) visits	NS	Decrease[G]	NS
Monthly number of preventable ED visits per 1,000 beneficiaries	NS	NS	NS
Probability of 30-day follow-up after mental health discharge	NS	NS	N/A
Monthly probability of any skilled nursing facility (SNF) admission	NS	NS	Decrease[G]
Annual probability of any long-stay nursing facility use	NS	NS	N/A
Monthly number of physician evaluation and management visits per 1,000 beneficiaries	Increase[G]	NS	NS

LTSS = long-term services and supports; N/A = not applicable; NS = not statistically significant; SPMI = serious and persistent mental illness.

NOTES: Statistical significance is defined at the α = 0.05 level. For additional details on results, see **Tables E-1, E-2**, and **E-3** in **Appendix E**. Green and red color-coded shading indicates where the direction of the difference-in-differences (DinD) estimate was favorable or unfavorable; green indicates favorable, and red indicates unfavorable. To ensure accessibility for text readers and individuals with sight disabilities, cells shaded green or red receive, respectively, a superscript "G" or "R." Long-stay nursing facility use means stays lasting 101 days or more in a year. In the column for "Demonstration effect (all eligible beneficiaries)," an *Increase* or *Decrease* refers to the *relative* change in an outcome for the demonstration group compared to the comparison group, based on the DinD regression estimate of the demonstration effect during the demonstration period. The results shown in the two columns for "Difference in demonstration effect (LTSS versus non-LTSS)" and "Difference in demonstration effect (SPMI versus non-SPMI)" compare two separate DinD estimates of the demonstration effect—one for the special population of interest (e.g., LTSS users) and another for the rest of the eligible population (e.g., non-LTSS users)—and indicate whether the difference between the two effect estimates is statistically significant (regardless of whether there is an overall demonstration effect for the entire eligible population). In these two columns, an *Increase* or *Decrease* measures the *relative* change in an outcome for the special population of interest compared to the rest of the eligible population. For a given outcome, the result shown for the entire eligible population and that separately for the special population (LTSS users or those with SPMI) can be different from each other.

SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data and Minimum Data Set data.

Table ES-2 summarizes the demonstration effects on total Medicare Parts A and B expenditures for all eligible beneficiaries, including both the cumulative effect over the 4-year demonstration period and the annual effect for each demonstration year.

Table ES-2
Summary of Rhode Island demonstration effects on total Medicare expenditures among all eligible beneficiaries, July 1, 2016–December 31, 2020

Measure	Measurement period	Demonstration effect
Medicare Parts A and B cost	Cumulative (demonstration years 1–4)	Increase[R]
	Demonstration year 1	Increase[R]
	Demonstration year 2	NS
	Demonstration year 3	Increase[R]
	Demonstration year 4	Increase[R]

NS = not statistically significant.
NOTES: Statistical significance is defined at the α = 0.05 level. For numeric estimates of the demonstration's effect on total Medicare expenditures, see *Figure 6-1* in *Section 6, Demonstration Impact on Cost Savings*. Red color coded shading indicates where the direction of the DinD estimate was unfavorable. To ensure accessibility for text readers and individuals with visual impairments, cells shaded red receive a superscript "R." In the column for "Demonstration effect," an *Increase* or *Decrease* refers to the *relative* change in an outcome for the demonstration group compared to the comparison group, based on the DinD regression estimate of the demonstration effect during the specified measurement period.
SOURCE: RTI analysis of Medicare and Medicaid claims.

Demonstration and Evaluation Overview

1.1   Demonstration Description and Goals

The Medicare-Medicaid Coordination Office (MMCO) and the Innovation Center at the Centers for Medicare & Medicaid Services (CMS) created the Medicare-Medicaid Financial Alignment Initiative (FAI) to test, in partnerships with States, integrated care models for dually eligible enrollees. The Integrated Care Initiative (ICI) demonstration in Rhode Island is part of a broader set of integrated care initiatives that the State implemented in two phases. The first phase began in 2013 with the introduction of an enhanced primary care case management model and a Medicaid managed long-term services and supports (MLTSS) program for Medicare-Medicaid beneficiaries and Medicaid-only beneficiaries receiving LTSS.[7] The second phase of the broader initiative included implementation of the ICI demonstration under the FAI for dually eligible beneficiaries. The ICI demonstration launched statewide July 1, 2016, with an original end date of December 31, 2020. The State and CMS later extended the demonstration through December 31, 2023, and then through December 2025.[8]

1.2   Purpose of this Report

CMS contracted with RTI International to monitor implementation of the demonstrations under the FAI and to evaluate their impact on beneficiary experience, quality, utilization, and cost. The Combined First and Second Evaluation Report includes extensive background information and early implementation information about the demonstration.

In this report we include qualitative evaluation information for calendar years 2020 and 2021 (demonstration years 4 and 5, respectively), with relevant updates from early 2022. We refer to this time period as "the reporting period" or "the report period" in the qualitative narrative. We provide updates to previous evaluation reports in key areas, including enrollment, care management[9], beneficiary experience, and stakeholder engagement activities, and discuss the challenges, successes, and emerging issues identified during the reporting period.

We present quantitative impact analysis results on service utilization, quality of care, and costs for the period spanning July 1, 2016 through December 31, 2020 (the first four demonstration years). The difference in timeframes between qualitative and quantitative analyses is due to the longer lag of secondary data used in quantitative analysis. Demonstration year one includes July 2016 through December 2017. Subsequent demonstration years—demonstration year 2, etc.—include full single calendar years.

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[7] The State's MLTSS program, known as Rhody Health Options (RHO), was phased out in 2018.

[8] In 2022, as part of the contract year 2023 Medicare Advantage and Part D rulemaking process, capitated model states were given an opportunity to extend their demonstrations (no later than December 31, 2025) in order to convert their MMPs into integrated Dual Eligible Special Needs Plans (D-SNPs) and contingent upon submitting to CMS a transition plan by October 1, 2022. CMS and Rhode Island updated the three-way contract in August 2023 to extend the demonstration through December 31, 2025.

[9] "Care coordination" is referred to as "care management" in the Rhode Island demonstration. Demonstration enrollees who are not receiving long-term services and supports (LTSS) and are otherwise not identified as being at high-risk receive care management from a non-clinical care coordinator. Other demonstration enrollees receive care management from a care manager. For simplicity, we use the term "care manager" universally throughout this report.

1.3   Data Sources

We used a variety of data sources to prepare this report (see below). See *Appendix A, Data Sources* for additional detail.

Data Sources

KEY INFORMANT INTERVIEWS

Site visits

Quarterly monitoring calls with CMS and Rhode Island Executive Office of Health and Human Services (EOHHS) officials

DEMONSTRATION DATA AND MATERIALS

State Data Reporting System (SDRS) submissions

Demonstration policies, contracts, and other materials

BENEFICIARY SATISFACTION DATA

Individual beneficiary interviews

Medicare Advantage Prescription Drug Plan Consumer Assessment of Healthcare Providers and Systems (CAHPS)

COMPLAINTS AND APPEALS DATA

MMP data reported to EOHHS and CMS

Complaint Tracking Module (CTM)

Medicare Independent Review Entity (IRE)

QUALITY DATA

State-specific quality measures

Medicare Healthcare Effectiveness Data and Information Set (HEDIS) measures

SERVICE UTILIZATION DATA

CMS Medicare Beneficiary Summary Files

CMS fee-for-service Medicare claims and encounter data

Nursing Home Minimum Data Set

Medicare enrollment files

Area Health and Resources Files

American Community Survey

COST DATA

CMS Medicare Advantage and Part D Inquiry System (MARx) data

Quality withhold repayments and risk corridor payments

Medicare Part A claims

Medicare Part B claims

Medicaid Analytic eXtract (MAX) claims

Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF)

SECTION 2
Demonstration Design and State Context

2.1   Changes in Demonstration Design

The ICI demonstration is a capitated model demonstration that operates statewide. The design of the demonstration is described in the Combined First and Second Evaluation Report. Rhode Island did not receive Federal implementation funds for the demonstration and was the last State to implement an FAI demonstration.[10]

The three-way contract between CMS, Rhode Island and the MMP was amended several times to make changes regarding financing, reporting measures, and other operational aspects of the demonstration, without changing the demonstration design (see the Combined First and Second Evaluation Report). The three-way contract was amended for effective dates of March 2020, August 2020, and July 2022 (see *Table 2-1*). See *Section 3.3, Care Management* and *Section 3.5, Financing and Payment* for more details on these changes.

> ### Implementation Effectiveness: Fidelity
>
> Now that the Financial Alignment Initiative demonstrations have been in place for several years, we have identified several measures as indicators of implementation effectiveness or success, based on the standard implementation science approach, that we believe are useful for this evaluation. The four measures are: (1) fidelity of the demonstration to the original design, (2) demonstration reach, (3) implementation dose, and (4) the State's and CMS' reflections on demonstration effectiveness. We discuss each of these measures in this report, starting with fidelity.
>
> Implementation fidelity can be considered as the degree to which an intervention is implemented as originally designed, even if adaptations to the strategy become necessary. For States, plans, and other stakeholders, including policy-makers, it is helpful to reflect on the changes to the demonstration model that were made as implementation unfolded, and the impact of those changes. These findings can inform design or implementation of future models.
>
> Despite changes in staff and leadership at the State, overall the ICI demonstration has been implemented with a high degree of fidelity to the original design (see *Table 2-2*). Based on implementation experience, modifications were made in operational requirements and processes which did not alter the fundamental design of the ICI demonstration's integrated model of care. Some of these operational changes are reflected in *Table 2-1*.

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[10] Only States that were awarded original design grants from CMS were then also eligible for Federal funds to support planning and funds to support implementation. Rhode Island did receive Federal funds to support enrollment and ombudsman services for the demonstration.

Table 2-1
Rhode Island three-way contract amendments: Key changes

2020[1]	2022
• Modified to permit passive enrollment from the Medicaid FFS system. • Clarified requirement for outreach frequency to unable-to-reach members and care planning for enrollees with LTSS needs. • Revised Medicaid component of capitation payment. • Updated required regulatory and technical changes. • Extended the demonstration by 3 years, through December 31, 2023, including applicable financing provisions.	• Adjusted timelines for assessment and care plan completion. • Updated continuity of care provisions. • Revised Medicaid component of capitation payment. • Added reference to alternative payment model for LTSS. • Revised encounter data reporting requirements. • Updated required regulatory and technical changes.

FFS= fee-for-service; LTSS = long-term services and supports; MMP = Medicare-Medicaid Plan.
[1] All changes were included in the March 2020 contract amendment, except for the changes in the last bullet which were included in the August 2020 amendment.

Table 2-2 illustrates the major changes to key ICI demonstration characteristics from its start in early 2016 to early 2022.[11]

Table 2-2
Key changes to the ICI demonstration over the course of the demonstration
(July 2016 through early 2022)

Key demonstration feature	Changes to the original demonstration design
Timeline	The demonstration was extended through December 31, 2023.[1]
Eligibility	No changes.
Geography/ Number of participating MMPs	No changes.
Services/Carve-outs	No changes specific to the demonstration.
Payment structure	Changes were made to the Medicaid rate methodology in 2020 and 2022. The risk corridor provision was not extended beyond demonstration year 3 (2019).

(continued)

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[11] This does not include temporary operational changes made in response to guidelines issued in response to the PHE. Examples included suspending in-person assessments and in-person care management, along with changes to other reporting and administrative requirements.

Table 2-2 (continued)
Key changes to the ICI demonstration over the course of the demonstration
(July 2016 through early 2022)

Key demonstration feature	Changes to the original demonstration design
Other changes	The initial design limited passive enrollment to enrollees in the State's MLTSS program. As of January 2018, passive enrollment was permitted for beneficiaries in the State's Medicaid FFS system. The State's MLTSS program was phased out later in 2018. The 2016 three-way contract required the MMP to advance delivery system innovation using alternative payment arrangements. The State intended to withhold a portion of the Medicaid capitation payment to the MMP through value-based purchasing capitation offsets, but while alternative payment arrangements were promoted, the withhold provision was removed.

FFS= fee-for-service; MLTSS = managed long-term services and supports; MMP = Medicare-Medicaid Plan.
[1] In August 2023, CMS and the State updated the three-way contract to extend the demonstration through December 31, 2025.

2.2 Overview of State Context

Historically, Rhode Island has used managed care as one of its primary strategies to deliver and coordinate care for its Medicaid population. The State's initial managed care program, RIte Care, began in 1994 to serve low-income children and families. Program eligibility has been expanded several times since its implementation. Rhode Island subsequently instituted several reforms aimed at individuals with complex care needs, including implementation of its Program of All-Inclusive Care for the Elderly (PACE) program in December 2005 that serves dually eligible beneficiaries. In January 2009, CMS approved the Rhode Island Comprehensive §1115(a) demonstration. The State currently operates its entire Medicaid program under the §1115(a) demonstration, including services previously provided under home and community-based services (HCBS) 1915(c) waiver authority.

In January 2013, Rhode Island sought CMS authority to undertake an Integrated Care Initiative in two phases.[12] This request was approved as part of its overall §1115(a) demonstration extension in December 2013. For the first phase, Rhode Island created Rhody Health Options (RHO), a managed Medicaid health plan option that included LTSS within the capitation benefit package. RHO enrollment began with a single managed care plan, NHPRI, in September 2013. RHO served Medicaid-only enrollees with LTSS needs as well as Medicare-Medicaid beneficiaries. The second phase of the initiative established the demonstration in 2016 with NHPRI as the sole MMP. RHO was subsequently phased out in October 2018.

Since implementation of the ICI demonstration, Rhode Island has engaged in several broader Medicaid reforms, including the State's "Reinventing Medicaid" initiative, signed into

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[12] At this time, dually eligible beneficiaries primarily received services through the State's fee-for-service (FFS) system. Some dually eligible beneficiaries were enrolled in a Program of All-Inclusive Care for the Elderly (PACE) or a Medicare Advantage Plan.

law in 2015.[13] More recent Medicaid reform activities included long-term services and support (LTSS) rebalancing, direct care workforce supports, and "No Wrong Door" activities to streamline access to services and supports.

Beginning in the summer of 2019, the State began a process to solicit broad stakeholder feedback regarding the delivery of care and services to dually eligible beneficiaries. The State also issued a Request for Information in early 2020 to seek input from managed care plans, beneficiary advocates, and other interested parties to solicit input on service delivery models and related preferences for serving dually eligible beneficiaries. Based in part on the favorable feedback received about the demonstration's fully integrated model of care, the State requested an extension of the ICI demonstration. While the State initially intended to move forward with a 2-year extension, because of the complications and uncertainties of the PHE, the State requested a 3-year extension through December 31, 2023.

In April 2022, CMS issued its Final Rule Contract Year 2023 Policy and Technical Changes to the Medicare Advantage and Medicare Prescription Drug Benefit Programs (the "Final Rule"), which impacts the status of demonstrations implemented under the FAI. Under a provision within the Final Rule, States will be able to maintain their existing MMP through a 2-year extension until December 31, 2025, if the State provided CMS with a transition plan by October 1, 2022. After engaging stakeholders, including the Implementation Council, the State filed a Transition Plan dated September 30, 2022.[14] This plan sought a two-year extension and set forth a high-level overview of an implementation plan and timeline for transitioning to a Fully Integrated Dual Eligible Special Needs Plan (FIDE-SNP) consistent with guidance issued by CMS.[15]

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[13] For more information, see the Combined First and Second Evaluation Report and the State's website for this initiative at: https://eohhs.ri.gov/initiatives/reinventing-medicaid

[14] A draft of Rhode Island's transition plan can be accessed on the State's website: https://eohhs.ri.gov/sites/g/files/xkgbur226/files/2022-11/RI%20MMP%20Transition%20Plan_9.30.2022_Draft_ExternalVersion.pdf

[15] In August 2023, CMS and the State updated the three-way contract to extend the demonstration through December 31, 2025.

SECTION 3
Update on Demonstration Implementation

In this section, we provide updates on important aspects of demonstration implementation that have occurred since the Combined First and Second Evaluation Report. This includes updates on integration efforts, enrollment, care management activities, stakeholder engagement activities, financing and payment, and quality management strategies.

3.1 Integration of Medicare and Medicaid

> EOHHS described high levels of partnership and collaboration with CMS and the MMP to address the impacts of COVID-19.

In this section we provide updates on demonstration integration structures, including joint management of the demonstration, and the integration of service delivery.

3.1.1 Joint Management of the Demonstration

Rhode Island and CMS jointly manage the demonstration through the Contract Management Team (CMT), meeting biweekly to review performance data and discuss current priorities. The CMT also met monthly with the MMP or more often as needed. For example, the CMT met weekly with the MMP for a period in 2020 as it continued to closely monitor the MMP's completion of Initial Health Screens (IHSs) and care team composition to ensure compliance with demonstration requirements. Both were issues that the MMP self-disclosed to the CMT.

Other topics managed and monitored by the CMT during the reporting period included COVID-19 testing and vaccination efforts, outreach, quality data, and delivery of care management services. During the PHE, the CMT added ad hoc meetings as needed to address the impacts of the PHE. CMS and the State members of the CMT continued to report a positive working relationship, with both describing each other as being "very responsive" to their respective issues and needs in terms of ongoing management of the demonstration.

3.1.2 Integrated Systems

EOHHS, the MMP, the Implementation Council, and the demonstration's ombudsman program continued to express strong support for an integrated system of care as the best option for providing care to dually eligible beneficiaries. They reported that beneficiaries liked having one insurance card and coordination of all services through one plan.

"[Beneficiaries] like [the demonstration]. People are joining it because they want access to the kind of care management support that is provided there. We would be concerned going into the future that if that level of integration is not required in future models, it would be a significant step back in the access to care that this very medically needy population really relies on."

—ICI Ombudsman, 2022

Operationally, integrating Medicare and Medicaid processes has presented challenges over the course of the demonstration, particularly in the early years,[16] and as discussed below. Some progress was reported during this reporting period, however. For example, in 2022, CMS and EOHHS said they had achieved better alignment of State and Federal encounter data submissions in terms of timeframes and data requirements.

The State continued to report systems challenges in managing the enrollment system for the ICI demonstration related to the complexity of integrating Medicare and Medicaid enrollments. The State also did not have dedicated staff with Medicare enrollment expertise which State officials believed would be beneficial. Even with the changes to encounter data submissions, EOHHS reported difficulties in leveraging the Medicare encounter data to help inform Medicaid operations and analysis.

3.2 Eligibility and Enrollment

> Enrollment in the demonstration remained relatively stable in 2020 and 2021, with over a third of total eligible beneficiaries enrolled.

> The State and CMS began passive enrollment of 150 beneficiaries per month from the Medicaid fee-for-service (FFS) system effective January 2021, to offset a decline in enrollment numbers.

In this section we provide updates on eligibility and enrollment processes, including integration of eligibility systems, enrollment methods, and outreach. We also discuss significant events affecting enrollment patterns during the timeframe covered by this report, including the moratorium on Medicaid terminations during the PHE and passive enrollment.

3.2.1 Enrollment Summary

There were no changes in the eligibility requirements for the demonstration during 2019–2021. Enrollment declined slightly for the first time in 2019 and remained relatively unchanged during 2020 and 2021 (see *Figure 3-1*). Although voluntary disenrollment rates remained low and Medicaid eligibility determinations were suspended during the PHE, the demonstration's enrollment

Implementation Effectiveness: Reach

"Reach" is an individual-level measure of participation and refers to the percentage of persons who are affected by a policy, program or initiative. To measure this in the FAI, we examine the percentage of eligible beneficiaries who are enrolled in the demonstration.

Figure 3-1 shows the changes in enrollment and in the percentage of eligible beneficiaries enrolled during the demonstration through 2021. At the end of 2018, 43 percent of eligible beneficiaries were enrolled in the ICI demonstration, due primarily to passive enrollment. In the absence of passive enrollment, enrollment declined slightly but remained relatively stable through 2020 and 2021. Overall, the demonstration has been able to reach, on average, about one-third of eligible beneficiaries.

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[16] See the Combined First and Second Evaluation Report for more information.

was impacted by involuntary terminations, low opt-in rates, and a lack of passive enrollment in 2019 and 2020. We discuss these enrollment factors below. The State and CMS began passive enrollment of 150 beneficiaries per month from the Medicaid FFS system effective January 2021 to help stabilize enrollment.

Figure 3-1
Rhode Island ICI enrollment and eligibility at the end of each calendar year, 2016–2021
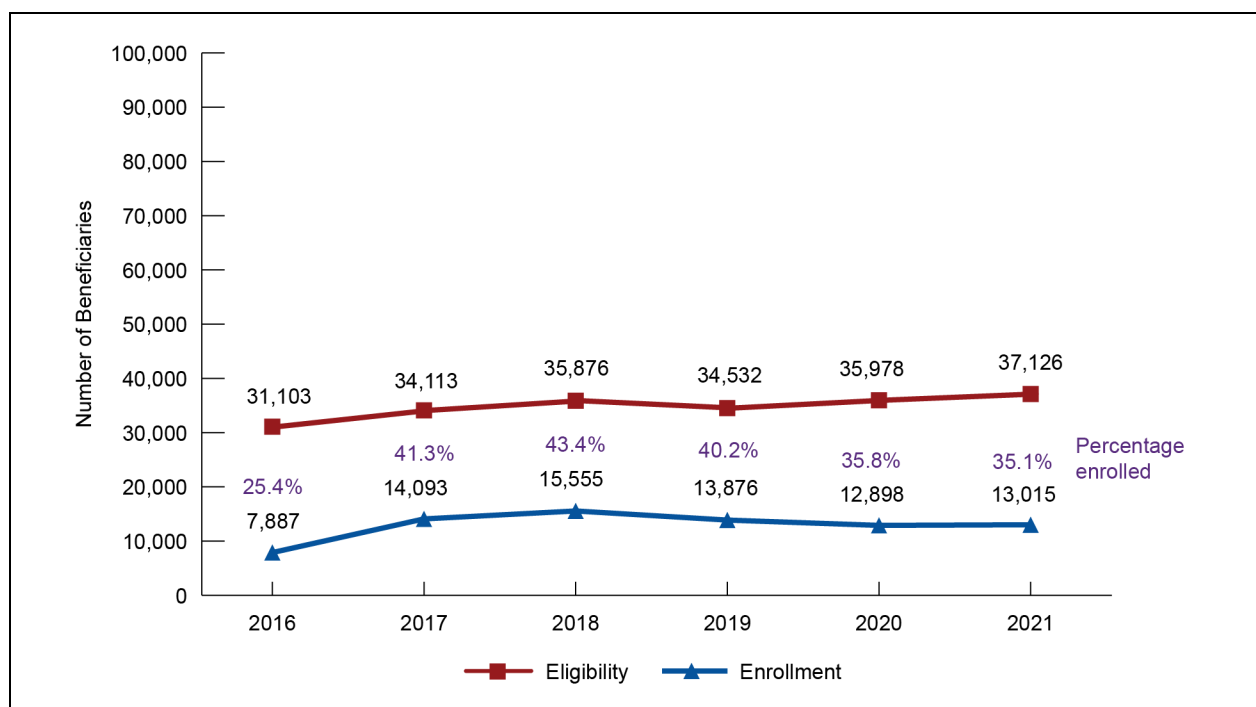
ICI = Integrated Care Initiative; SDRS = State Data Reporting System.
NOTE: Enrollment and eligibility are reported as of December each year. Enrollment and eligibility data reported in the SDRS may not match the finder file data used for quantitative analyses, because of the timing for completion and submitting the finder file versus the SDRS. The definition of eligibility used here, and also in **Section 6, Demonstration Impact on Cost Savings**, includes FFS and Medicare Advantage populations.
SOURCE: SDRS data for 2016–2021. The SDRS items used to collect eligibility and enrollment were: "Total number of beneficiaries who are eligible to participate in the demonstration" and "Total number of beneficiaries who are enrolled in the demonstration, as of the end of the given month."

3.2.2 Passive Enrollment Process and Experience

As described in the Combined First and Second Evaluation Report, passive enrollment into the demonstration was initially limited to beneficiaries enrolled in the State's Medicaid MLTSS program for which NHPRI was the sole participating health plan. Effective January 2018, enrollment guidelines were modified to allow passive enrollment of beneficiaries from the State's FFS system. Passive enrollment did not occur in 2019 and 2020 but resumed for 2021 on a monthly basis. The State and CMS began passively enrolling 150 people per month in 2021 and increased to 250 people per month in 2022, when nursing facility residents started being included in passive enrollment. At the request of the nursing facility industry, earlier phases of passive enrollment had excluded beneficiaries residing in nursing facilities due to challenges and severe impacts of the PHE on nursing facilities and their residents.

The MMP expressed satisfaction with the opt-out rate, which they estimated as 15 percent in 2021. They attributed this low rate to the MMP's proactive outreach process and work to ensure enrollees are familiar with the MMP and the services provided by the demonstration. The MMP also attributed its success to general name recognition, beneficiary satisfaction ratings demonstrated by its CAHPS score, and strength of its provider network. In addition to MMP outreach activities, the State continued to conduct voluntary enrollment activities, sending informational letters on a monthly basis to eligible beneficiaries who were not being passively enrolled in the demonstration. In 2021, due in part to increased competition from D-SNPs, the MMP began offering supplemental benefits such as gym memberships and supplemental food benefits to help support enrollment and retention rates. The MMP reported favorable results in retention rates in the first year of this approach based on preliminary data.

In 2022, the State described resuming passive enrollment as one of the successes of the demonstration for the prior year. Neither the State nor the MMP encountered challenges in modifying their enrollment processes to passively enroll beneficiaries from the State's Medicaid FFS system. The State reported that opt out rates remained consistent to earlier rates when beneficiaries were being passively enrolled from NHPRI's Medicaid MLTSS program.

3.2.3   Involuntary Disenrollment

Medicaid redeterminations were suspended during the PHE. However, the MMP and the ombudsman noted that in early 2021 EOHHS began terminating the eligibility of enrollees eligible for a Medicare savings program (a Medicaid benefit that helps pay for premiums and costs under Medicare) who otherwise did not meet Medicaid eligibility for the demonstration.[17] Although statewide involuntary loss of Medicaid eligibility was reduced during this period, this change resulted in involuntary disenrollment from the ICI demonstration.

The MMP and the ombudsman expressed concerns about fully resuming redeterminations at the end of the PHE, when the State would need to complete Medicaid eligibility determinations for all enrollees.[18] Key concerns focused on the capacity of the State's enrollment systems and staff, potentially outdated contact information reflected in the State's eligibility systems, and negative impacts on enrollees caused by confusion and loss of eligibility.

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[17] Rhode Island implemented these eligibility changes based on CMS guidance known as the Better Fit Benefit Maintained policy issued as part of CMS-9912-Interim Final Rule (IFR), Section 433.400 in Part 433 of Title 42 of the Code of Federal Regulations (published October 28, 2020). For State issued interpretation on this regulation, see https://eohhs.ri.gov/sites/g/files/xkgbur226/files/2021-03/EOHHS-Medicaid-Policy-Changes-Per-COVID-PHE-CMS-Regs-12-30-20-Final.pdf

[18] At the time of the 2022 site visit, the PHE was still in effect. The Federal government subsequently declared an end to the PHE as of May 11, 2023.

3.3   Care Management

> Timeframes for assessment completion were changed in 2022 to lessen administrative burden on the MMP and reduce the frequency of reassessments for enrollees.

> The PHE amplified and underscored the vulnerabilities of dually eligible beneficiaries, and care management helped to ensure adequate access to food and other critical needs.

> In 2021, the MMP redesigned its processes for engaging new enrollees to more effectively connect beneficiaries to care management and needed services. These changes lowered the percentage of enrollees that the MMP was unable to reach within 90 days of enrollment.

The design of ICI demonstration's care management model is more fully described in the Combined First and Second Evaluation Report. The intensity of care management services, including the type and frequency of assessments and the composition of the care team, is tied to an enrollee's risk status, as described below. In this section we provide an update on care management activities and highlight the major accomplishments of the ICI demonstration's care management model.

3.3.1   Assessments

The MMP conducts an initial risk stratification for each enrollee to determine the appropriate assessment and assignment of care management staff based on the expected level of care. Low- to moderate-risk enrollees receive an Initial Health Screen assessment (IHS), which may be conducted in person or by phone. This health screen either confirms an enrollee's status as low to moderate risk or indicates a high level of risk, in which case the individual receives an in-person Comprehensive Functional Needs Assessment (CFNA). Enrollees who are receiving or will receive community LTSS are classified as high risk, requiring the completion of a CFNA (Rhode Island three-way contract, 2020, pp. 90-91). The assessment process for facility-based LTSS enrollees includes a Discharge Opportunity Assessment for enrollees who may have the desire or opportunity to return to the community, and a Wellness Assessment for enrollees who do not want to return to the community.

In 2022, EOHHS and CMS modified the timeframes required for completing some of these assessments to provide additional flexibility and reduce burden on the MMP and enrollees. For example, completion of IHSs for new enrollees was extended from 45 days following enrollment to 90 days. Completion of the CFNA for community members eligible for LTSS was extended from 15 days following enrollment to 45 days, with reassessments required at a minimum every 180 days instead of the previously required 90-day reassessment period (Rhode Island three-way contract, 2022, pp. 60-65). EOHHS and the MMP had long supported these changes but finalizing the contract amendment was delayed in part by the PHE.

To help improve assessment completion rates and more effectively connect enrollees to care, the MMP changed its processes for engaging new enrollees and began conducting this work with its own staff (instead of using a contracted vendor). This included creating a specialized engagement team, adding 10 full-time equivalent (FTE) positions to the team that managed welcome calls, IHS administration, and targeted outreach to members who the MMP had not been able to reach. With the initiation of monthly passive enrollment in 2021, EOHHS and CMS spoke favorably about the MMP's focus on improving outreach to new enrollees. The MMP implemented these changes in August 2021 and by year end, the MMP reported increased IHS completion rates. By increasing the number of completed IHSs, the MMP noted it could more effectively connect enrollees to care management and needed services.

As shown in *Figure 3-2*, the percentage of enrollees that the MMP was unable to reach within 90 days of enrollment varied over the course of the demonstration to-date (2016–2021), with a low of 0.0 percent in quarter 3 of 2016, and a high of 55.3 percent in quarter 3 of 2017. In most quarters, over one-third of enrollees could not be reached within 90 days. The last quarter of 2021 showed marked improvement consistent with the reported improvements made by the MMP to its specialized engagement team, as discussed above.

Implementation Effectiveness: Dose

Earlier in this report, we discussed "reach," which measures the percentage of persons who receive or are affected by or participate in a *policy, program or initiative*. "Dose" is a measure of implementation effectiveness that refers to the amount of, exposure to, or uptake of an *intervention* provided to a target population within a program or initiative. In the FAI, the main intervention is care coordination (care management in the Rhode Island demonstration).

Because we do not have a direct measure of how many enrollees receive care management, we use a proxy measure for dose: the percentage of enrollees that MMPs were not able to reach or locate. This measure gives a sense of how many enrollees were not able to make a choice to engage in care management, i.e., without connecting with care mangers, enrollees could not participate in IHSs, have care plans, or identify care goals. (These activities are discussed later in this section.)

Figure 3-2 shows that in most quarters, over one-third of enrollees could not be reached within 90 days. In 2021, the MMP restructured its processes to focus resources on contacting hard-to-reach enrollees to more effectively connect them to care management.

Figure 3-2
Percentage of members that the Rhode Island ICI MMP was unable to reach following three attempts, within 90 days of enrollment, 2016–2021
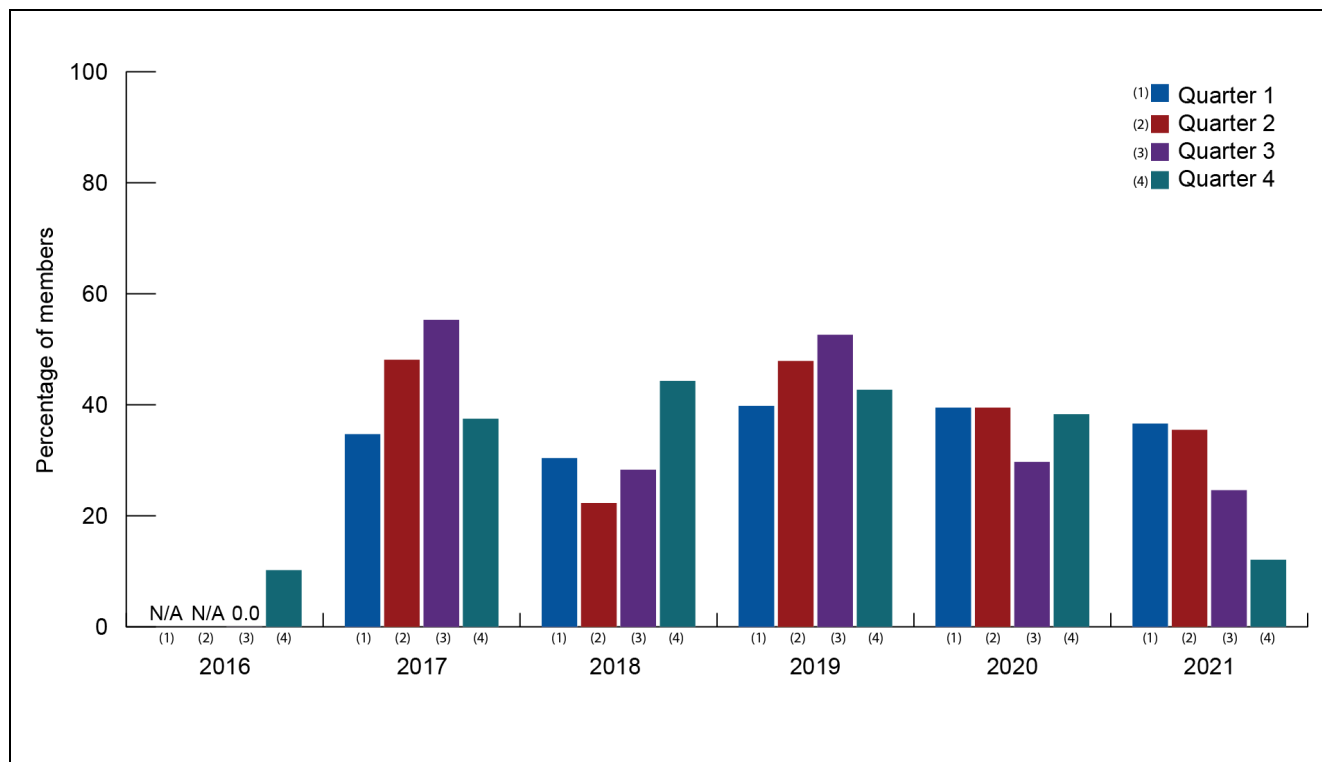
ICI = Integrated Care Initiative; MMP = Medicare-Medicaid Plan; N/A = not applicable; Q = quarter.
NOTE: Because the Rhode Island demonstration began in July 2016, data are not applicable for quarter 1 and quarter 2 of 2016.
SOURCE: RTI analysis of MMP-reported data for Core Measure 2.1 as of February 2023. The technical specifications for this measure are in the Medicare-Medicaid Capitated Financial Alignment Model Core Reporting Requirements document.

As shown in *Table 3-1*, among all enrollees, the percentage with an assessment completed within 90 days of enrollment varied greatly. The percentage ranged from 39.9 to 94.4 percent in 2016 through 2021. Among enrollees willing to participate and who could be reached, the percentage with assessments completed within 90 days of enrollment was consistently high, above 90 percent, from 2016 through 2021, in all but two quarters.

Table 3-1
Rhode Island ICI members whose assessments were completed within 90 days of enrollment, 2016–2021

Quarter	Total number of members whose 90th day of enrollment occurred within the reporting period and who were currently enrolled at the end of the reporting period	Percentage of members with assessments completed within 90 days of enrollment[1]	
		All members	All members willing to participate and who could be reached[2]
2016			
Q1	N/A	N/A	N/A
Q2	N/A	N/A	N/A
Q3	18	94.4	94.4
Q4	1,122	85.6	96.8
2017			
Q1	8,502	44.4	72.4
Q2	2,913	44.8	95.9
Q3	1,775	39.9	96.1
Q4	1,087	53.5	92.1
2018			
Q1	342	58.8	91.0
Q2	130	71.5	96.9
Q3	180	67.2	98.4
Q4	2,350	52.1	99.1
2019			
Q1	1,004	54.0	95.9
Q2	305	46.9	96.0
Q3	388	41.0	97.5
Q4	349	48.7	97.7
2020			
Q1	301	51.8	94.0
Q2	397	51.6	94.9
Q3	263	60.1	94.0
Q4	188	52.1	93.3

(continued)

Table 3-1 (continued)
Rhode Island ICI members whose assessments were completed within 90 days of enrollment, 2016–2021

Quarter	Total number of members whose 90th day of enrollment occurred within the reporting period and who were currently enrolled at the end of the reporting period	Percentage of members with assessments completed within 90 days of enrollment[1]	
		All members	All members willing to participate and who could be reached[2]
2021			
Q1	265	58.9	92.9
Q2	496	57.5	89.6
Q3	537	72.6	96.5
Q4	497	81.9	94.0

ICI = Integrated Care Initiative; MMP = Medicare-Medicaid Plan; N/A = not applicable; Q = quarter.

[1] The "all members" column presents the percentage of assessments completed for members whose 90th day of enrollment occurred within the reporting period. In the "all members willing to participate and who could be reached" column, the percentages exclude members who were documented as unwilling to participate in an assessment, and members who the MMP was unable to reach following three documented outreach attempts.

[2] The number of members willing to participate and who could be reached cannot be calculated using the corresponding percentages in this table. As indicated in table note 1, RTI used additional data points to calculate these percentages.

NOTE: Because the Rhode Island demonstration began in July 2016, data are not applicable for quarter 1 and quarter 2 of 2016.

SOURCE: RTI analysis of MMP-reported data for Core Measure 2.1 as of February 2023. The technical specifications for this measure are in the Medicare-Medicaid Capitated Financial Alignment Model Core Reporting Requirements document.

3.3.2   Care Planning

The design of the ICI demonstration includes access to care management services for each enrollee. The type and intensity of care management services depends on an enrollee's risk classification. Community-based enrollees receiving LTSS and other enrollees in the community determined to be high risk receive intensive case management services, requiring a lead care manager with clinical background. The care plan is developed based on the in-person completion of the CFNA, described above. Community enrollees not receiving LTSS or not determined to be at high risk receive care management provided by a care coordinator who is not required to have clinical background. The care plan is developed using the IHS which may be developed without an in-person meeting. Transition coordination is provided to enrollees in nursing facilities who are transitioning back to the community (Rhode Island three-way contract, 2020, p. 69). Further detail is provided in the Combined First and Second Evaluation Report.

With the onset of COVID-19 and the resulting PHE, the MMP pivoted to remote operations and transitioned from in-person to virtual care management. The MMP reported quickly moving to support providers at the onset of the PHE by waiving certain types of service authorizations and distributing COVID-19 supplies as needed. The MMP prioritized additional supports to enrollees to ensure that needs were being met during the lock-down period where enrollees had more limited access to needed services and supplies. The PHE amplified and underscored the vulnerabilities of dually eligible beneficiaries, and extra effort was required to

ensure adequate access to food and other critical needs. Examples included expanding access to food benefits, partnering with community-based organizations to provide peer navigators to help enrollees with technology, and providing information and resources for COVID-19 testing and vaccinations. EOHHS and the MMP felt that enrollees in the ICI demonstration benefited from the ICI demonstration's care model as compared to an FFS model because of added support that demonstration care management services provided, especially during the PHE.

The MMP described how participating in the demonstration, especially though the PHE, taught the plan a great deal about the complex needs of dually eligible individuals. The MMP also convened a workgroup on social determinants of health to be sure that assessment questions and delivery of care management adequately identified needs and connected people to resources. Adding a focus on social determinants of health also helped identify high risk members and helped support people "where they were", taking into consideration the member preferences.

Each member [enrollee] has a care manager…and members actually have someone that will answer the phone. We provide guidance that the member would not receive otherwise, if they were in a fee-for-service world.

—MMP, 2022

In 2021, the MMP modified its care model and created a total of five pods for care management consisting of clinical and non-clinical staff assigned to specific geographic locations. The MMP reported that this change would better clarify and assign responsibilities, creating more specialization in roles and streamlining processes. In early 2022, EOHHS and the MMP reported it was too soon to know whether this change impacted the quality of care management received by enrollees.

Care Plan Completion

The MMP reported on care plan completion using two different measures during the demonstration. From 2016–2017, the plan used a State-specific measure. ***Table 3-2*** shows that in 2016 and 2017, the percentage of enrollees with interdisciplinary care plans or wellness plans[19] completed within 15 days of a completed assessment remained above 90.0 percent for all enrollees, and also for all enrollees willing to complete an interdisciplinary care plan or wellness plan and who could be reached.

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[19] For enrollees residing in nursing facilities who do not want or are not able to transition to the community, a care manager develops a wellness plan that complements clinical plans of care at the nursing facility.

Table 3-2
Rhode Island ICI members with Interdisciplinary Care Plans or Wellness Plans within 15 days of a completed assessment, 2016–2017

Quarter	Total number of members with an assessment completed within the reporting period	Percentage of members with Interdisciplinary Care Plans or Wellness Plans completed within 15 days after completion of the assessment[1]	
		All members	All members willing to complete Interdisciplinary Care Plans or Wellness Plans and who could be reached[2]
2016			
Q1	N/A	N/A	N/A
Q2	N/A	N/A	N/A
Q3	79	91.1	91.1
Q4	918	92.9	92.9
2017			
Q1	1,332	92.7	92.9
Q2	1,204	90.9	91.7
Q3	918	89.6	91.2
Q4	1,737	91.3	93.2

ICI = Integrated Care Initiative; MMP = Medicare-Medicaid Plan; N/A = not applicable; Q = quarter.

[1] The "all members" column presents the percentage of Interdisciplinary Care Plans or Wellness Plans completed for members who had an assessment completed during the reporting period. In the "all members willing to complete Interdisciplinary Care Plans or Wellness Plans and who could be reached" column, the percentages exclude members who were documented as unwilling to complete Interdisciplinary Care Plans or Wellness Plans and members who the MMP was unable to reach following three documented outreach attempts.

[2] The number of members willing to complete Interdisciplinary Care Plans or Wellness Plans and who could be reached cannot be calculated using the corresponding percentages in this table. As indicated in table note 1, RTI used additional data points to calculate these percentages.

NOTE: Because the Rhode Island demonstration began in July 2016, data are not applicable for quarter 1 and quarter 2 of 2016.

SOURCE: RTI analysis of MMP-reported data for State-specific Measure RI 1.1 as of February 2023. The technical specifications for this measure are in the Medicare-Medicaid Capitated Financial Alignment Model Rhode Island-Specific Reporting Requirements document.

As of 2018, the MMP reported on care plan completion a newly introduced core measure that applies across all FAI demonstrations. *Table 3-3* shows that, among all enrollees, and among enrollees willing to participate and who could be reached, the percentage with care plans completed within 90 days of enrollment noticeably decreased after 2018 from percentages ranging from 84.4 to 96.1 percent, to percentages ranging from 14.1 to 34.4 percent in 2019 through 2021. This decline is related to a late 2019 CMT discovery that the MMP had been incorrectly counting certain care plans in their care plan completion rate. Those care plans were mailed to lower risk beneficiaries but developed without their involvement. Although it negatively impacted the MMP's core quality measure, the plan continued to use the mailed care plan strategy because it was still allowed in the three-way contract. This issue is more fully described in the Combined First and Second Evaluation Report.

Table 3-3
Rhode Island ICI members with care plans completed within 90 days of enrollment, 2018–2021

Quarter	Total number of members whose 90th day of enrollment occurred within the reporting period and who were currently enrolled at the end of the reporting period	Percentage of members with care plans completed within 90 days of enrollment[1]	
		All members	**All members willing to complete a care plan and who could be reached[2]**
2018			
Q1	342	63.2	84.4
Q2	130	74.6	91.5
Q3	180	68.3	96.1
Q4	2,350	51.4	94.2
2019			
Q1	999	20.1	20.7
Q2	306	19.3	20.7
Q3	387	17.1	18.4
Q4	349	15.8	17.5
2020			
Q1	301	13.6	14.1
Q2	397	22.2	24.1
Q3	263	28.1	31.5
Q4	188	30.9	34.1
2021			
Q1	265	17.7	20.1
Q2	496	19.6	21.0
Q3	537	19.2	21.1
Q4	497	20.7	22.9

ICI = Integrated Care Initiative; MMP = Medicare-Medicaid Plan; Q = quarter.

[1] The "all members" column presents the percentage of care plans completed for members whose 90th day of enrollment occurred within the reporting period. In the "all members willing to complete a care plan and who could be reached" column, the percentages exclude members who were documented as unwilling to complete a care plan and members who the MMP was unable to reach following three documented outreach attempts.

[2] The number of members willing to complete a care plan and who could be reached cannot be calculated using the corresponding percentages in this table. As indicated in table note 1, RTI used additional data points to calculate these percentages.

SOURCE: RTI analysis of MMP-reported data for Core Measure 3.2 as of February 2023. The technical specifications for this measure are in the Medicare-Medicaid Capitated Financial Alignment Model Core Reporting Requirements document.

Table 3-4 shows that the percentage of enrollees with at least one documented discussion of care goals in their initial care plan increased overall but varied greatly among the quarters, with a low of 5.3 percent in quarter 4 of 2017, and a high of 100.0 percent in quarter 4 of 2021. All percentages were close to 100 percent in 2020 and 2021.

Table 3-4
Rhode Island ICI members with documented discussion of care goals, 2016–2021

Quarter	Total number of members with an initial care plan completed	Percentage of members with at least one documented discussion of care goals in the initial care plan
2016		
Q1	N/A	N/A
Q2	N/A	N/A
Q3	40	50.0
Q4	405	32.6
2017		
Q1	429	38.7
Q2	202	65.8
Q3	527	25.2
Q4	1,348	5.3
2018		
Q1	178	68.5
Q2	331	25.7
Q3	602	28.9
Q4	1,176	16.8
2019		
Q1	125	55.2
Q2	117	70.1
Q3	105	82.9
Q4	32	93.8
2020		
Q1	458	100.0
Q2	570	99.3
Q3	609	99.5
Q4	649	99.2
2021		
Q1	515	99.6
Q2	490	99.8
Q3	389	99.7
Q4	434	100.0

ICI = Integrated Care Initiative; MMP = Medicare-Medicaid Plan; N/A = not applicable; Q = quarter.
NOTE: Because the Rhode Island demonstration began in July 2016, data are not applicable for quarter 1 and quarter 2 of 2016.
SOURCE: RTI analysis of MMP-reported data for State-specific Measure RI 1.3 as of February 2023. The technical specifications for this measure are in the Medicare-Medicaid Capitated Financial Alignment Model Rhode Island-Specific Reporting Requirement document.

As shown in **Table 3-5**, from 2016 to 2021, the number of care managers increased overall from 31 to 99. The percentage of care managers assigned to care management and conducting assessments remained above 90 percent after 2016. The enrollee load (case load) notably decreased from 464.6 in 2016 to 137.8 in 2021. The turnover rate increased after the first demonstration year (2016), from 3.1 percent in 2016 to 11.0—14.5 percent in other years.

Table 3-5
Care coordination staffing at the Rhode Island ICI MMP, 2016–2021

Calendar year	Total number of care coordinators (FTE)	Percentage of care coordinators assigned to care management and conducting assessments	Member load per care coordinator assigned to care management and conducting assessments	Turnover rate (%)
2016	31	54.8	464.6	3.1
2017	65	92.3	236.4	14.5
2018	85	92.9	198.7	11.5
2019	103	93.2	145.3	14.2
2020	89	94.4	154.4	11.0
2021	99	94.9	137.8	12.4

FTE: full time equivalent; ICI = Integrated Care Initiative; MMP = Medicare-Medicaid Plan.
SOURCE: RTI analysis of MMP-reported data for Core Measure 5.1 as of February 2023. The technical specifications for this measure are in the Medicare-Medicaid Capitated Financial Alignment Model Core Reporting Requirements document.

3.4   Stakeholder Engagement

> The Implementation Council and the MMP's Member Advisory Committee transitioned to virtual meetings and continued to meet during the PHE.

> The design of the Implementation Council was widely described as a success of the ICI demonstration and many stakeholders expressed support for its continuation as part of the design for any future integrated care model.

As part of the design of the ICI demonstration, Rhode Island established a member-led Implementation Council to ensure a stakeholder voice in the demonstration. The structure of the Implementation Council is described in the Combined First and Second Evaluation Report. CMS and the State also required the MMP to establish a Member Advisory Committee (MAC) to provide regular feedback to the plan on issues around demonstration management and enrollee care (Rhode Island three-way contract, 2020, p. 202). In this section we describe stakeholder engagement activities during 2020 and 2021, and the impact of those efforts on the demonstration.

3.4.1   Implementation Council

Shortly after the onset of the PHE, the Implementation Council transitioned from in-person to virtual meetings. EOHHS staff provided technical assistance and support to members who did not have prior experience using a virtual platform. This transition allowed the Implementation Council to maintain monthly meetings throughout the PHE and on-going engagement with EOHHS, CMS, the MMP, and RIPIN (the ombudsman program for the demonstration). Because transportation to demonstration enrollees was provided through Rhode Island's statewide Medicaid transportation broker, the Implementation Council regularly invited the State's transportation broker to meetings to discuss the transportation needs of enrollees and provide beneficiary feedback on access and quality issues related to those services.

The Implementation Council primarily focused on impacts of the PHE in 2020 and needed support for beneficiaries. This included access to behavioral health services, COVID-19 testing and vaccination resources, and other supportive services. Rhode Island's Department of Health provided information and updates to the Implementation Council.

Implementation Council members viewed their role as being a conduit to other beneficiaries in their communities, advocating on their behalf and helping them advocate for themselves. The Implementation Council focused particularly on ensuring that beneficiaries were aware of all the demonstration benefits available to them, including a care manager. Implementation Council members felt that they shared a strong team spirit, with everyone working together, and with solid support from EOHHS.

Beginning in 2021–2022, the Implementation Council began to focus on the future of the demonstration after its end date of December 2023 and implications of the Final Rule issued by CMS. Implementation Council members, as well as the MMP, EOHHS, and CMS, described the Implementation Council as a successful component of the demonstration and hoped to be able to continue this design feature as part of the transition to the State's future integrated care model.

3.4.2   Member Advisory Committee

The MMP's MAC continued to meet virtually in 2020 and 2021, although participation decreased during the onset of the PHE. Although the MMP reported fewer members on the MAC, those members provided helpful insight that informed the MMP's vaccination outreach efforts and development of the supplemental benefits that the MMP began offering in 2021, as described in *Section 3.2, Eligibility and Enrollment.*

3.5   Financing and Payment

> In early 2021, the MMP reported positive trends and increased stability in its financial performance but by the next year, it anticipated significant losses due to changes in the Medicaid rate setting methodology that decreased rates to the MMP for 2022.

> Although EOHHS acknowledged the Medicaid rates for the ICI demonstration did not adequately account for the administrative costs associated with the demonstration, EOHHS attributed this issue to the federal requirement that the cost of the demonstration could not exceed the cost of what services would have been absent the demonstration.

In this section we provide a summary of changes to the financing and payment for the ICI Demonstration since 2019, any pertinent findings related to these changes, and any additional financial results not included in the previous Evaluation Report.

3.5.1   Capitation Rates

Rating Categories and Risk Adjustment

FAI MMPs receive separate Medicare and Medicaid capitation payments. The changes we describe in this section refer to the Medicaid rates. The Medicaid capitation rate for the ICI Demonstration is based on five rate cell categories that reflect the enrollees' expected level of care.[20] Although no changes were made to the rate cell categories in 2020-2022, the State changed its rate setting approach for the Medicaid capitation rate, reflected in contract amendments effective in March 2020 and in July 2022. These changes impacted how the EOHHS calculated baseline Medicaid spending to assure that spending did not exceed the estimated Medicaid costs that would have been incurred absent the demonstration. This assurance is a federal requirement for the FAI demonstrations.

The March 2020 contract amendment specified that the Medicaid portion of the capitation rate would be established using the State's experience under the Rhody Health Options (RHO) program, Rhode Island's previously operational MLTSS program (Rhode Island three-way contract, 2020, Section 4.2.1.2).[21] Because RHO was phased out of operation by the State in 2018, and cost experience was dated, the State transitioned to using FFS data to calculate Medicaid rates for the ICI demonstration, effective for rating periods beginning July 1, 2021 (Rhode Island three-way contract amendment, 2022, Section 4.2.1.2.2).

The calculation of the Rhode Island Medicare capitation payments uses an approach developed by CMS for all capitated model demonstrations under the FAI and is described in the Combined First and Second Evaluation Report.

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[20] The five rate cell categories are described in the Combined First and Second Evaluation Report.
[21] Previously, the Medicaid baseline spending was established using fee-for-service use and experience and the State's experience under its MLTSS program.

Quality Withhold Percentages

CMS and the State withhold part of their respective capitation payments pending analysis of MMP performance on a set of CMS core and State-specific quality measures. Due to the PHE, the MMP received 100 percent of its withheld amounts in demonstration year 4 (2020), based on full reporting of applicable quality withhold measures under special provisions used during the PHE (CMS, n.d.-a). For demonstration year 5 (2021), the MMP received 75 percent of the withhold amount (CMS, n.d.-b). For more details about the quality withhold measures and MMP performance, see **Section 3.6, Quality of Care**.

Savings Percentage

Capitation payments to the MMPs include a discount relative to Medicare and Medicaid baseline rates, referred to as the aggregate savings percentage. The aggregate savings percentage for the demonstration, which is applied equally to Medicare Parts A and B and Medicaid baseline spending amounts, increased gradually over the first few years of the demonstration. Since demonstration year 3 (2019), the aggregate savings percentage has remained at three percent. The three-way contract amendment finalized in August 2020 and extending the demonstration maintained a three percent savings percentage for demonstration years 5 through 7.

Medical Loss Ratios

The medical loss ratio (MLR) is the percent of an MMP's capitation payments that it spends on covered services, services provided in lieu of more costly covered services, and personnel costs for care managers. Under the terms of the three-way contract, the MMP has a minimum target MLR of 85 percent and is required to refund a percentage of dollars to CMS and the State if the MLR falls below the minimum target for any demonstration year (Rhode Island three-way contract, 2018, pp. 237-239). Although the 85 percent threshold did not change in demonstration years 5 through 7, additional requirements would apply if the MLR is below 86 percent for demonstration year 5, 87 percent for demonstration year 6, and 88 percent for demonstration year 7 (Three-way contract, July 2022, p. 207). The MLR results for NHPRI were above the 85 percent threshold for demonstration year 3 (2019). Results for demonstration years 4 and 5 were not available at the time of this report.

Risk Corridors

As of demonstration year 4 (2020), risk corridor provisions, outside of the standard Medicare Part D risk corridor, no longer applied to the ICI demonstration.

3.5.2   Financial Experience

In early 2021, the State and MMP reported improved financial performance of the MMP as a key marker of progress and success, especially following several years of losses. As described in the Combined First and Second Evaluation Report, several factors contributed to financial performance in the early demonstration years. The MMP attributed its turn-around in part to maturing as an organization with respect to risk adjustment and managing costs specific to the population served by the demonstration.

Based on this favorable direction, the MMP reported being able to place greater focus on improving enrollee services in 2021 and 2022. In 2022, this included offering supplemental

benefits to beneficiaries such as gym memberships and community-based services to help address social isolation and loneliness. The MMP also reported that service utilization, which declined at the outset of the PHE for many services, rebounded relatively quickly relative to other programs administered by the health plan, in part because of the acuity levels and frailty of the ICI demonstration's population.

By 2022, the MMP reported a very different financial outlook. It expressed concerns about significant reductions in the Medicaid rates, describing them as having "catastrophic" impacts on its financial performance. This change was attributed to the State calculating rates solely using FFS data to calculate Medicaid rates for the ICI demonstration, rather than relying on data from the demonstration or the State's MLTSS program (phased out in 2018). In part, the MMP noted that FFS rates had generally been unchanged for decades and did not account for administrative costs, including care management services required for the ICI demonstration.

Related concerns included the MMP's payment of a premium tax as part of the administrative component of its rate, which differed from its other Medicaid product lines where the cost of the premium tax was built into the rate. The MMP also noted that the significant staff and administrative costs required by demonstration design to support the population served affected the Medicaid rates and MLR thresholds. The MMP also reported that as of early 2022, it had still not been reimbursed for enrollees assigned to incorrect rating categories (for example, situations where the enrollee in a nursing home was assigned to a lower need community rate cell). See the Combined First and Second Evaluation Report for additional discussion on this challenge.[22]

From the perspective of EOHHS, the State reduced the Medicaid rates because of the federal requirement that the cost of the demonstration could not exceed the cost of what services would have been absent the demonstration. In earlier years, the State based its rates in whole or in part on its MLTSS program, Rhody Health Options. After the State phased out its MLTSS program in 2018, EOHHS reported that the MLTSS data was outdated, and the only available basis was the State's FFS system. The MMP felt that there were likely more flexibilities in the State's ability to set rates that could better reflect true costs that the State was not pursuing.

The MMP reported it was cautiously optimistic about the demonstration's anticipated transition to a FIDE-SNP because the financing of that model would not be tied to the costs of services absent the demonstration. It expressed interest in maintaining a similar care model built on a different financial structure.

In terms of the State's financial experience with the demonstration, EOHHS continued to describe the ICI demonstration as highly favorable to beneficiaries but less favorable to the State in terms of financial impact.

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[22] EOHHS reported that it improved remediation of issues moving forward from 2021 and while it was working to settle past claims, it faced bandwidth issues for investigating and in some cases, had substantive disagreement about the timing of the reclassifications.

3.6   Quality of Care

> For 2019–2021, the percent of withhold payments received by the MMP ranged from 100 to 75 percent based on the number of benchmarks met for CMS Core and State-specific quality measures.

> Medicare Healthcare Effectiveness Data and Information Set (HEDIS) performance data for the MMP showed improvement in several measures from 2017–2021, including 30-day follow-up after hospitalization for mental illness, controlling HbA1c levels (blood glucose measure), and medication review (one of the Care for Older Adults measures).

> HEDIS results on all-cause readmissions (ages 18–64 and ages 65+) were mixed, with some higher than expected readmission rates in 2020 and 2021, potentially related to the PHE.

In this section we provide information on the quality measures for the demonstration, updates on the quality management structure and activities for the demonstration, and HEDIS results. We discuss results of the demonstration's impact on quality measures, separately defined using Medicare claims, in *Section 5, Demonstration Impact on Service Utilization and Quality of Care*.

3.6.1   Quality Measures

MMPs are required to report performance on a combination of CMS core and State-specific quality metrics. Both CMS and the State withhold a portion of their respective components of the capitation rate, and MMPs can earn back some or all of their withheld payments based on meeting the benchmarks or gap closure targets for the quality withhold measures.[23]

Our biggest concerns around the demonstration and the fully integrated model is the financial arrangement, for Medicaid in particular…the demonstration was never intended to be a money-maker for the State but it also wasn't intended for the State to really overextend on it either.

—EOHHS, 2021

For 2019, the MMP met benchmarks for all five of the CMS core quality measure and nine of the ten State-specific measure (the MMP fell below the benchmark for Long-Stay, High-

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[23] MMPs can earn a "met" designation for a measure by meeting the benchmark set by CMS or the State. For some measures, MMPs can also earn a "met" by closing the gap between its prior year performance and the benchmark by a stipulated improvement percentage (typically 10 percent) (CMS, 2021).

Risk Nursing Facility Residents with Pressure Ulcers measure). With 93 percent of the measures met, the MMP received 100 percent of the withhold payment.

Due to the PHE, all MMPs were eligible for a quality withhold adjustment in 2020. The MMP completed all of the applicable CMS Core and State-specific measures based solely on full reporting. One measure, annual flu vaccine, was designated as not applicable, because MMPs were not required to report 2020 CAHPS survey results due to the PHE.

The performance of the MMP on core and State-specific quality measures declined in 2021, with the MMP meeting 79 percent of the measures, and receiving 75 percent of the withhold payment. The MMP met five of the six CMS core measures and six of the eight State-specific measures.[24]

3.6.2 Quality Management Activities

The State's External Quality Review Organization (EQRO) conducted the required Medicaid managed care compliance review of MMPs for the full set of standards in 2020 and 2021. The EQRO also worked with the MMPs on their Quality Improvement Projects which included activities on advance care planning, functional status assessment, pain assessment, and transitions from nursing home to the community. In 2022, EOHHS reported trends in a positive direction.

Over the course of the demonstration, the MMP and State have remained interested in exploring alternate payment methodologies (APMs) to improve quality as part of the demonstration's integrated care model. The MMP instituted a pay-for-performance incentive programs with nursing facilities focused on performance on several of the ICI demonstration's quality measures, with the MMP reporting favorable outcomes. In 2022, EOHHS began implementing the first phase of an APM initiative for providers of home and community-based services (HCBS) serving demonstration enrollees. The first phase included a readiness period for contract preparation and for HCBS providers to build capacity for data collection and submissions. This initiative had not yet started at the time of the 2022 RTI evaluation team site visit.

3.6.3 HEDIS Quality Measures Reported for the Rhode Island ICI MMP

MMPs are required to report HEDIS data to CMS and the States. HEDIS is a measure set developed and maintained by the National Committee for Quality Assurance. It is used by the vast majority of commercial, Medicare, and Medicaid health plans to measure performance on dimensions of care and service in order to maintain and/or improve quality. In the FAI, MMPs report data on a subset of HEDIS measures that are required of all Medicare Advantage plans.

Five of the 13 Medicare HEDIS measures for MMP enrollees that RTI analyzes are reported in *Figures 3-3* through *3-8*, with results on all 13 measures appearing in *Table B-1* in *Appendix B.* RTI identified these measures in its Aggregate Evaluation Plan ⬀ based on their

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[24] Benchmarks were not met for Plan All-Cause Readmissions (CMS Core measure); Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (State-specific measure); and Long-Stay, High-Risk Nursing Facility Residents with Pressure Ulcers (State-specific measure).

historic completeness, reasonability, and sample size. HEDIS data for 2017–2021 were available for the Rhode Island ICI MMP. In response to the PHE, CMS did not require Medicare plans (including MMPs) to submit HEDIS data covering 2019. Medicare plans (including MMPs) resumed normal reporting for the 2020 measurement year.

Detailed descriptions of selected HEDIS measures can be found in the RTI Aggregate Evaluation Plan. Results reported in *Figures 3-3* through *3-6* show the Rhode Island ICI MMP's 2017 through 2021 HEDIS performance data on measures for blood pressure control, 30-day follow-up after hospitalization for mental illness, good control of Hemoglobin A1c (HbA1c) levels (<8.0 percent), medication review (one of the Care for Older Adults measures), and plan all-cause readmissions (ages 18–64 and ages 65+).[25]

Although monitoring trends in MMP performance is the primary focus of our HEDIS analysis, the figures and appendix table also compare MMP performance to national Medicare Advantage plan means for reference when available. We provide the national Medicare Advantage plan means with the understanding that Medicare Advantage enrollees and demonstration enrollees may have different health and sociodemographic characteristics which would affect the results. Previous studies on health plan performance reveal poorer quality ratings for plans serving a higher proportion of dually eligible beneficiaries and beneficiaries with disabilities. Additionally, HEDIS measure performance, in particular, is slightly worse among Medicare plans serving areas with lower income and populations with a higher proportion of minorities (ASPE, 2016). Comparisons to national Medicare Advantage plan means should be considered with these limitations in mind.

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[25] These are hospital readmissions.

As shown in ***Figure 3-3***, NHPRI's performance on blood pressure control slightly decreased from 2017 to 2021.

Figure 3-3
Blood pressure control[1], 2017–2021: Reported performance rates for NHPRI
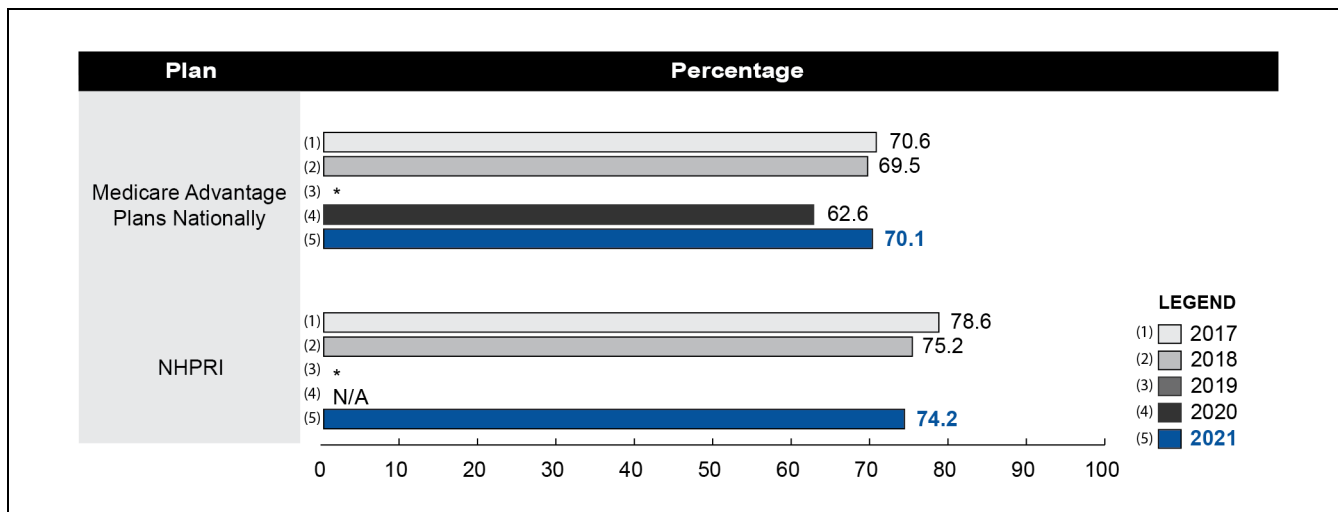
* = data not available; HEDIS = Healthcare Effectiveness Data and Information Set; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; N/A = not applicable, where the number of enrollees in the MMP's provided HEDIS data available for inclusion in the measure was less than 30, and therefore not reported per RTI's decision rule for addressing low sample size; NHPRI = Neighborhood Health Plan of Rhode Island.

[1] The following criteria were used to determine adequate blood pressure control: less than 140/90 mm Hg for enrollees 18–59 years of age; diagnosis of diabetes and <140/90 mm Hg for enrollees 60–85 years of age; no diagnosis of diabetes and <150/90 mm Hg for enrollees 60–85 years of age.

NOTE: In response to the COVID-19 Public Health Emergency, CMS did not require MA plans (including MMPs) to submit HEDIS data covering the 2019 measurement year.

SOURCE: RTI analysis of 2017 through 2021 HEDIS measures.

Figure 3-4 shows that for 30-day follow-up after hospitalization for mental illness, NHPRI improved performance from 2017 to 2021.

Figure 3-4
30-day Follow-up after hospitalization for mental illness[1], 2017–2021:
Reported performance rates for NHPRI
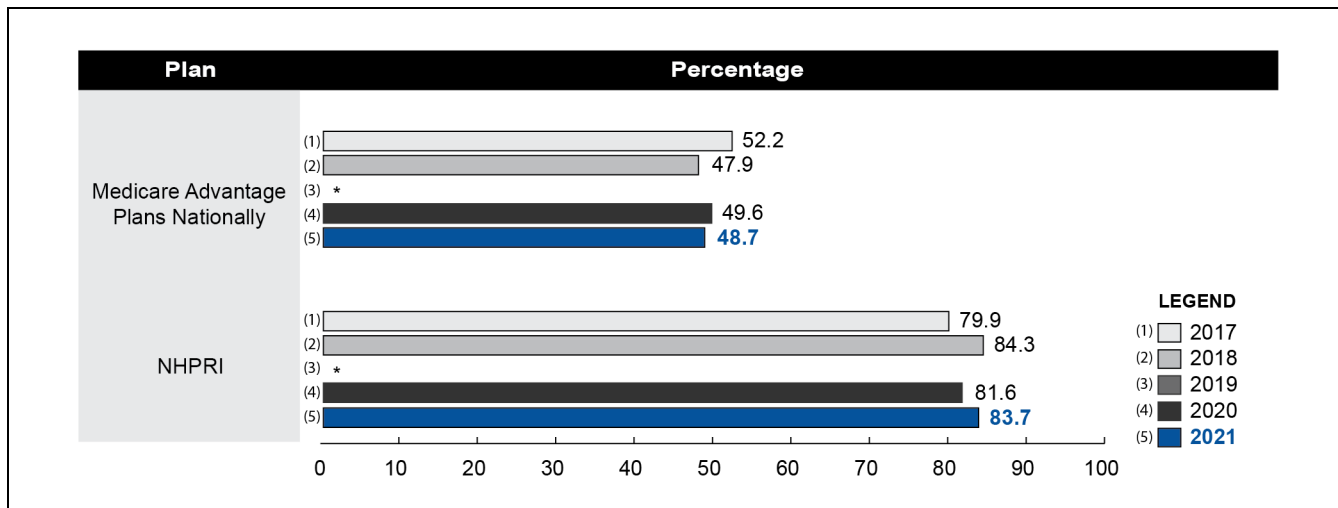
Plan	Percentage

	(1) 52.2
	(2) 47.9
Medicare Advantage Plans Nationally	(3) *
	(4) 49.6
	(5) **48.7**
	(1) 79.9
	(2) 84.3
NHPRI	(3) *
	(4) 81.6
	(5) **83.7**

0 10 20 30 40 50 60 70 80 90 100

LEGEND
(1) 2017
(2) 2018
(3) 2019
(4) 2020
(5) **2021**

* = data not available; HEDIS = Healthcare Effectiveness Data and Information Set; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; NHPRI = Neighborhood Health Plan of Rhode Island.

[1] NCQA implemented a significant specification change with HEDIS 2017, disallowing same-day follow-up visits. National benchmarks fell from HEDIS 2017 to HEDIS 2018.

NOTE: In response to the COVID-19 Public Health Emergency, CMS did not require MA plans (including MMPs) to submit HEDIS data covering the 2019 measurement year.

SOURCE: RTI analysis of 2017 through 2021 HEDIS measures.

As shown in ***Figure 3-5***, NHPRI's performance on controlling HbA1c levels (<8.0 percent) improved from 2017 to 2021.

Figure 3-5
Good control of HbA1c level (<8.0%), 2017–2021:
Reported performance rates for NHPRI
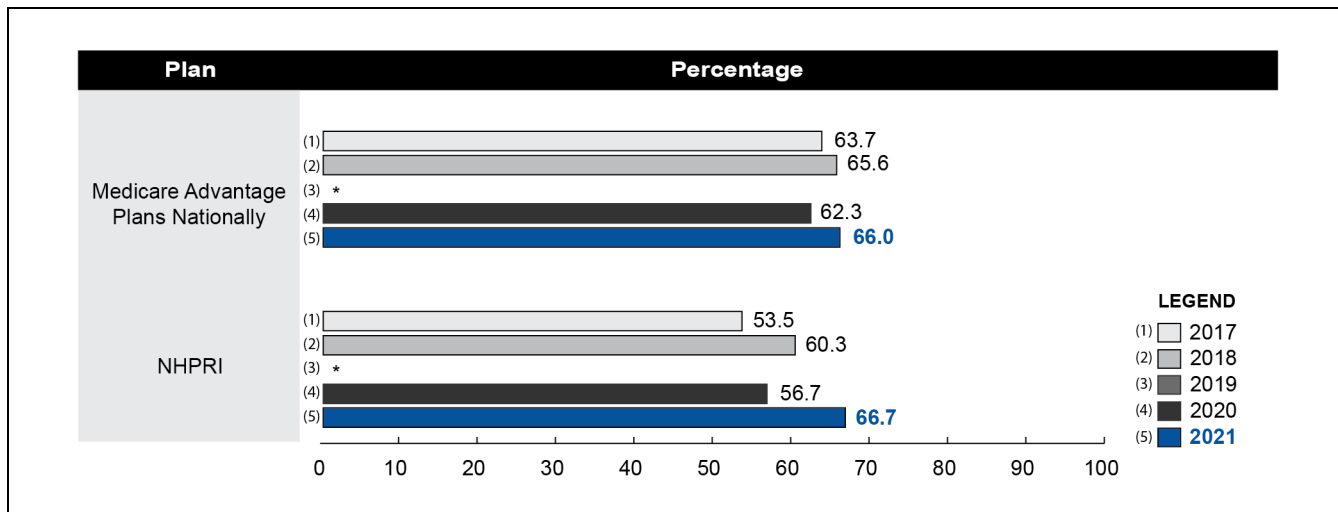
Plan	Percentage
Medicare Advantage Plans Nationally	(1) 63.7 (2) 65.6 (3) * (4) 62.3 (5) **66.0**
NHPRI	(1) 53.5 (2) 60.3 (3) * (4) 56.7 (5) **66.7**

LEGEND
(1) 2017
(2) 2018
(3) 2019
(4) 2020
(5) **2021**

* = data not available; HEDIS = Healthcare Effectiveness Data and Information Set; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; NHPRI = Neighborhood Health Plan of Rhode Island.
NOTE: In response to the COVID-19 Public Health Emergency, CMS did not require MA plans (including MMPs) to submit HEDIS data covering the 2019 measurement year.
SOURCE: RTI analysis of 2017 through 2021 HEDIS measures.

Figure 3-6 shows that for medication review (one of the Care for Older Adults measures), NHPRI greatly improved performance from 2017 to 2021. Non-SNP MA plans do not report the Care for Older Adults measures, so a national MA plan mean is not available.

Figure 3-6
Medication review (one of the Care for Older Adults measures), 2017–2021:
Reported performance rates for NHPRI
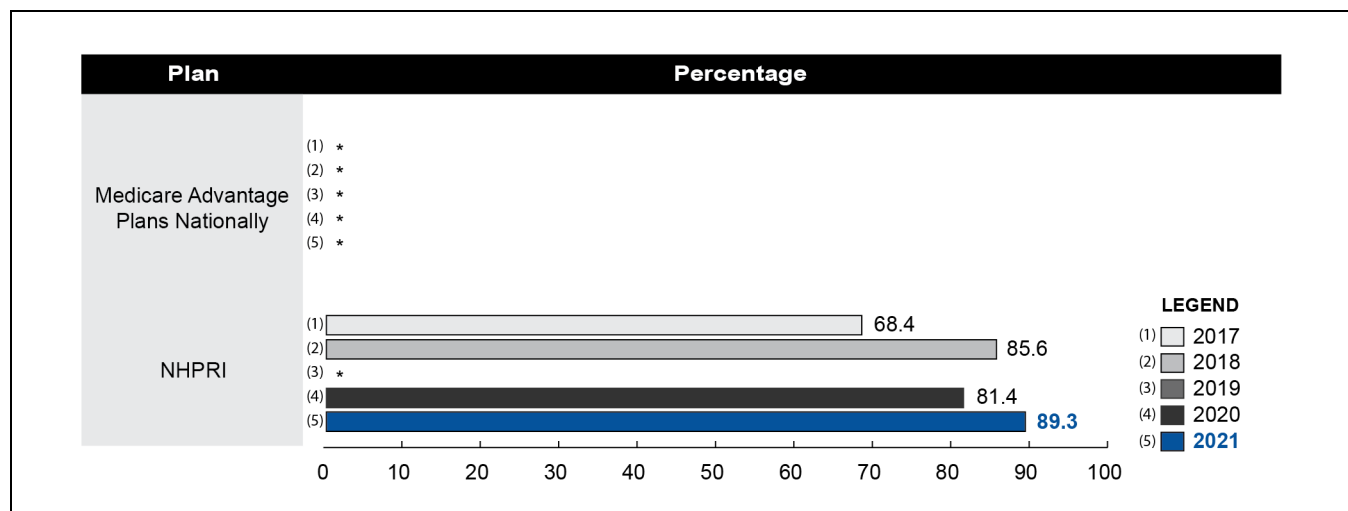
* = data not available; HEDIS = Healthcare Effectiveness Data and Information Set; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; NHPRI = Neighborhood Health Plan of Rhode Island
NOTE: In response to the COVID-19 Public Health Emergency, CMS did not require MA plans (including MMPs) to submit HEDIS data covering the 2019 measurement year.
SOURCE: RTI analysis of 2017 through 2021 HEDIS measures.

Plan all-cause readmissions for enrollees ages 18–64 and 65+ are reported in ***Figure 3-7*** and ***Figure 3-8***, respectively, as an observed-to-expected ratio, whereby an MMP's observed readmission rate is compared to its expected readmission rate given its beneficiary case mix; a value below 1.0 (shown by the vertical line at *x = 1* in the figure below) is favorable and indicates that MMPs had fewer readmissions than expected for their populations based on case mix.

Figure 3-7 shows that NHPRI reported lower than expected readmission rates for enrollees ages 18–64 in 2017 and 2018. NHPRI reported higher than expected readmission rates in 2020 and 2021, potentially related to COVID-19. ***Figure 3-8*** shows that NHPRI reported a lower than expected readmission rate for enrollees ages 65+ in 2017, but a slightly higher than expected readmission rate in 2018. NHPRI reported higher than expected readmission rates in 2020 and 2021 for both age groups, potentially related to COVID-19.

Figure 3-7
Plan all-cause readmissions, ages 18–64, 2017–2021: Reported observed-to-expected ratios for NHPRI
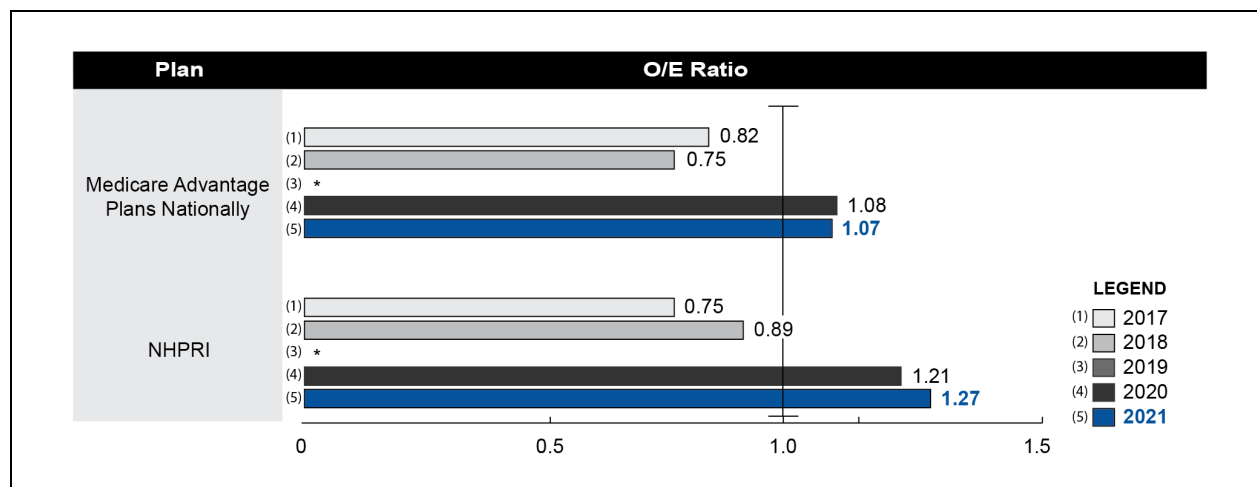
* = data not available; HEDIS = Healthcare Effectiveness Data and Information Set; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; NHPRI = Neighborhood Health Plan of Rhode Island.
NOTE: In response to the COVID-19 Public Health Emergency, CMS did not require MA plans (including MMPs) to submit HEDIS data covering the 2019 measurement year.
SOURCE: RTI analysis of 2017 through 2021 HEDIS measures.

Figure 3-8
Plan all-cause readmissions, ages 65+, 2017–2021: Reported observed-to-expected ratios for NHPRI
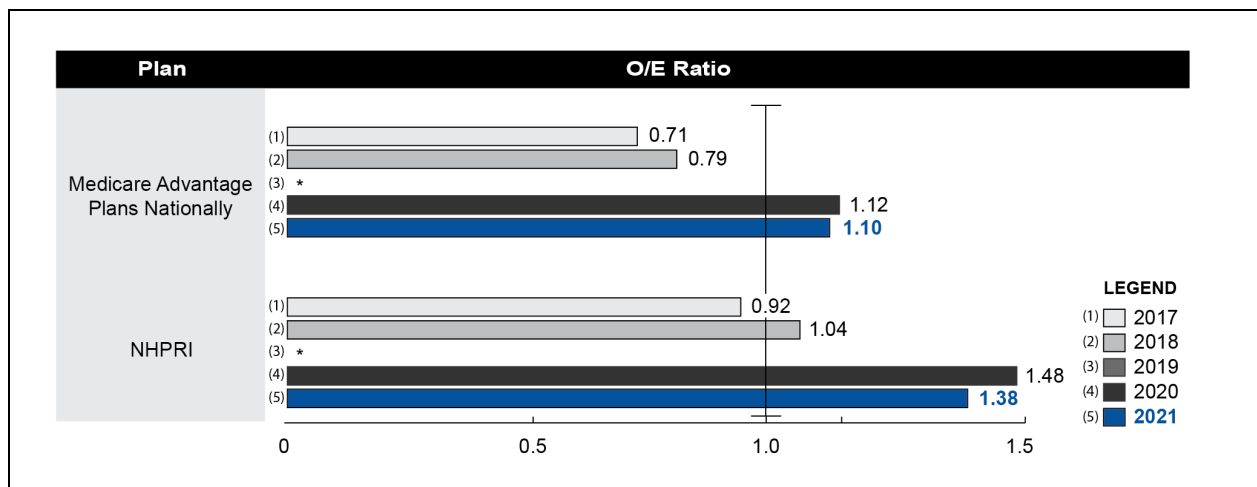
Plan	O/E Ratio

Medicare Advantage Plans Nationally
(1) 2017: 0.71
(2) 2018: 0.79
(3) 2019: *
(4) 2020: 1.12
(5) 2021: 1.10

NHPRI
(1) 2017: 0.92
(2) 2018: 1.04
(3) 2019: *
(4) 2020: 1.48
(5) 2021: 1.38

LEGEND
(1) 2017
(2) 2018
(3) 2019
(4) 2020
(5) 2021

* = data not available; HEDIS = Healthcare Effectiveness Data and Information Set; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; NHPRI = Neighborhood Health Plan of Rhode Island.
NOTE: In response to the COVID-19 Public Health Emergency, CMS did not require MA plans (including MMPs) to submit HEDIS data covering the 2019 measurement year.
SOURCE: RTI analysis of 2017 through 2021 HEDIS measures.

SECTION 4
Beneficiary Experience

> Findings from CAHPS, beneficiary interviews, and stakeholder input reported by the State indicated a high level of beneficiary satisfaction with the ICI demonstration.

> In 2021, over three-quarters of CAHPS respondents rated their health plan as a 9 or 10, with 10 being the highest rating.

One of the main goals of the demonstration under the FAI is to improve the beneficiary experience accessing Medicare and Medicaid services. In this section we highlight beneficiary experience with the ICI demonstration, and provide information on beneficiary protections, complaints and appeals data, and critical incident and abuse reports. For beneficiary experience, we draw on findings from beneficiary interviews and the CAHPS survey. In response to the PHE, CMS did not require MMPs to collect CAHPS data for 2020. See ***Appendix A*** for a full description of these data sources.

4.1   Impact of the Demonstration on Beneficiaries

Overall Satisfaction with the Demonstration

Consistent with prior years, the State, MMP, ombudsman program and members of the Implementation Council continued to express favorable opinions of the demonstration in terms of beneficiary experience and the benefits to enrollees of an integrated model of care. These opinions were based in part on the beneficiary CAHPS scores and on feedback the State received in 2019 as part of an extensive public stakeholder process focused on the State's care delivery model for dually eligible individuals (see ***Section 2.2, State Context***). The State reported in 2021 that "overwhelmingly, we heard from our stakeholders that the preference was the fully integrated model of care."

In 2022 the RTI evaluation team conducted individual interviews with 15 ICI demonstration enrollees or their proxies to ask about their experience with the demonstration. When asked to rate their experience with the demonstration, two-thirds of participants gave it a 5, or "very satisfied." The lowest rating was 3.5 (one person), and the remaining ratings were either 4 or 4.5. Although these enrollees were generally satisfied, they expressed dissatisfaction with the responsiveness of the plan. For example, one enrollee attributed their lower rating to barriers in getting needed medications. Almost all participants liked having one card combining Medicare and Medicaid. Although not everyone provided specifics, a few described benefits such as being able to call one place, the MMP, with issues or concerns rather than having to contacting two different programs. They thought it improved communication and the ability to help with care needs.

My [MMP] care manager worked with me and she fought for me. She got stuff done for me that I did not think was possible, so I am quite satisfied.

—Individual Beneficiary Interview Participant (2022)

The CAHPS data support findings of overall beneficiary satisfaction with the demonstration. Overall satisfaction remained high in 2021 (even during the PHE), and slightly increased over prior years. ***Figure 4-1*** shows that the percentage of CAHPS respondents who rated their health plan (the sole MMP in the Rhode Island demonstration) as a 9 or 10 varied from year to year, and slightly increased overall from 73 percent in 2018 to 76 percent in 2021.

Figure 4-1
Rhode Island ICI beneficiary overall satisfaction, 2018–2021:
Percentage of beneficiaries rating their health plan as a 9 or 10
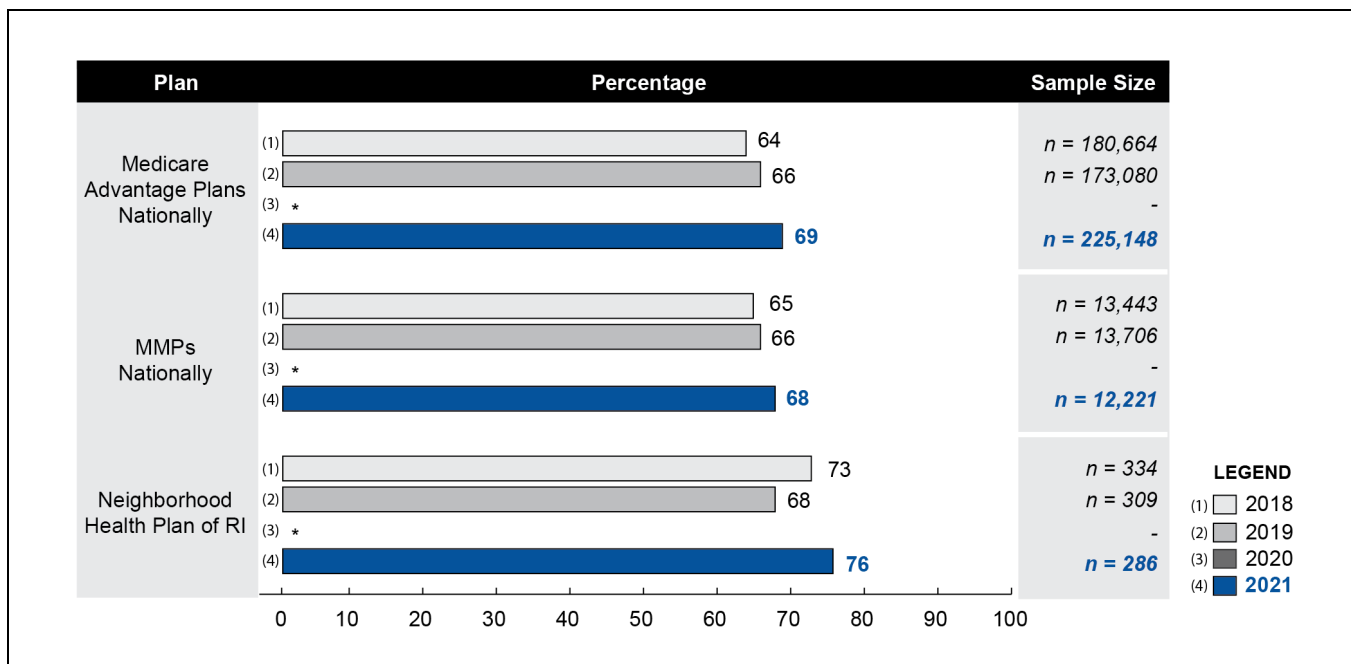
* = data not available; - = sample size data not available; CAHPS = Consumer Assessment of Healthcare Providers and Systems; ICI = Integrated Care Initiative; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; RI= Rhode Island.
NOTES: The Rhode Island FAI demonstration began in 2016 and the first year that the CAHPS was administered to enrollees was 2018. In response to the COVID-19 Public Health Emergency, CMS did not require MA plans (including MMPs) to collect CAHPS data for 2020.
SOURCE: CAHPS data for 2018-2021. This item was case mix adjusted. The CAHPS question used for this item was: "Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your health plan?"

As shown in *Figure 4-2*, the percentage of CAHPS respondents who rated their drug plan as a 9 or 10 was similar in 2018 (70 percent), 2019 (71 percent), and 2021 (68 percent).

Figure 4-2
Rhode Island ICI beneficiary overall satisfaction, 2018–2021:
Percentage of beneficiaries rating their prescription drug plan as a 9 or 10
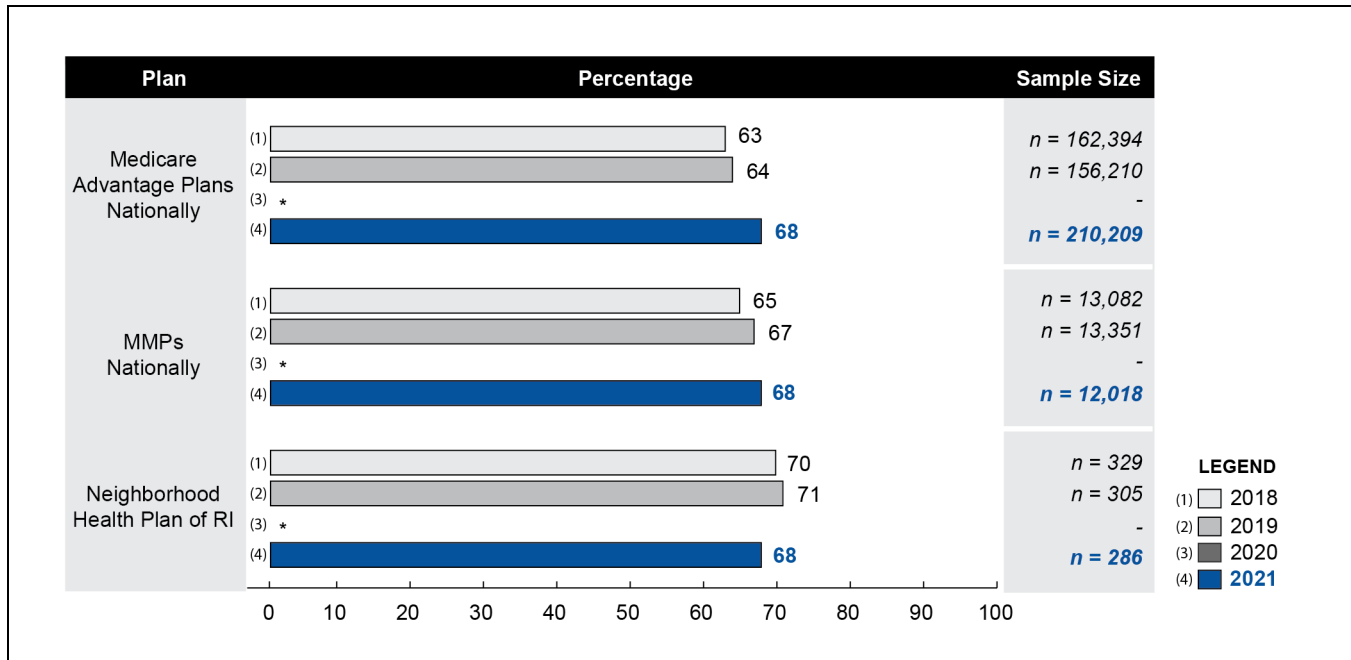
* = data not available; - = sample size data not available; CAHPS = Consumer Assessment of Healthcare Providers and Systems; ICI = Integrated Care Initiative; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; RI= Rhode Island.

NOTES: The Rhode Island FAI demonstration began in 2016 and the first year that the CAHPS was administered to enrollees was 2018. In response to the COVID-19 Public Health Emergency, CMS did not require MA plans (including MMPs) to collect CAHPS data for 2020.

SOURCE: CAHPS data for 2018-2021. This item was case mix adjusted. The CAHPS question used for this item was: "Using any number from 0 to 10, where 0 is the worst prescription drug plan possible and 10 is the best prescription drug plan possible, what number would you use to rate your prescription drug plan?"

Beneficiary Experience with Care Management

Most beneficiaries interviewed by the RTI evaluation team had a care manager, and many interviewees knew their care manager's name. Most participants had the name and direct contact information, but some reported needing to call the MMP's main number. Participants provided mixed feedback on the responsiveness of their care managers, with some reporting prompt action and others noting delays in returning messages or providing help. One-third of participants, including two of the three Spanish-speaking interviewees, reported not knowing or not having a care manager assigned to them or their family member.

Participants described care managers helping them to connect to services, especially to obtain medical equipment and supplies. Examples included walkers, nebulizers, shower chairs, and other adaptive equipment. In one case, a care manager helped arrange for equipment and

care after surgery and provided help that the enrollee would not have thought to ask about. Care managers helped some participants resolve billing problems with providers. Most participants described discussing their overall health or wellness plans and goals with their care managers, although a few thought the questions and/or process was perfunctory (for example, being asked through a questionnaire).

When I had my knee replacements, [my MMP care manager] helped me get my walker and my bathroom set up with equipment. And when I had the other knee done, she did the same thing to make sure everything was set.

—Individual Beneficiary Interview Participant (2022)

As shown in **Figure 4-3**, from 2018 through 2021, the percentage of CAHPS respondents reporting that their health plan usually or always gave them information they needed decreased year to year but was greater than or equal to 79 percent over the course of the demonstration. While overall satisfaction increased in 2021 (see **Figure 4-1**), the percent of beneficiaries reporting that the MMP usually or always gave them information they needed declined from previous years. In beneficiary interviews, most said that the plan reached out to them during the PHE, although several participants said they had no contact from the plan or their care manager and did not receive information about resources such as testing or vaccines.

Figure 4-3
Rhode Island ICI beneficiary experience with care coordination, 2018–2021:
Percentage of beneficiaries reporting that their health plan usually or always gave them information they needed

* = data not available; - = sample size data not available; CAHPS = Consumer Assessment of Healthcare Providers and Systems; ICI = Integrated Care Initiative; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; RI= Rhode Island.

NOTES: The Rhode Island FAI demonstration began in 2016 and the first year that the CAHPS was administered to enrollees was 2018. In response to the COVID-19 Public Health Emergency, CMS did not require MA plans (including MMPs) to collect CAHPS data for 2020.

SOURCE: CAHPS data for 2018–2021. The CAHPS question used for this item was: "In the last 6 months, how often did your health plan's customer service give you the information or help you needed?"

As shown in ***Figure 4-4***, the percentage of CAHPS respondents who reported that their personal doctors were usually or always informed about care from specialists increased year to year from 2018 to 2021, from 87 to 90 percent.

Figure 4-4
Rhode Island ICI beneficiary experience with care coordination, 2018–2021:
Percentage of beneficiaries reporting that in the past 6 months their personal doctors were usually or always informed about care from specialists
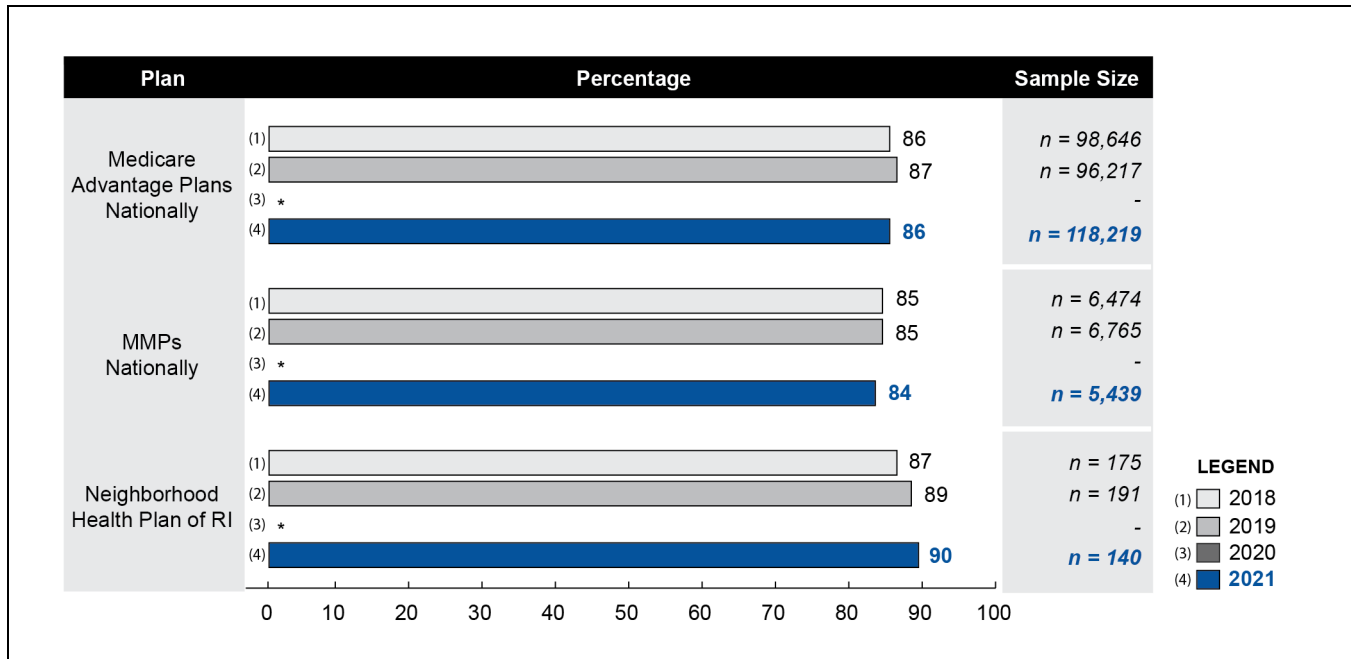
* = data not available; - = sample size data not available; CAHPS = Consumer Assessment of Healthcare Providers and Systems; ICI = Integrated Care Initiative; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; RI= Rhode Island.
NOTES: The Rhode Island FAI demonstration began in 2016 and the first year that the CAHPS was administered to enrollees was 2018. In response to the COVID-19 Public Health Emergency, CMS did not require MA plans (including MMPs to collect CAHPS data for 2020.
SOURCE: CAHPS data for 2018–2021. The CAHPS question used for this item was: "In the last 6 months, how often did your personal doctor seem informed and up-to-date about the care you got from specialists?"

Quality and Access to Care

None of the beneficiaries interviewed by the RTI evaluation team reported having to change providers upon enrolling in the demonstration, and most felt it was easy to get the services they needed. A few noted access issues with dental services and specialists, including oral surgery, neuro-psychology, dermatology, and pain management. A few participants reported challenges or delays in getting referrals for specialists they needed and challenges to getting prescription medications they needed (e.g., long wait times for approval).

Beneficiary Experience with Flexible and Supplemental Benefits

In 2021, the State and MMP reported that the PHE underlined the vulnerability of the demonstration population and the need to address social determinants of health such as food insecurity among enrollees. To respond to these needs, the MMP launched initiatives in 2020 that included providing a monthly dollar amount to purchase food and offering membership in a home-delivered meals program.

[My care manager] had conversations with me to find out if I needed anything else, or if I needed food delivery. Yes, she was very helpful.

—Individual Beneficiary Interview Participant (2022)

In addition to addressing food insecurity and building on its experience with telehealth for medical appointments during the PHE, the MMP began developing social programming that was offered virtually as a supplemental benefit in 2021.

4.2   Beneficiary Protections

Enrollees have certain protections under the demonstration. There are several options for them to report grievances or complaints, appeals, and critical incidents and abuse. Ombudsman services are available under the demonstration to assist enrollees with filing and resolving complaints, as well as providing information. Enrollees have the right to file a grievance with the MMP at any time. A grievance is a complaint or a dispute expressing dissatisfaction with the MMP or a provider, regardless of whether the enrollee is requesting a remedial action. Grievances are resolved at the MMP level.

The MMP is required to track and report grievance data. The way that plan-reported grievance data were analyzed changed in 2018; thus, we report separate data from two periods (2016–2017 and 2018–2021). In 2016 and 2017, data were analyzed per 1,000 enrollees per quarter. Beginning in 2018, data were analyzed per 10,000 enrollee months per quarter.

In 2016 and 2017 the average number of MMP-reported grievances per 1,000 enrollees per quarter remained very low, with an average of 1 and 3, respectively (data not shown). *Figure 4-5* presents the average number of grievances filed with the MMP in 2018 through 2021. The average number of MMP-reported grievances per 10,000 enrollee months increased from 12 in 2018 to 25 in 2019 before decreasing in 2020 and 2021 to 15 and 13, respectively.

Figure 4-5
Rhode Island ICI average number of MMP-reported grievances per 10,000 enrollee months per quarter, 2018–2021
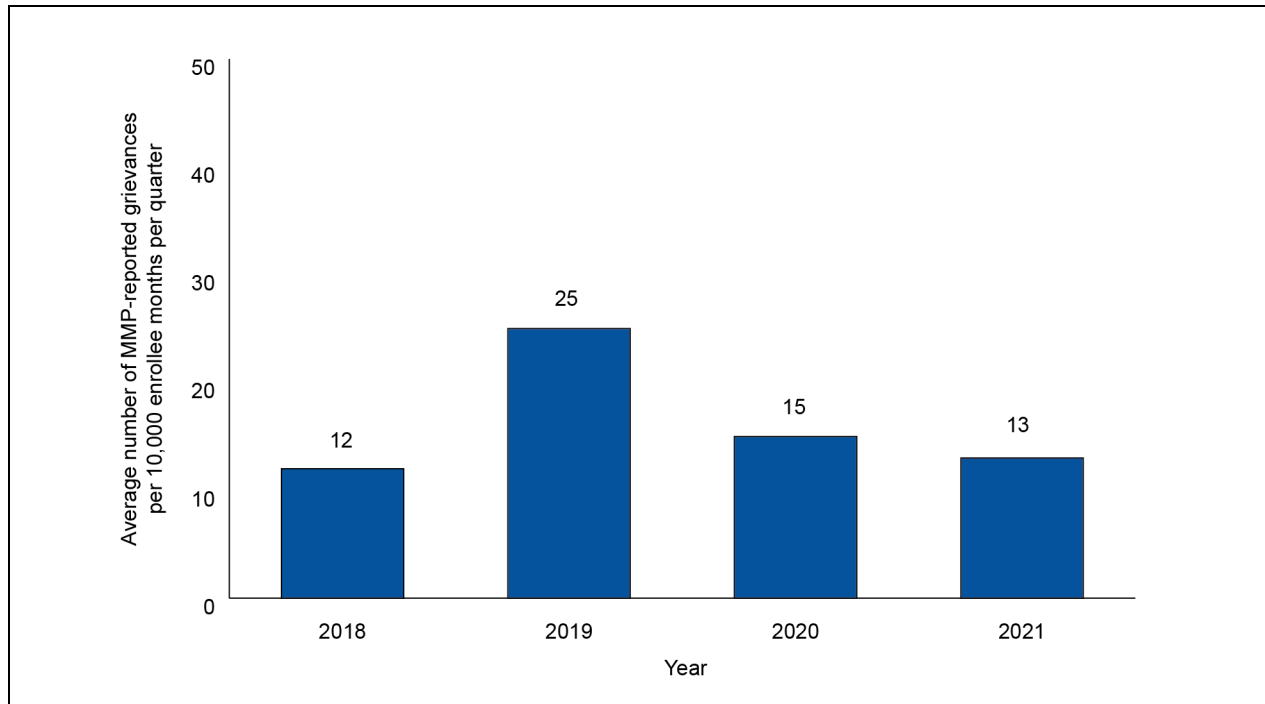
ICI = Integrated Care Initiative; MMP = Medicare-Medicaid Plan.

Figure 4-6 shows total complaints reported to the Complaint Tracking Module (CTM) by EOHHS or through 1-800-Medicare in 2016–2021. The number of CTM complaints increased from 4 in 2016 to 29 in 2017 but remained low again—ranging from 4 to 9—in 2018 through 2021. The highest number of complaints during this period were in the premiums and costs category.

Figure 4-6
Rhode Island ICI number of CTM complaints per year, 2016–2021
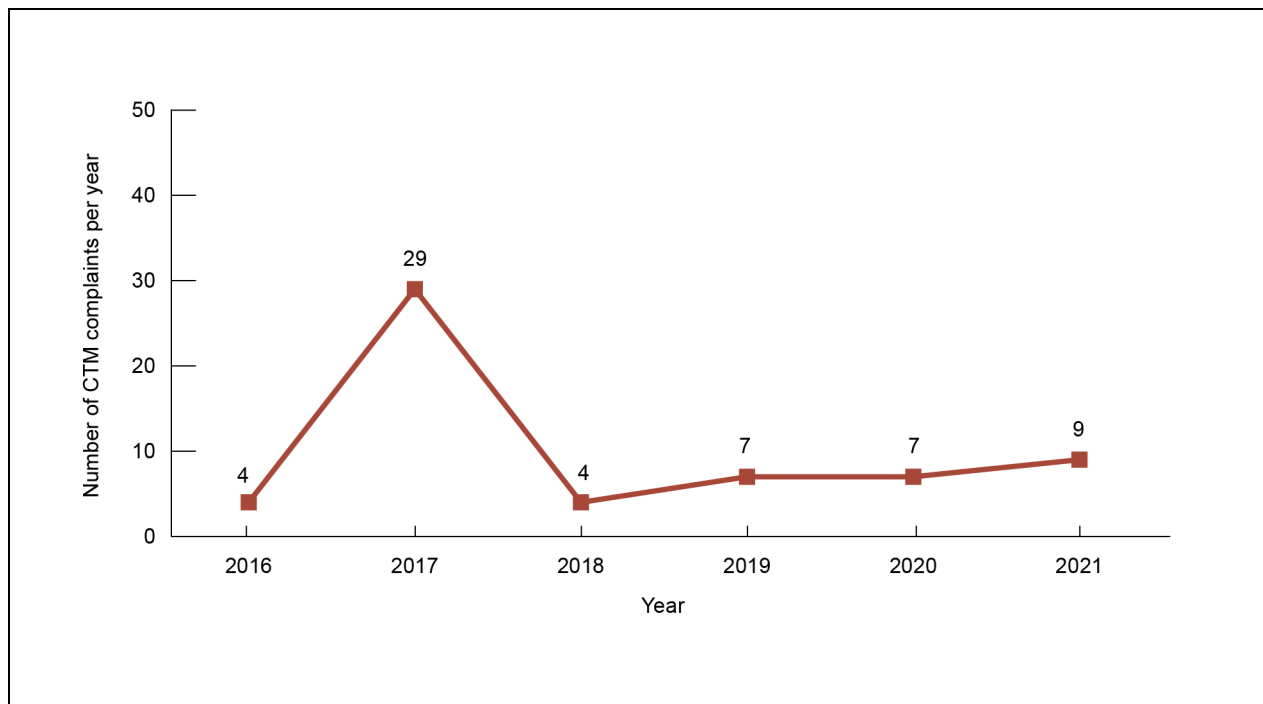
ICI = Integrated Care Initiative; CTM = Complaint Tracking Module.

Enrollees also have the right to appeal the MMP's decision to deny, terminate, suspend, or reduce services. The first level of appeal is filed directly with the MMP. If the MMP denies an appeal involving Medicare-only services, or a service that could be covered by Medicare or Medicaid (i.e., an "overlap" service), the MMP automatically forwards the appeal to the Medicare Independent Review Entity (IRE) for the second level of appeal.

The way that plan-reported appeals data are analyzed changed in 2018; thus, we report separate data from two periods (2016–2017 and 2018–2021). In 2016 and 2017, data were analyzed per 1,000 enrollees per quarter. Beginning in 2018, data were analyzed per 10,000 enrollee months per quarter.

In 2016 and 2017, the average number of MMP-reported appeals per 1,000 enrollees per quarter remained very low, with an average of 0 in 2016 and 3 in 2017 (data not shown). As shown in *Figure 4-7,* the average number of MMP-reported appeals per 10,000 enrollee months per quarter decreased from 12 in 2018 to 8 in 2019 through 2021. The number of appeals has consistently remained low over the course of the ICI demonstration.

Figure 4-7
Rhode Island ICI average number of MMP-reported appeals per 10,000 enrollee months per quarter, 2018–2021
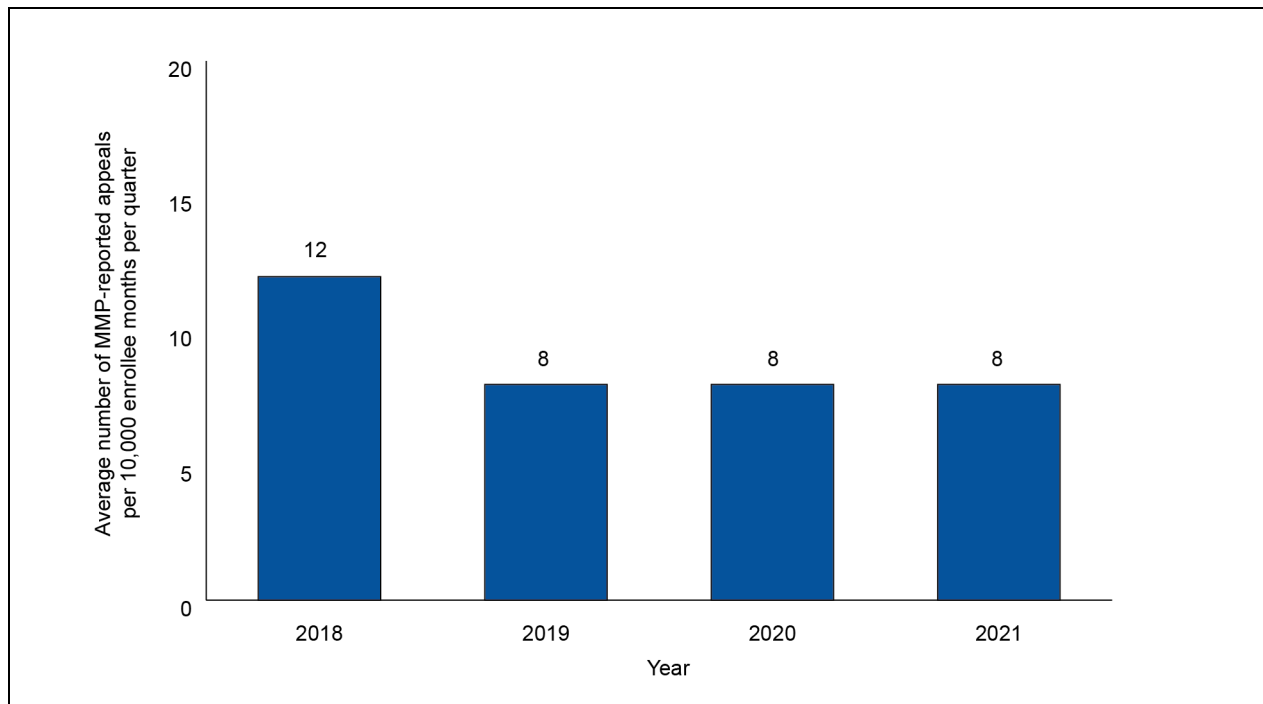
ICI = Integrated Care Initiative; MMP = Medicare-Medicaid Plan.

Figure 4-8 shows the total number of MMP-reported appeals auto-forwarded to the IRE in 2016 through 2021. No appeals were auto-forwarded to the IRE in 2016–2018. The number of appeals auto-forwarded to the IRE in 2019 through 2021 ranged from 24 to 37. Of the 94 MMP-reported appeals auto-forwarded to the IRE in 2016 through 2021, 67 percent of the MMP decisions were upheld, 29 percent were overturned or partially overturned, and 4 percent were dismissed. The most common category of appeals auto-forwarded to the IRE was for issues related to Clinic/Lab/X-Ray services.

Figure 4-8
Rhode Island ICI number of IRE appeals per year, 2016–2021
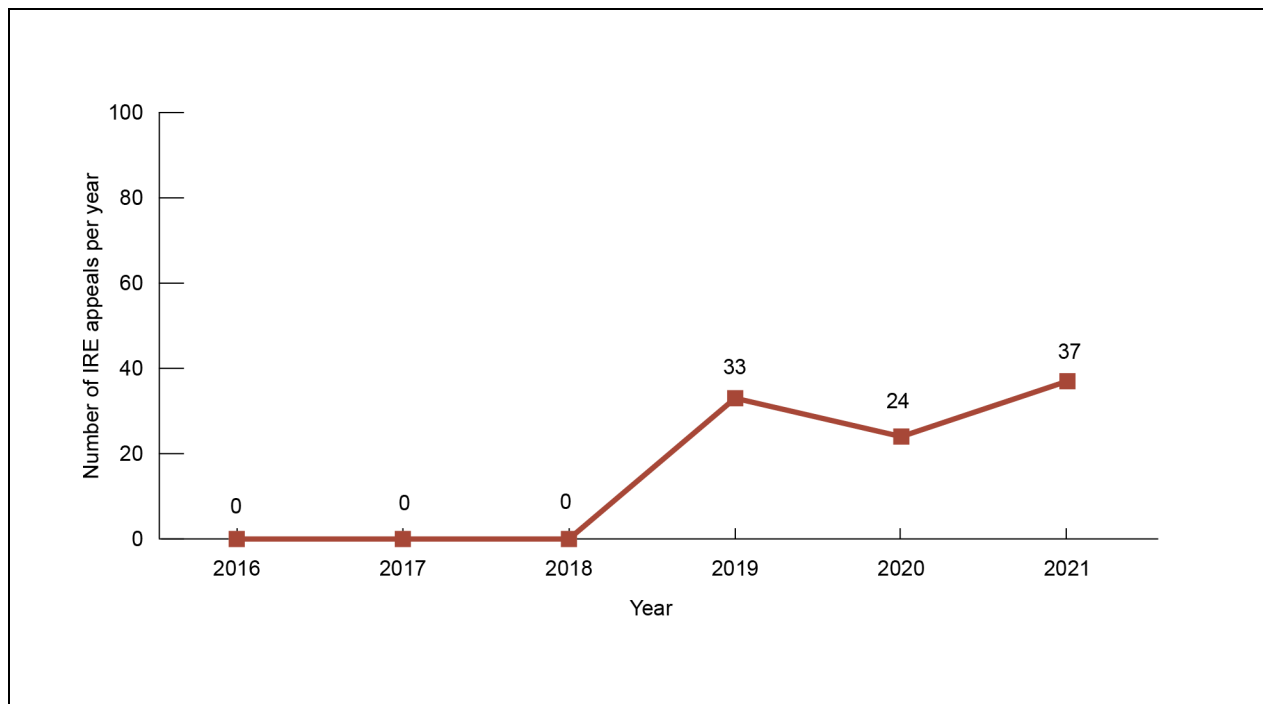
ICI = Integrated Care Initiative; IRE= Independent Review Entity.

The MMP is required to report to CMS the number of critical incidents and abuse reports for members receiving LTSS.[26] From 2016 through 2021, the number of critical incidents and abuse reports per 1,000 enrollees receiving LTSS remained below 30.1 (data not shown).

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[26] A critical incident is any actual or alleged event or situation that creates a significant risk of substantial or serious harm to the physical or mental health, safety, or well-being of a member. Abuse refers to willful use of offensive, abusive, or demeaning language by a caretaker that causes mental anguish; knowing, reckless, or intentional acts or failures to act which cause injury or death to an individual or which places that individual at risk of injury or death; rape or sexual assault; corporal punishment or striking of an individual; unauthorized use or the use of excessive force in the placement of bodily restraints on an individual; and use of bodily or chemical restraints on an individual which is not in compliance with Federal or State laws and administrative regulations. https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/MMPInformationandGuidance/MMPReportingRequirements

SECTION 5
Demonstration Impact on Service Utilization and Quality of Care
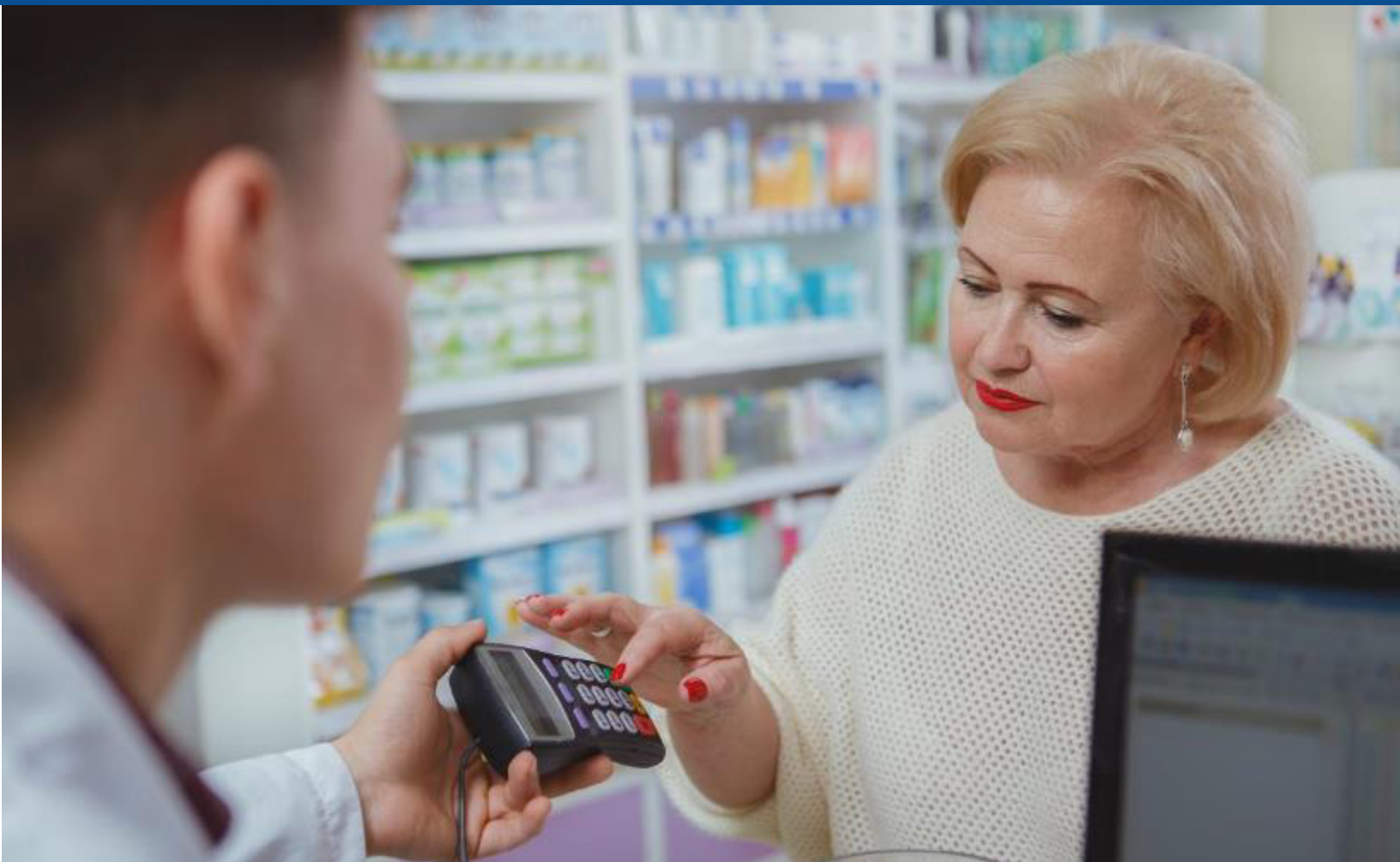
5.1   Methods Overview

The demonstrations under the FAI are intended to shift utilization from inpatient to ambulatory care, from nursing facility (NF) care to HCBS, and to improve quality of care through care management activities and the demonstrations' financial incentives. The analyses in this section evaluate the effects of the Rhode Island ICI demonstration in demonstration years 1–4 (July 1, 2016–December 31, 2020) on service utilization and quality of care outcomes among Rhode Island demonstration eligible beneficiaries.

For this analysis, we used an intent-to-treat (ITT) approach that included all FFS Medicare-Medicaid beneficiaries eligible for the demonstration, not just those who enrolled in the MMPs. The ITT framework alleviates concerns of selection bias, supports generalizability of the results across the demonstration eligible population, and mimics the real-world implementation of the demonstration. In the analyses presented in this section, enrolled beneficiaries account for approximately 53.8 percent[27] of all eligible beneficiaries (including FFS beneficiaries and MMP enrollees in the denominator) as of demonstration year 4 (the enrollment percentage varied somewhat across demonstration years).

We used a quasi-experimental difference-in-differences (DinD) regression analysis with inverse propensity weighting to estimate the impact of the demonstration on the change in the probability or frequency of service utilization and quality of care outcomes, relative to the comparison group. Our analyses were conducted using Medicare enrollment and FFS claims data, MMP encounter data, Area Health and Resource Files, and the American Community Survey. See *Appendix C* and *Appendix D* for more detail on our comparison group and analytic methodology.

For ease of interpretation, we present the DinD estimate as both the absolute change in the probability (for a dichotomous outcome) or frequency (for a count outcome) of the outcome, relative to the comparison group, and a relative percent change of the average outcome value in the comparison group during the demonstration period. Thus, a positive DinD value may correspond to a greater increase or a smaller decrease in the outcome in the demonstration group relative to the comparison group, depending on the estimated trend in the outcome. For example, if the DinD estimate is positive and the trend is a decline in both the demonstration and comparison groups, then the interpretation of the DinD estimate is that the demonstration group had a slower decline in the outcome, relative to the comparison group. Similarly, a negative DinD value can result from either a greater decrease or a smaller increase in the outcome depending on the estimated trend in the demonstration group relative to the comparison group.

The forest plots (e.g., *Figure 5-1*) present a point estimate of the demonstration effect by demonstration year for each outcome, along with 95 percent confidence intervals of each point

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[27] The enrollment percentages reported in this section may be different than what was reported in *Section 3, Eligibility and Enrollment* because of the timing for completion and submitting the finder file versus the SDRS. Moreover, the sample used in this analysis excludes eligible beneficiaries who enrolled in Medicare Advantage, reducing the size of the denominator, which results in an increase in the percent of population enrolled. Thus, the percent enrolled in this sample is also different than what is reported in *Section 6, Demonstration Impact on Cost Savings*.

estimate. A point estimate indicates a statistically significant demonstration effect if neither the upper nor lower bound of its confidence interval crosses zero.

In addition, we discuss the effects of the demonstration on two special populations of interest: beneficiaries who use LTSS and beneficiaries with serious and persistent mental illness (SPMI). Our goal is to understand whether the demonstration might have had specific impacts on these two special populations. We present the demonstration effects separately for the LTSS users and for non-LTSS users, as well as for those with and without SPMI. We also discuss any interaction effect (the difference between the two effects). This chapter only describes demonstration DinD impact estimates that are statistically significant with 95 percent confidence intervals. Estimates that are not statistically significant are not discussed unless otherwise noted when discussing the pattern of yearly estimates. We re-scaled the monthly and annual DinD estimates to reflect percentage points (for binary outcomes) and frequency per 1,000 beneficiary months (for count outcomes) for ease of interpretation. For a complete list of DinD estimates with 95 and 90 percent confidence intervals, see *Appendix E*.

Finally, this analysis applied the demonstration's Medicaid medically needy exclusion criteria, specified in the three-way contract on the Financial Alignment Initiative website, which removed between 3 to 8 percent of monthly observations from the demonstration group each year and between 42 to 49 percent of monthly observations from the comparison group each year.[28] The Combined First and Second Evaluation Report did not apply this exclusion due to the lack of available and reliable Medicaid eligibility data for all years at the time that report was prepared. The addition of two demonstration years also resulted in further exclusions as a result of Medicare Advantage enrollment, resulting in removal of approximately 11 to 15 percent of observations in the demonstration group, and 10 to 15 percent in the comparison group per year. As such, the results reported here are somewhat different than what was previously reported, though in general align with the Combined First and Second Evaluation Report.

5.2 Demonstration Impact on Service Utilization Among Eligible Beneficiaries

> Overall, the demonstration increased the number of physician visits by 3.8 percent, relative to the comparison group. There were no demonstration impacts on the probability of any inpatient admission, SNF admissions, ED visit, or long-stay nursing facility use.

5.2.1 Cumulative Impact Over Demonstration Years 1–4

The key goals of the Rhode Island ICI demonstration include the delivery of person-centered care to improve enrollee quality of life and the development of an integrated system of care management. Through better care management, outpatient management of chronic conditions, and the integration of medical care, LTSS and behavioral health services, the demonstration is intended to improve quality of care, increase use of outpatient care and HCBS, and decrease inpatient care, ED visits, and long-stay NF use.

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[28] https://www.cms.gov/files/document/ricontract.pdf

Table 5-1 shows the cumulative impacts of the demonstration on service utilization. Monthly physician evaluation and management (E&M) visits increased more in the demonstration group, relative to the comparison group, a favorable finding for the demonstration.[29] There was no demonstration effect on the probability of inpatient admissions, SNF admissions, ED visits, or long-stay nursing facility use.

Table 5-1
Cumulative demonstration impact on select service utilization measures in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Group	Adjusted mean for predemonstration period	Adjusted mean for demonstration period	Regression-adjusted DinD estimate (95% confidence interval)	Relative difference (%)	*p*-value
Monthly probability of any inpatient admission (%)	Demonstration	2.87	2.64	–0.12 (–0.36, 0.13)	NS	0.3457
	Comparison	3.03	2.90			
Monthly probability of any ED visit (%)	Demonstration	4.66	4.31	–0.04 (–0.27, 0.18)	NS	0.7205
	Comparison	5.74	5.36			
Monthly number of physician E&M visits per 1,000 beneficiaries	Demonstration	763.43	785.38	29.96** (8.11, 51.82)	3.8	0.0072
	Comparison	802.98	796.56			
Monthly probability of any SNF admission (%)	Demonstration	0.71	0.68	–0.04 (–0.13, 0.05)	NS	0.4031
	Comparison	0.59	0.60			
Annual probability of any long-stay NF use (%)	Demonstration	7.21	6.78	–0.04 (–2.16, 2.07)	NS	0.9672
	Comparison	7.50	7.09			

*p < 0.05; **p < 0.01; ***p < 0.001

DinD = difference-in-differences; ED = emergency department; E&M = evaluation and management; NF = nursing facility; NS = not statistically significant; SNF = skilled nursing facility.

NOTES: The adjusted mean is the regression-adjusted predicted probability or number of events for the predemonstration and demonstration periods for the demonstration and comparison groups. The relative difference is calculated by dividing the DinD estimate (column heading Regression-adjusted DinD estimate) by the predicted average for the comparison group in the demonstration period (column heading Adjusted mean for demonstration period). The magnitude of a relative difference could be large when the underlying denominator is small. In such cases, the relative difference should be interpreted with caution. Green color-coded shading indicates where the direction of the difference-in-differences (DinD) estimate was favorable.

SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data, and Minimum Data Set data.

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[29] We specified the E&M measure slightly differently than in the Combined First and Second Evaluation Report. In May 2018, the Integrated Data Repository system changed how it displayed chart review encounters, which was that it would no longer mark them as final action encounters. Because we include final action encounters, we had been implicitly including chart review encounters for service utilization measures prior to 2018. RTI originally included chart reviews from encounters after May 2018 to ensure consistency over the demonstration period. For this report we removed chart reviews from the creation of any service utilization measure to avoid over counting unique services.

Physician E&M Visits

- The cumulative effect of the demonstration on the number of physician visits was an increase of 29.96 visits per 1,000 beneficiary-months, relative to the comparison group. This monthly increase represents a relative difference of 3.8 percent of the predicted number of physician visits in the comparison group during the demonstration period (796.56, in *Table 5-1*).

  – These results are driven by an increase in the monthly number of physician visits per 1,000 beneficiary-months (763.43 to 785.38 from the predemonstration to demonstration periods) among the demonstration group and by a decrease among the comparison group (from 802.98 to 796.56).

- Some caution should be used when interpreting these results. The monthly average number of primary care E&M visits among the demonstration group increased during the predemonstration period, while primary care E&M visits among the comparison group decreased during the same period (see *Appendix E, Table E-4*).[30] As described in *Section 1.1, Demonstration Description and Goals*, the Rhode Island demonstration built on and complemented an existing MLTSS program for the dually eligible population in the State. This may have accelerated the increase in physician visits in the demonstration group over the predemonstration period. As such, our results may overestimate the impact of the demonstration on number of physician visits.

Furthermore, these results may be impacted by the service use and health characteristics of the demonstration enrolled population. The ITT evaluation design mitigates selection bias due to voluntary enrollment in the demonstration. However, if the demonstration enrolls beneficiaries who have lower service utilization rates and lower mortality than beneficiaries who are eligible but not enrolled, then such favorable selection may impact the likelihood of observing any favorable demonstration impacts on these measures. To determine whether these characteristics are evident in the demonstration enrolled group, we conducted the following supplemental analyses:

- A cohort analysis comparing predemonstration utilization outcome trends among beneficiaries who were enrolled at any point during demonstration year 1 to beneficiaries who were eligible but never enrolled in demonstration year 1.

- A cross-sectional analysis of mortality rates among the enrolled, eligible but not enrolled, and the comparison group during the entire study period.

Findings from these supplemental analyses are included in *Appendix G*, which indicate that the demonstration year 1 enrolled cohort had lower rates of inpatient and SNF use, but higher ED use during the predemonstration period compared to the cohort that was eligible but never enrolled in demonstration year 1. Similarly, enrolled beneficiaries had slightly lower rates

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[30] To determine whether our DinD estimate was robust to non-parallel predemonstration trends, in a sensitivity analysis we ran an alternative DinD model controlling for predemonstration trend differences between the comparison and demonstration groups. The DinD result of this model shows that the cumulative demonstration impact on E&M visits was positive but not statistically significant. Thus, the cumulative demonstration impact on this measure, as presented in *Table 5-1*, may have been overestimated to some extent.

of mortality during the demonstration period than the eligible but not enrolled group. These findings provide some evidence of favorable selection among enrolled beneficiaries. Favorable selection into the demonstration may make it less likely to observe greater decreases for some measures such as inpatient hospitalizations, relative to the comparison group.

5.2.2 Demonstration Impact in Each Demonstration Year

Figures 5-1 through *5-5* show annual effects of the demonstration on all-cause inpatient admissions, ED visits, physician visits, SNF admissions, and long-stay NF use, respectively, with the cumulative effects included as points of comparison. These annual impact estimates indicate that the Rhode Island demonstration increased the number of physician visits in demonstration years 1 through 3, while decreasing the number of physician visits in demonstration year 4, relative to the comparison group. The demonstration decreased the probability of any monthly SNF admission in demonstration year 4.

- The Rhode Island demonstration increased the number of physician E&M visits in demonstration years 1 through 3 by 47.9, 27.6, and 90.7 visits per 1,000 beneficiary months, respectively, relative to the comparison group (*Figure 5-3*). These favorable annual findings are consistent with the cumulative findings but the magnitudes of the effects are likely overestimated.[31] However, the demonstration decreased the number of physician E&M visits in demonstration year 4 by 44.0 visits per 1,000 beneficiary months, relative to the comparison group.

- The Rhode Island demonstration decreased the probability of SNF admissions in demonstration year 4 by 0.19 percentage points per month per beneficiary, relative to the comparison group (*Figure 5-4*).

  – This finding appeared to be driven in part by a larger increase in the weighted monthly average probability of any SNF use in the comparison group from 0.5 in demonstration year 3 to 0.7 relative to the demonstration group in demonstration year 4, while the demonstration group increased more slowly from 0.7 percent to 0.8 percent (see *Appendix E, Table E-4*). Caution should be used when interpreting these findings, as the predemonstration trend in the demonstration group indicated a decline in SNF use, while there was a weighted increase in the monthly percent of SNF use in the comparison group. As described in the Combined First and Second Evaluation Report, the implementation of MLTSS in 2013 in Rhode Island may contribute to an overestimation of our findings on SNF use for this year if the introduction of MLTSS led to accelerated annual declines in the use of these services during the baseline and demonstration periods.

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[31] As described in *Section 5.2.1, Cumulative Impact over Demonstration Years 1-4*, non-parallel trends in this outcome during the predemonstration period likely biased these estimates in a more favorable direction. Subsequent analysis controlling for differences in predemonstration trends between the comparison and demonstration groups resulted in annual estimates of a smaller magnitude and not statistically significant in demonstration years 1 and 2, but still significant in demonstration years 3 and 4.

Figure 5-1
Cumulative and annual demonstration effects on inpatient admissions in Rhode Island,
demonstration years 1–4, July 1, 2016–December 31, 2020
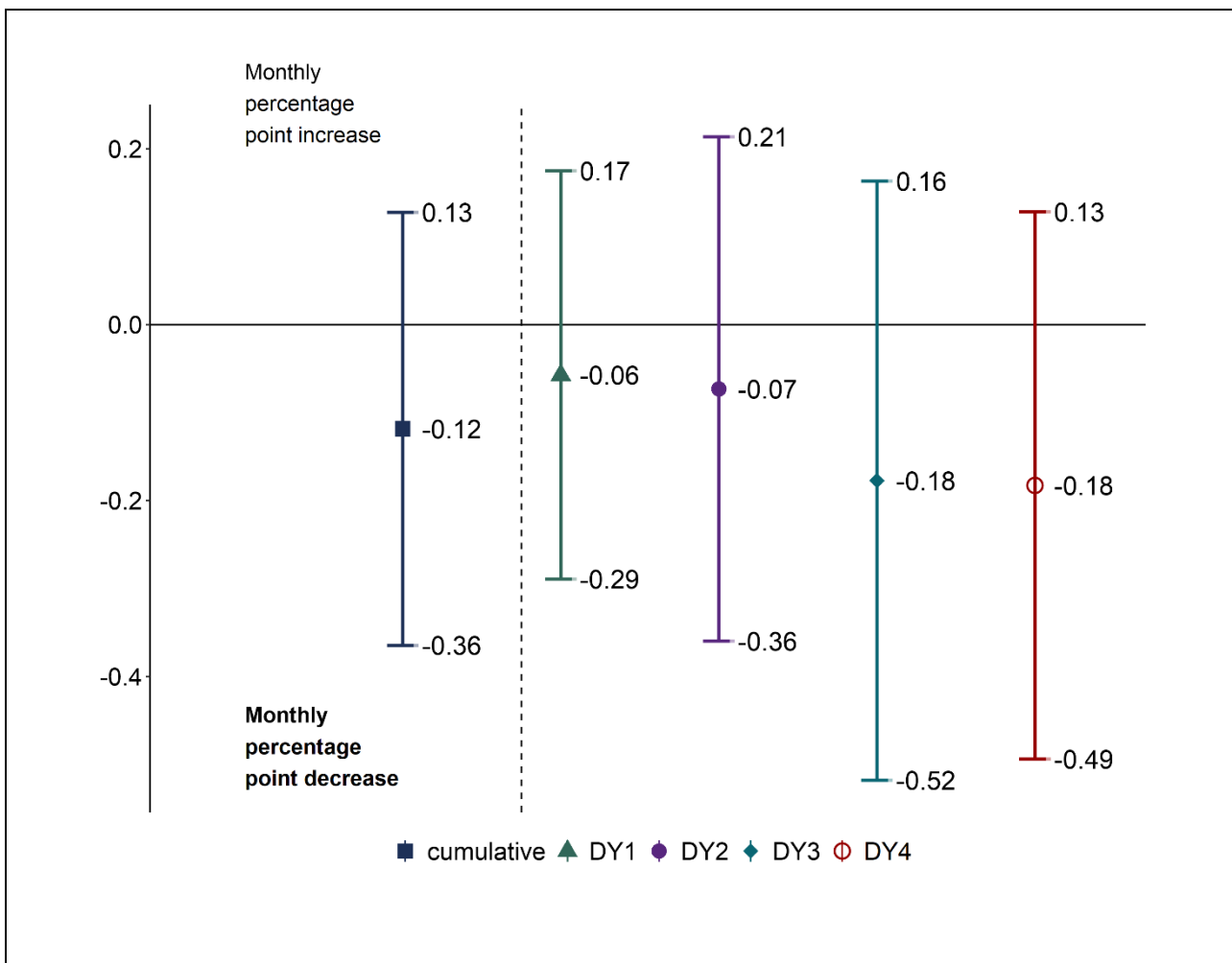
DY = demonstration year.
NOTES: 95 percent confidence intervals are shown. The expected direction of effect is a decrease.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

Figure 5-2
Cumulative and annual demonstration effects on ED visits in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020
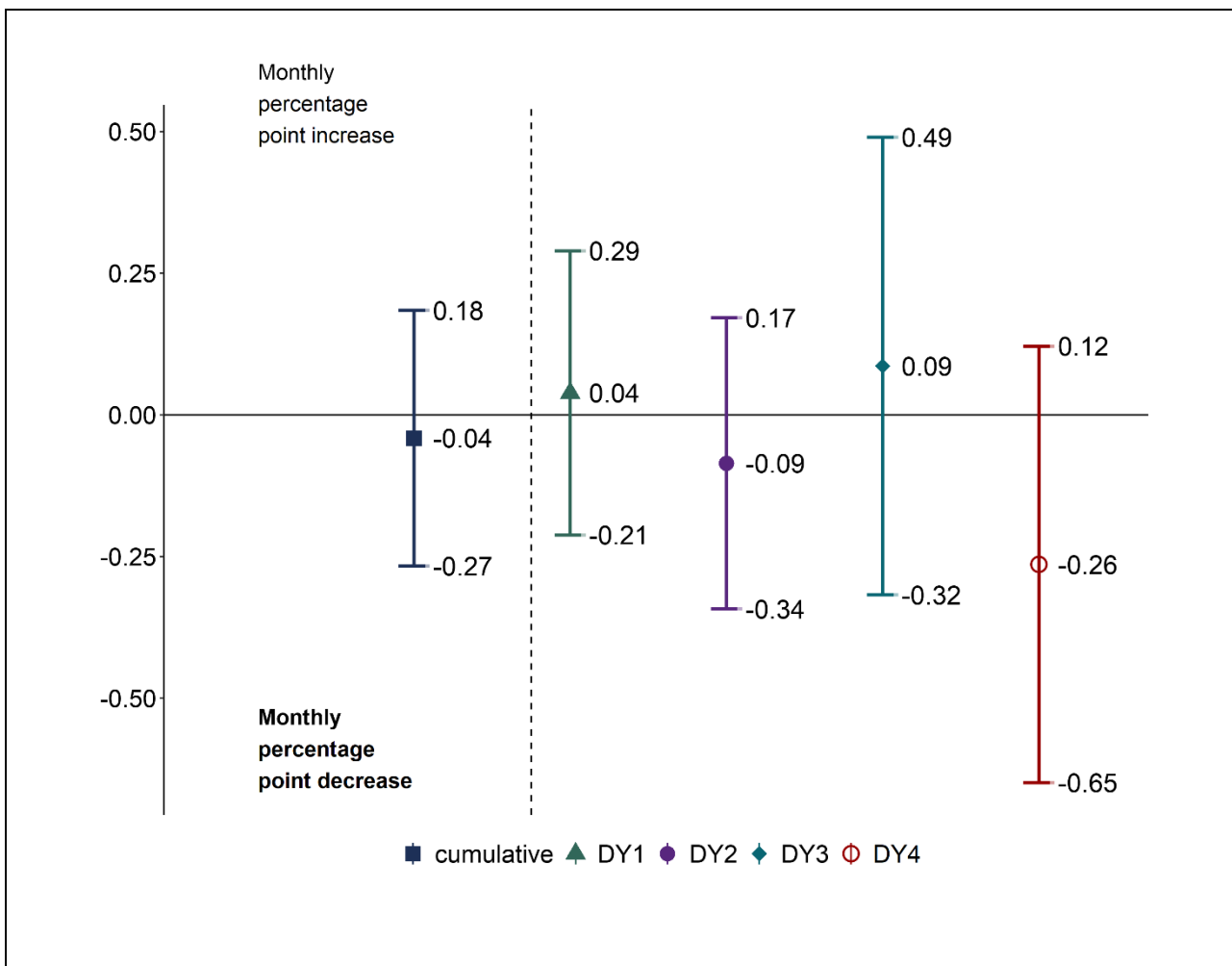
DY = demonstration year; ED = emergency department.
NOTES: 95 percent confidence intervals are shown. The expected direction of effect is a decrease.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

Figure 5-3
Cumulative and annual demonstration effects on physician E&M visits in Rhode Island,
demonstration years 1–4, July 1, 2016–December 31, 2020
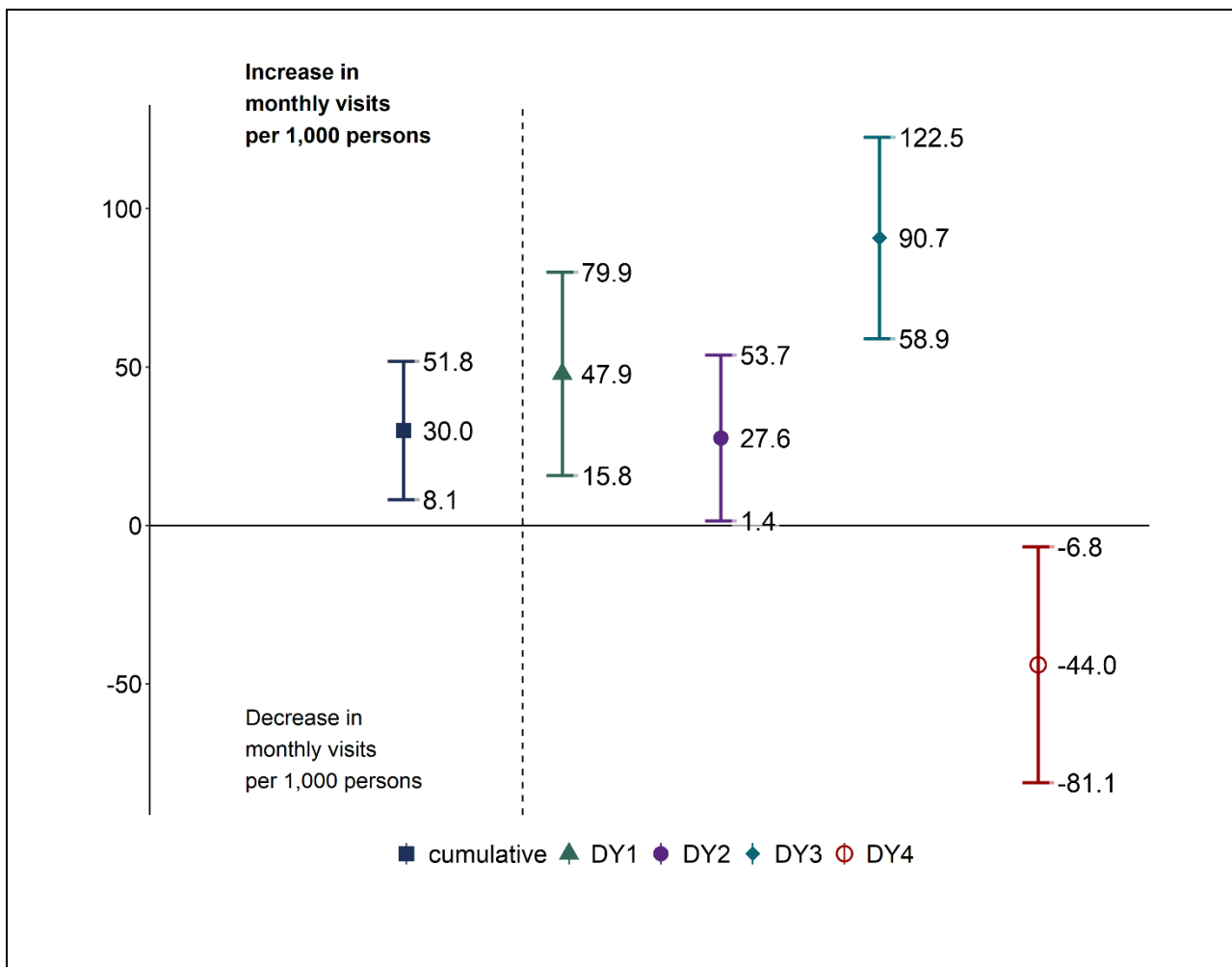
DY = demonstration year; E&M = evaluation and management.
NOTES: 95 percent confidence intervals are shown. The expected direction of effect is an increase.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

Figure 5-4
Cumulative and annual demonstration effects on SNF admissions in Rhode Island,
demonstration years 1–4, July 1, 2016–December 31, 2020
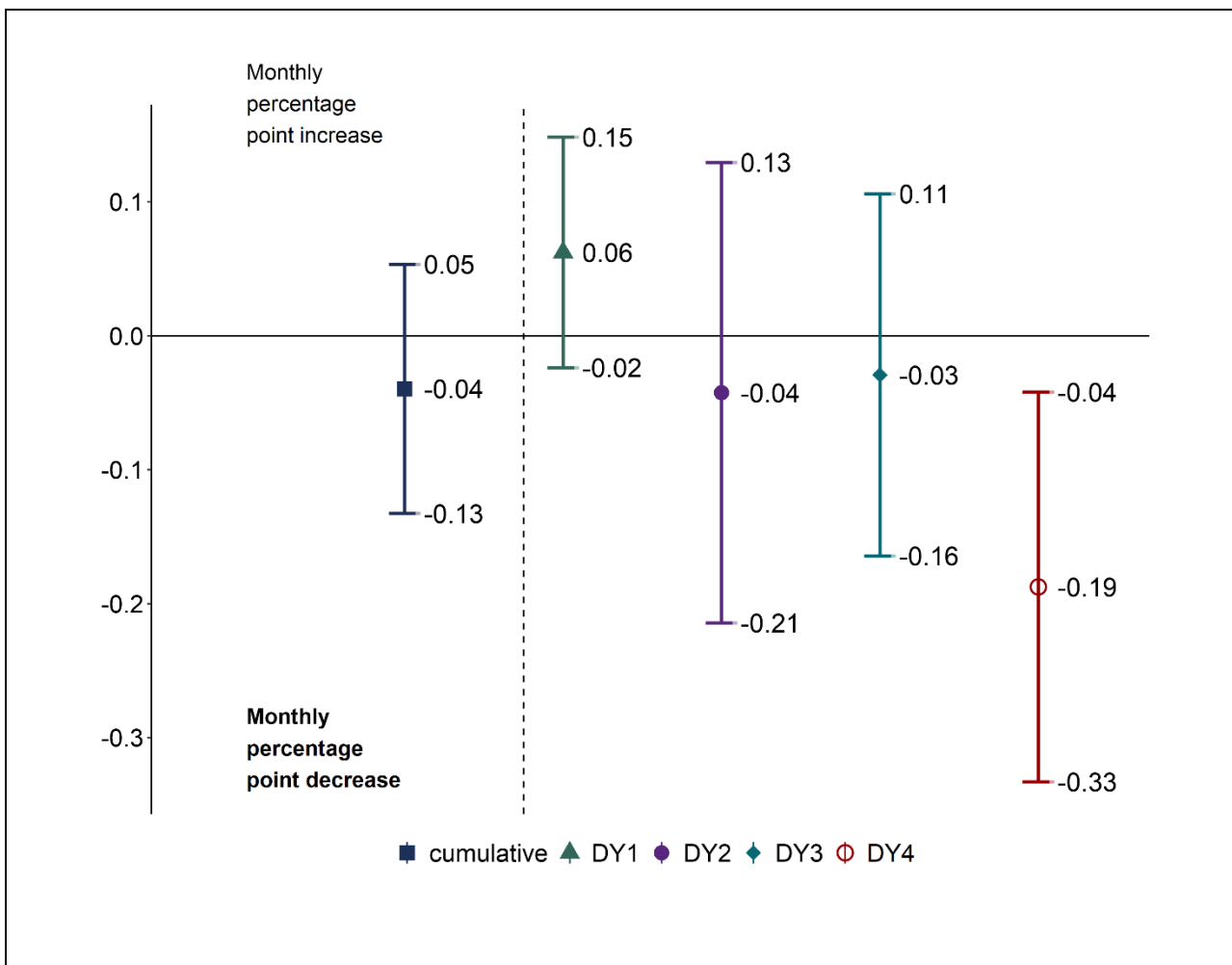
DY = demonstration year; NF = nursing facility.
NOTES: 95 percent confidence intervals are shown. The expected direction of effect is a decrease.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

Figure 5-5
Cumulative and annual demonstration effects on long-stay NF use in Rhode Island,
demonstration years 1–4, July 1, 2016–December 31, 2020
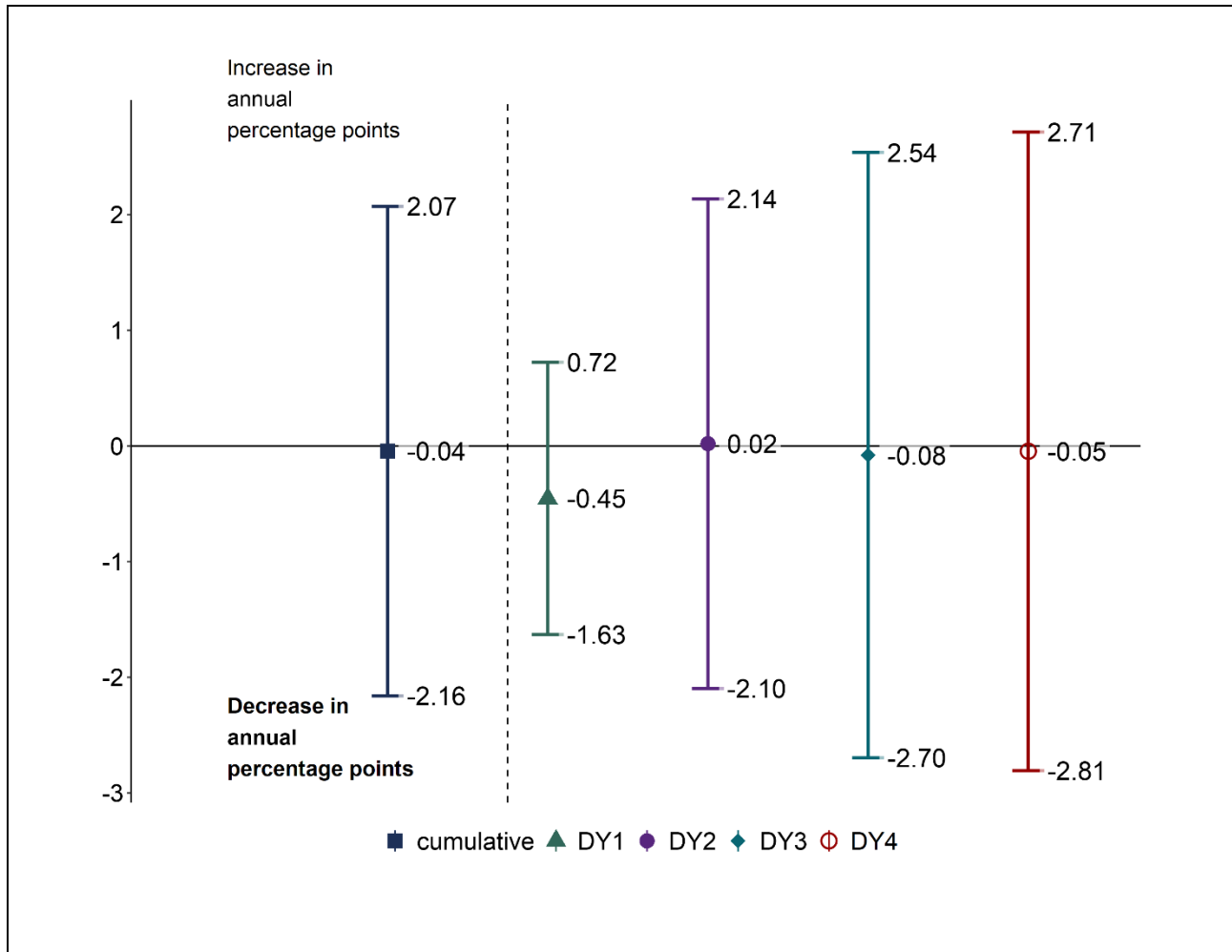
DY = demonstration year; NF = nursing facility.
NOTES: 95 percent confidence intervals are shown. The expected direction of effect is a decrease.
SOURCE: RTI analysis of Minimum Data Set data.

5.3   Demonstration Impact on Quality of Care Among Eligible Beneficiaries

The demonstration did not have any cumulative impact on the quality of care measures analyzed.

5.3.1   Cumulative Impact Over Demonstration Years 1–4

The Rhode Island demonstration is expected to improve quality of care as a result of care management and increased access to needed services. However, there was no cumulative impact

consistent with these goals over the first 4 years of the demonstration, as evaluated by several common measures of medical quality of care. **Table 5-2** illustrates the cumulative impact and adjusted means for these measures.

Table 5-2
Cumulative demonstration impact on select quality of care measures in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Group	Adjusted mean for predemonstration period	Adjusted mean for demonstration period	Regression-adjusted DinD estimate (95% confidence interval)	Relative difference (%)	*p*-value
Monthly number of preventable ED visits per 1,000 beneficiaries	Demonstration	24.48	22.86	−1.54 (−4.12, 1.04)	NS	0.2429
	Comparison	32.45	31.77			
Monthly probability of any ACSC admission, overall (%)	Demonstration	0.43	0.43	0.04 (−0.03, 0.11)	NS	0.2288
	Comparison	0.52	0.49			
Monthly probability of any ACSC admission, chronic (%)	Demonstration	0.31	0.33	0.01 (−0.05, 0.07)	NS	0.7788
	Comparison	0.32	0.33			
Probability of 30-day follow-up after mental health discharge (%)	Demonstration	31.28	33.36	1.28 (−3.41, 5.98)	NS	0.5925
	Comparison	46.29	47.33			
Number of all-cause 30-day readmissions per 1,000 discharges	Demonstration	239.15	226.29	−1.77 (−32.69, 29.15)	NS	0.9107
	Comparison	240.96	229.61			

ACSC = ambulatory care sensitive condition; DinD = difference-in-differences; ED = emergency department; NS = not statistically significant.

NOTES: The adjusted mean is the regression-adjusted predicted probability or number of events for the predemonstration and demonstration periods for the demonstration and comparison groups. The relative difference is calculated by dividing the DinD estimate (column heading Regression-adjusted DinD estimate) by the predicted average for the comparison group in the demonstration period (column heading Adjusted mean for demonstration period). The magnitude of a relative difference could be large when the underlying denominator is small. In such cases, the relative difference should be interpreted with caution.

SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

5.3.2   Demonstration Impact in Each Demonstration Year

Figures 5-6 through **5-10** show the demonstration's annual effects on 30-day readmission, ACSC admissions (overall), ACSC admissions (chronic), preventable ED visits, and 30-day follow-up post mental health discharge, with the cumulative impact also shown as points of comparison. These annual impact estimates indicate that the Rhode Island demonstration was associated with an increase the probability of a 30-day follow-up after mental health discharge in demonstration year 3.

- The demonstration increased the probability of a 30-day follow-up after mental health discharge in demonstration year 3 by 10.45 percentage points, relative to the

comparison group (*Figure 5-10*). Descriptively, the weighted monthly average 30-day follow-up after mental health discharge was 45.9 percent in demonstration group, an increase from 39.6 percent during predemonstration year 2 (see *Appendix E, Table E-5*). By contrast, the weighted monthly average in the comparison group was 41.9 percent in demonstration year 3, a decrease from 43 percent in predemonstration year 2 (see *Appendix E, Table E-5*). Caution should be used when interpreting these findings, as the predemonstration trends in this outcome were non-parallel between the comparison and demonstration group (see *Appendix E, Table E-5*).[32] Thus, these favorable findings are likely overestimated which may reflect a continuation of the predemonstration trends, as opposed to the implementation of care management activities for beneficiaries with a mental health discharge.

- There were no statistically significant annual effects of the demonstration on other quality of care measures.

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[32] Non-parallel trends in this outcome during the predemonstration period likely biased these estimates in a more favorable direction. We ran a sensitivity analysis controlling for differences in predemonstration trends between the comparison and demonstration groups. The demonstration year 3 estimate from the sensitivity model was smaller and not statistically significant, suggesting that the main model overestimated the impact of the demonstration on 30-day follow-up after a mental health discharge.

Figure 5-6
Cumulative and annual demonstration effects on 30-day readmissions, in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020
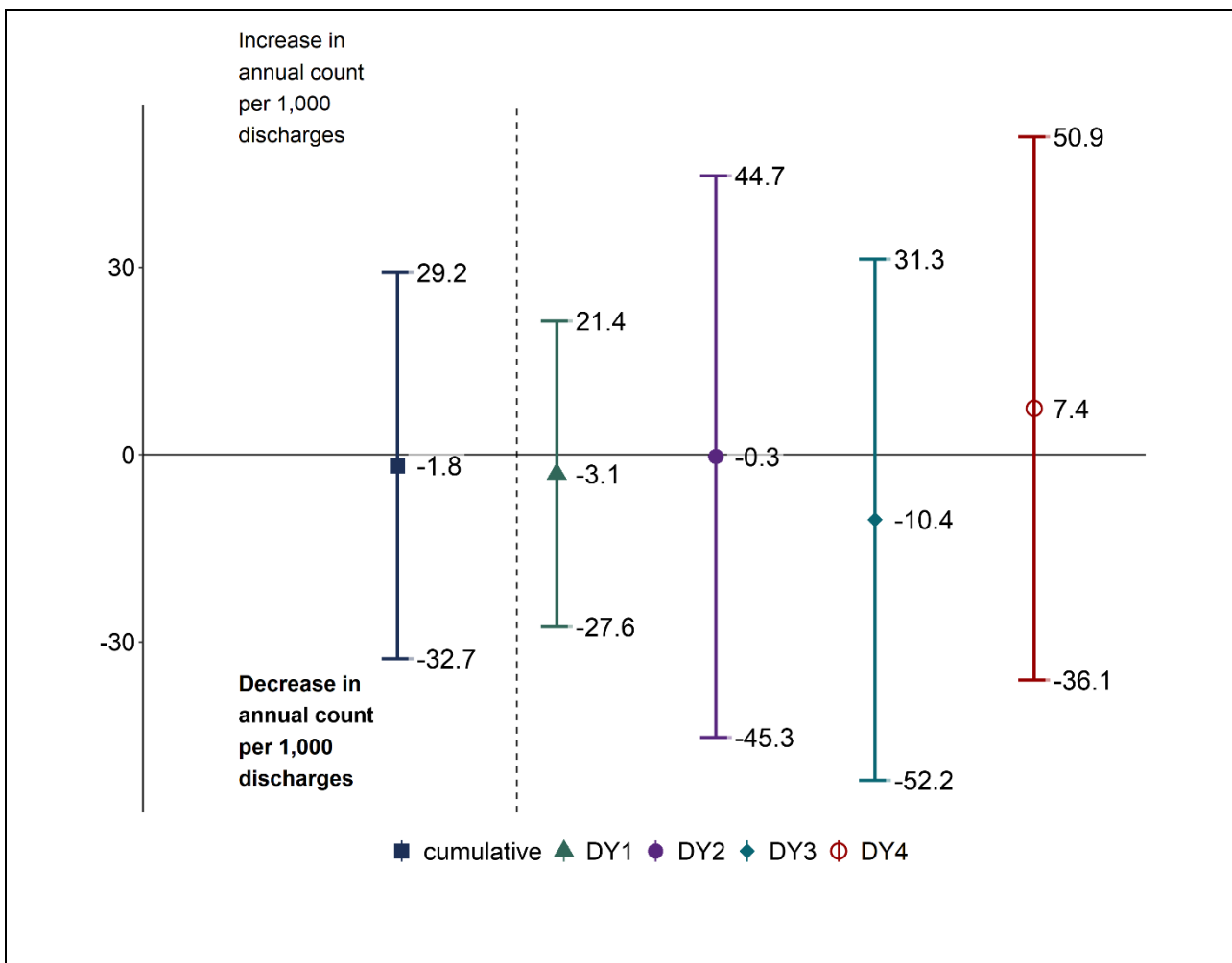
DY = demonstration year.
NOTE: 95 percent confidence intervals are shown. The expected direction of effect is a decrease.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

Figure 5-7
Cumulative and annual demonstration effects on ACSC admissions (overall), in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020
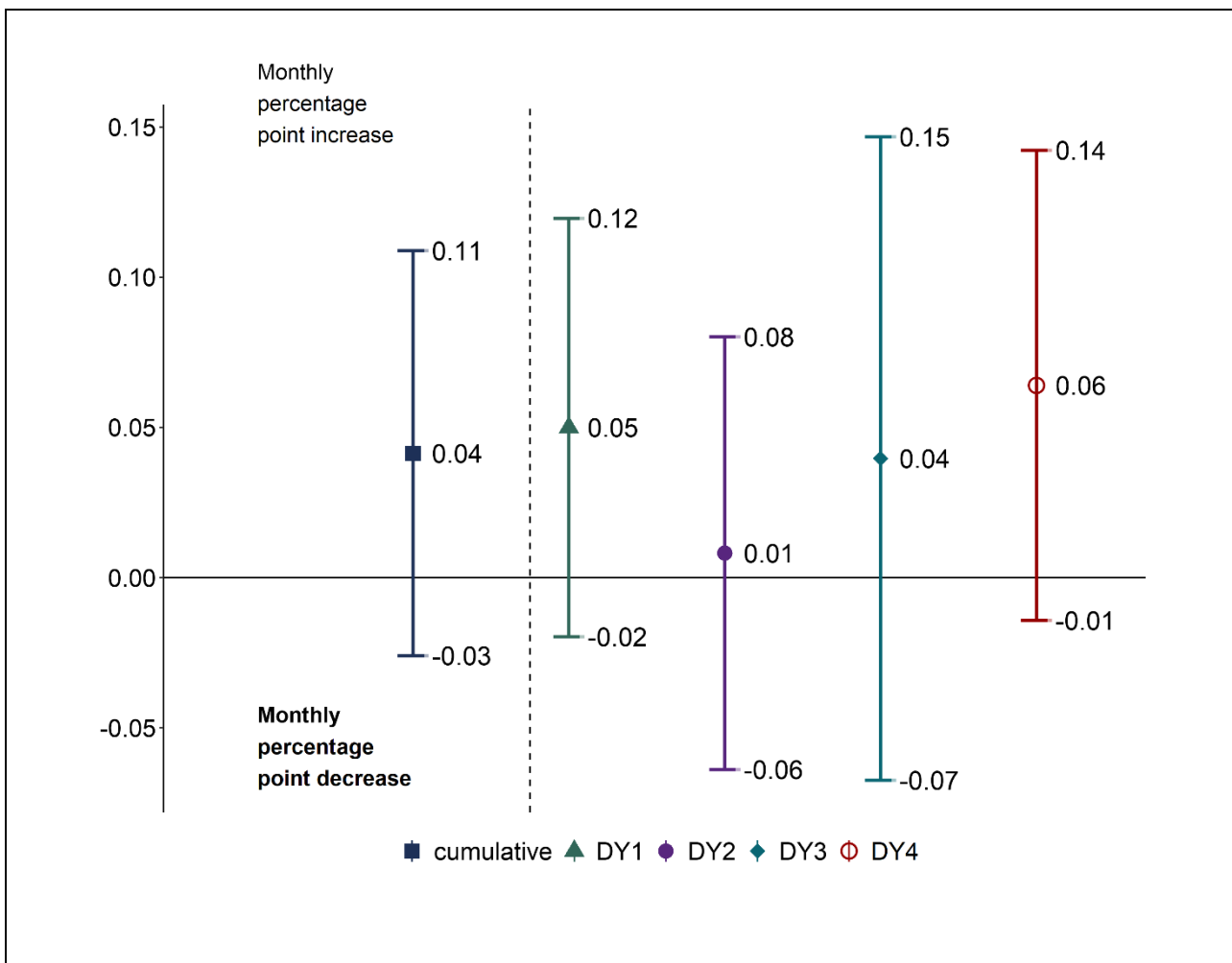
ACSC = ambulatory care sensitive condition; DY = demonstration year.
NOTE: 95 percent confidence intervals are shown. The expected direction of effect is a decrease.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

**Figure 5-8
Cumulative and annual demonstration effects on ACSC admissions (chronic), in Rhode
Island, demonstration years 1–4, July 1, 2016–December 31, 2020**
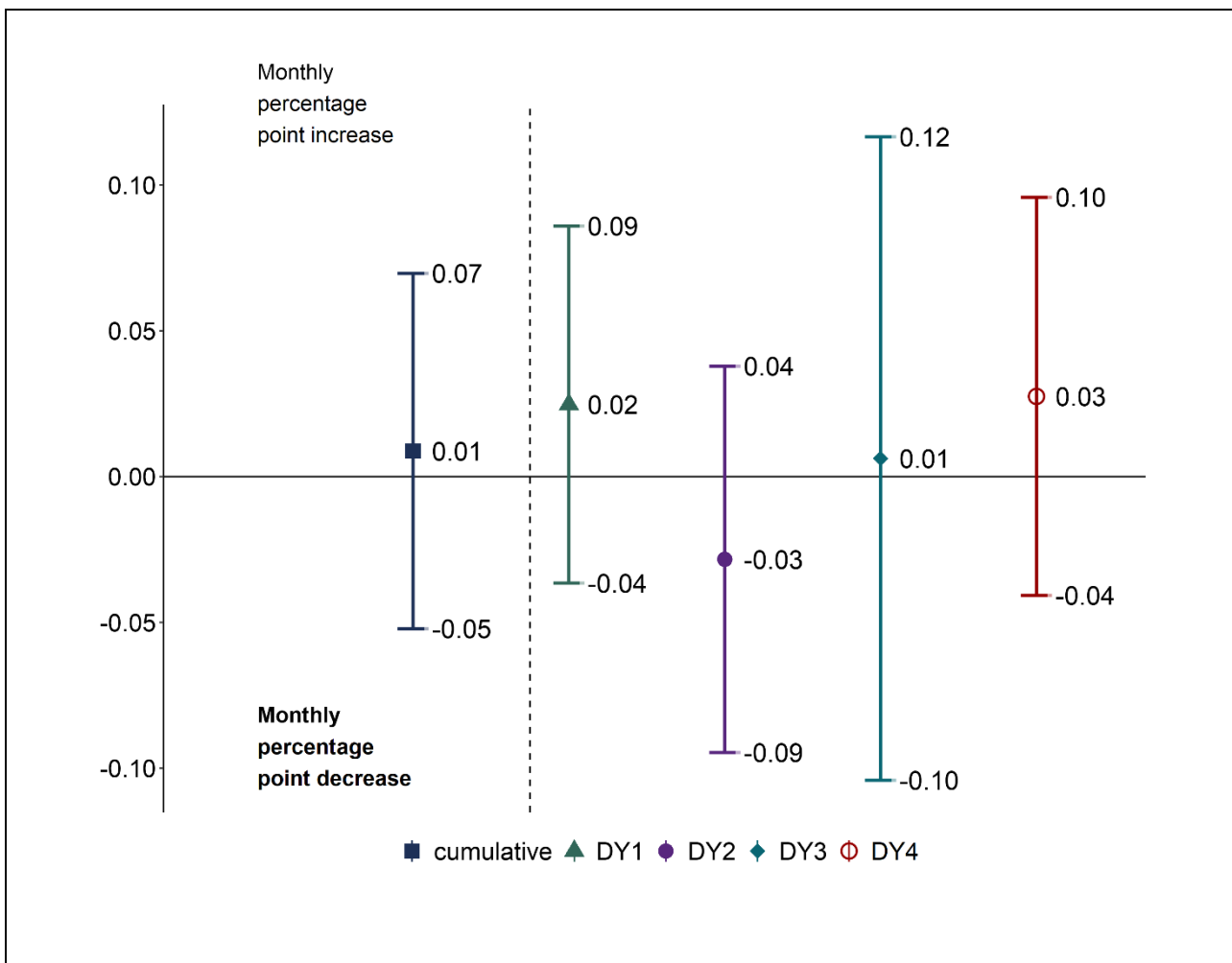
ACSC = ambulatory care sensitive condition; DY = demonstration year.
NOTE: 95 percent confidence intervals are shown. The expected direction of effect is a decrease.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

Figure 5-9
Cumulative and annual demonstration effects on preventable ED visits, in Rhode Island,
demonstration years 1–4, July 1, 2016–December 31, 2020
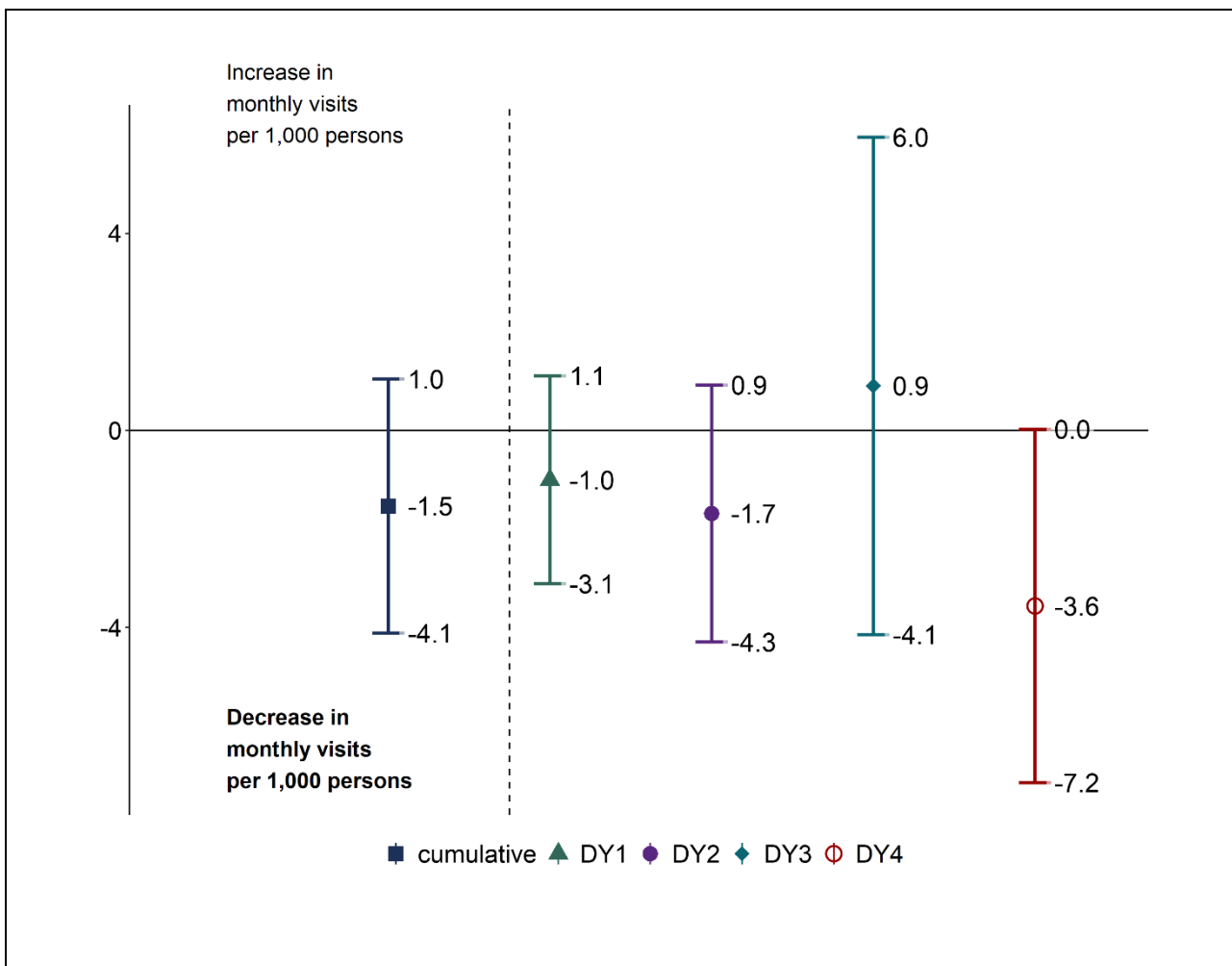
DY = demonstration year; ED = emergency department.
NOTE: 95 percent confidence intervals are shown. The expected direction of effect is a decrease.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

Figure 5-10
Cumulative and annual demonstration effects on 30-day follow-up post mental health discharge, in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020
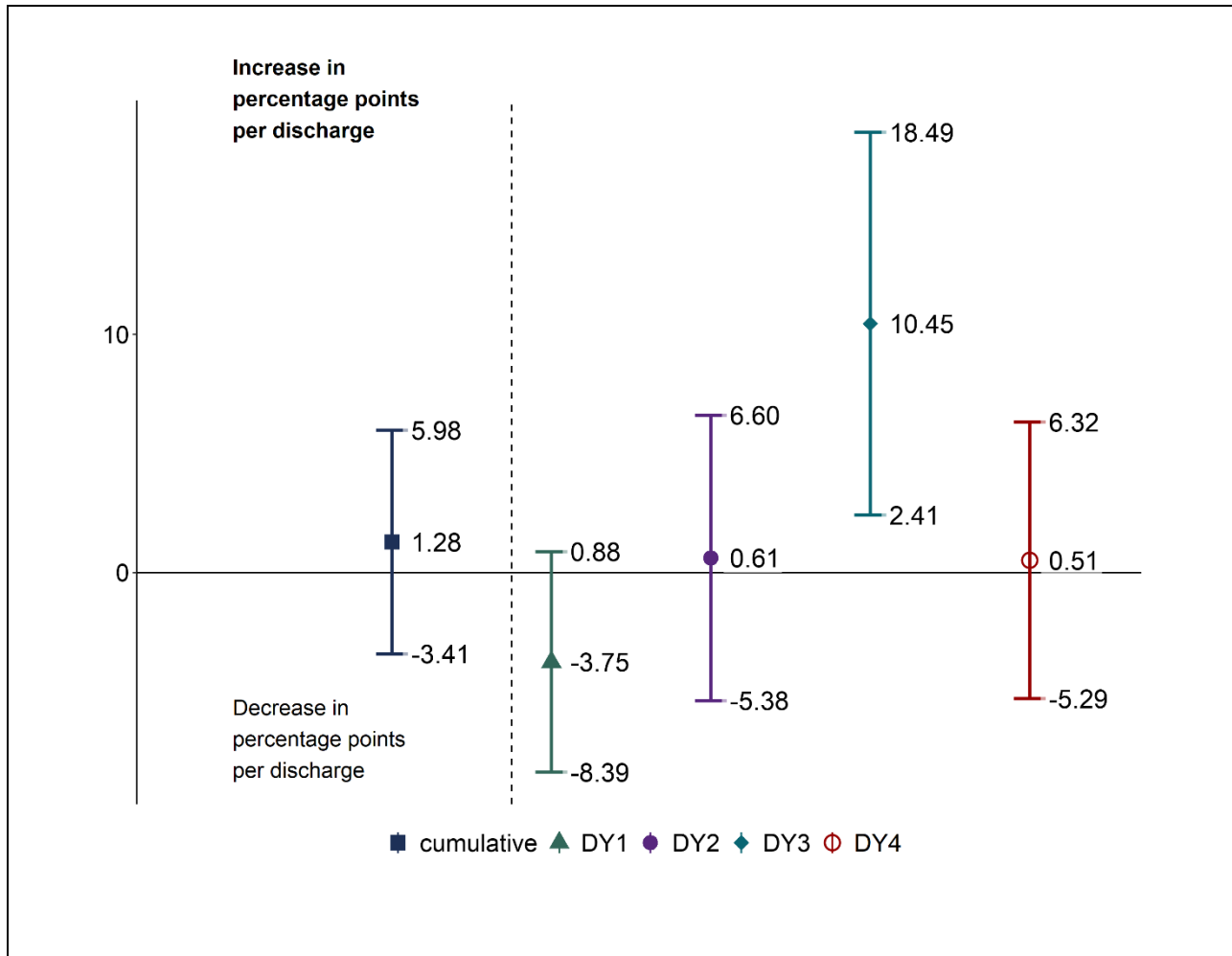
DY = demonstration year.
NOTE: 95 percent confidence intervals are shown. The expected direction of effect is an increase.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

See *Appendix E, Tables E-4* through *E-8*, for unadjusted descriptive statistics for all service use and quality of care measures for the demonstration eligible population and for demonstration enrollees (i.e., beneficiaries who enrolled in MMPs).

5.4 Demonstration Impact on Special Populations

> The demonstration was associated with a greater decrease in the probability of any monthly ED visit among LTSS users than among those not using LTSS relative to the comparison group.

> The demonstration impacted beneficiaries with SPMI differently than those without SPMI. The demonstration effects for beneficiaries with SPMI were a decrease in the probability of any SNF admission, an increase in the probability of any ACSC admission (overall), and an increase in the number of all-cause 30-day readmissions, relative to the demonstration effect for those without SPMI.

Improved coordination and integration of LTSS and behavioral health services is a key feature of this demonstration. It is expected that the demonstration may uniquely impact service utilization and quality of care among eligible beneficiaries with LTSS use or who have SPMI, relative to non-LTSS users and those without SPMI (see group definitions in *Appendix D*). The special population analyses indicate that the demonstration impacts were slightly more favorable for LTSS users and mixed for beneficiaries with SPMI, relative to the demonstration impacts among those without LTSS use and those without SPMI (see *Tables E-2* and *E-3* in *Appendix E*).

In addition to these populations of focus, other subpopulations examined included those who were enrolled and non-enrolled. See *Tables E-*7 and *E-8* in *Appendix E* for unadjusted descriptive statistics for demonstration enrollees and non-enrollees.

Additionally, further analyses were conducted to examine unadjusted service utilization results by racial and ethnic groups among the eligible population for select utilization measures: inpatient admissions, ED visits (without subsequent inpatient admission), physician E&M visits, outpatient therapy (physical therapy, occupational therapy, and speech therapy), and hospice use (see *Figures E-1, E-2,* and *E-3* in *Appendix E*).

5.4.1 Beneficiaries Receiving Long-Term Services and Supports

As indicated in *Table D-1* in *Appendix D*, about 12.3 percent of the demonstration eligible population in demonstration year 4 had any LTSS use. The demonstration impacted one service utilization measure more favorably for those with LTSS use than for those with no LTSS use (see *Table 5-3*). Specifically, the difference in the cumulative demonstration effect on the probability of any monthly ED visit for beneficiaries with LTSS use was a 0.85 percentage point decrease, relative to the demonstration effect for beneficiaries without LTSS use.

There are a couple factors that may help explain a greater decrease in ED use among LTSS users than among non-LTSS users. First, the Rhode Island demonstration provided more intensive case management services for community-based enrollees with LTSS use. Care plans were developed and led by a lead care manager, who was required to have a clinical background (see *Section 3.3.2, Care Planning*), whereas enrollees residing in the community without LTSS

needs were classified as lower-risk and had less intensive care-management services. Second, the introduction of MLTSS for dually eligible beneficiaries in Rhode Island may have contributed to greater decreases in ED use in the predemonstration period among LTSS users in the demonstration group, relative to LTSS users in the comparison group (results not shown). Our findings that the demonstration was associated with a greater decrease in ED use among those with LTSS, relative to the those without LTSS use, may be overestimated and to some extent reflect a continuation of trends in ED use that occurred prior to the start of the demonstration.

See ***Table E-2*** in ***Appendix E*** for estimates of the demonstration effect for LTSS users and non-LTSS users in each demonstration year.

**Table 5-3
Cumulative demonstration effect on service utilization and quality of care measures,
beneficiaries with LTSS use versus those without LTSS use in Rhode Island, demonstration
years 1–4, July 1, 2016–December 31, 2020**

Measure	Special population	Demonstration effect relative to the comparison group	Relative difference (%)	p-value	95% confidence interval	Difference in demonstration effect (LTSS versus non-LTSS)
Service Utilization Measures						
Monthly probability of any inpatient admission (%)	LTSS	–0.08	NS	0.6328	–0.43, 0.26	–0.15
	Non-LTSS	0.06	NS	0.6056	–0.17, 0.30	
Monthly probability of any ED visit (%)	LTSS	–0.70	–12.6	0.0005	–1.10, –0.30	–0.85***
	Non-LTSS	0.15	NS	0.2942	–0.13, 0.44	
Monthly number of physician E&M visits per 1,000 beneficiaries	LTSS	5.29	NS	0.8986	–75.99, 86.57	–28.95
	Non-LTSS	34.23	5.4	0.0040	10.92, 57.55	
Monthly probability of any SNF admission (%)	LTSS	0.14	NS	0.0597	–0.01, 0.29	0.10
	Non-LTSS	0.04	NS	0.1006	–0.01, 0.09	
Quality of Care Measures						
Monthly number of preventable ED visits per 1,000 beneficiaries	LTSS	–4.47	–14.0	0.0131	–8.00, –0.94	–4.01
	Non-LTSS	–0.46	NS	0.7909	–3.87, 2.95	
Monthly probability of any ACSC admission, overall (%)	LTSS	0.07	11.7	0.0044	0.02, 0.12	0.04
	Non-LTSS	0.04	NS	0.5218	–0.07, 0.14	
Monthly probability of any ACSC admission, chronic (%)	LTSS	0.04	NS	0.1333	–0.01, 0.09	0.04
	Non-LTSS	–0.00	NS	0.9768	–0.10, 0.09	
Probability of 30-day follow-up after mental health discharge (%)	LTSS	–6.26	NS	0.3720	–20.01, 7.49	–7.38
	Non-LTSS	1.11	NS	0.7090	–4.74, 6.97	
Number of all-cause 30-day readmissions per 1,000 discharges	LTSS	20.51	NS	0.2497	–14.41, 55.44	31.53
	Non-LTSS	–11.02	NS	0.6174	–54.27, 32.22	

*p<0.05; **p<0.01; ***p<0.001
ACSC = ambulatory care sensitive condition; ED = emergency department; E&M = evaluation and management; LTSS = long-term services and supports; NS = not statistically significant; SNF = skilled nursing facility.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

5.4.2 Beneficiaries with Serious and Persistent Mental Illness

As indicated in **Table D-1** in **Appendix D**, about 51.1 percent of the demonstration eligible population in demonstration year 4 had an SPMI. On some measures, the demonstration impacted those with SPMI differently than those without SPMI (see **Table 5-4**). The demonstration effect for those with SPMI on the probability of any SNF admission was a 0.18 percentage point decrease, relative to the demonstration effect for those without SPMI. The demonstration effect for those with SPMI was an increase of 0.10 percentage points in the monthly probability of any ACSC admission (overall) and an increase of 48.54 readmissions per 1,000 discharges in the number of all-cause 30-day readmissions, relative to the demonstration effect for those without SPMI.

There were no demonstration impacts on SNF use, ACSC admissions, or 30-day readmission for the overall population (see **Tables 5-1** and **5-2**), as well as independently for the SPMI and non-SPMI subpopulations (see **Table 5-4**). Thus, the estimates for these outcomes should be interpreted with caution. See **Table E-3** in **Appendix E** for estimates of the demonstration effect for beneficiaries with SPMI and those without SPMI in each demonstration year.

Table 5-4
Cumulative demonstration effect on service utilization and quality of care measures, beneficiaries with SPMI versus those without SPMI in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Special population	Demonstration effect relative to comparison group	Relative difference (%)	p-value	95% confidence interval	Difference in demonstration effect (SPMI versus non-SPMI)
Service Utilization Measures						
Monthly probability of any inpatient admission (%)	SPMI	−0.21	NS	0.2537	−0.58, 0.15	−0.20
	Non-SPMI	−0.02	NS	0.8783	−0.22, 0.19	
Monthly probability of any ED visit (%)	SPMI	−0.06	NS	0.7863	−0.50, 0.38	0.04
	Non-SPMI	−0.10	NS	0.3389	−0.29, 0.10	
Monthly number of physician E&M visits per 1,000 beneficiaries	SPMI	21.01	NS	0.2394	−13.99, 56.02	−1.10
	Non-SPMI	22.11	3.9	0.0487	0.13, 44.09	
Monthly probability of any SNF admission (%)	SPMI	−0.12	NS	0.1016	−0.27, 0.02	−0.18*
	Non-SPMI	0.05	NS	0.0941	−0.01, 0.12	

(continued)

Table 5-4 (continued)
Cumulative demonstration effect on service utilization and quality of care measures, beneficiaries with SPMI versus those without SPMI in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Special population	Demonstration effect relative to comparison group	Relative difference (%)	p-value	95% confidence interval	Difference in demonstration effect (SPMI versus non-SPMI)
Quality of Care Measures						
Monthly number of preventable ED visits per 1,000 beneficiaries	SPMI	−1.39	NS	0.4679	−5.15, 2.36	−0.03
	Non-SPMI	−1.36	−6.6	0.0444	−2.68, −0.03	
Monthly probability of any ACSC admission, overall (%)	SPMI	0.09	NS	0.0941	−0.02, 0.20	0.10*
	Non-SPMI	−0.01	NS	0.5779	−0.05, 0.03	
Monthly probability of any ACSC admission, chronic (%)	SPMI	0.05	NS	0.4298	−0.07, 0.17	0.08
	Non-SPMI	−0.03	NS	0.0695	−0.06, 0.00	
Number of all-cause 30-day readmissions per 1,000 discharges	SPMI	15.80	NS	0.3763	−19.20, 50.80	48.54*
	Non-SPMI	−32.74	NS	0.1001	−71.76, 6.28	

*p<0.05; **p<0.01; ***p<0.001
ACSC = ambulatory care sensitive condition; ED = emergency department; E&M = evaluation and management; NS = not statistically significant; SNF = skilled nursing facility; SPMI = serious and persistent mental illness.
NOTES: Probability of 30-day follow-up after mental health discharge is estimated on only those with a hospitalization for SPMI; the difference-in-differences estimate is reported in **Table 5-2.**
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

Demonstration Impact on Cost Savings

> Our results show increases in Medicare Parts A and B costs over the first 4 demonstration years ($83.99, PMPM) using a difference-in-differences analysis of beneficiaries eligible for the demonstration, relative to the comparison group.

6.1 Methods Overview

As part of the capitated financial alignment model, Rhode Island, CMS, and MMPs entered into a three-way contract to provide services to MMP enrollees. MMPs receive three separate, risk-adjusted prospective capitated payments. The first two payments are from the Medicare program (for Medicare Parts A and B, Medicare Part D), and the third comes from the state (for Medicaid services). To develop a Medicare Parts A and B capitated rate for the MMPs, CMS combined the Medicare FFS Standardized County Rates and the Medicare Advantage projected payment rates. Each component contributed to the final rate proportionally to the target population that would be enrolled in each program absent the demonstration.[33] CMS adjusts the Medicare component for each enrollee using CMS's hierarchical risk adjustment model to account for differences in the characteristics of enrollees. Additionally, CMS applies aggregate saving percentages to the rates. For further information on the rate development and risk adjustment process, see the Memorandum of Understanding, and the three-way contract on the Financial Alignment Initiative website.[34]

This section presents the Medicare Parts A and B cost savings analysis for demonstration years 1 to 4 (July 2016 to December 2020). We used an intent to treat (ITT) analytic framework that includes beneficiaries eligible for the demonstration rather than only those who enrolled. The ITT framework alleviates concerns of selection bias, supports generalizability of the results among the demonstration eligible population, and mimics the real-world implementation of the demonstration. For this analysis, enrolled beneficiaries account for approximately 39 percent of all eligible beneficiaries (including FFS beneficiaries, MMP enrollees, and MA enrollees in the denominator) as of demonstration year 4 (the enrollment percentage varied somewhat across demonstration years).[35] The remaining 61 percent of those in the demonstration group are beneficiaries who are eligible for an MMP but not enrolled (non-enrollees). Descriptive results for the entire eligible population are provided in *Appendix F* (see *Tables F-4* through *F-11*). Results from a separate analysis, using a more restricted definition of MMP enrollees and their comparison group counterparts, are included in *Appendix F* (see *Table F-14*).

To evaluate the cost implications of the demonstration, RTI performed a DinD analysis of Medicare Parts A and B expenditures that compares demonstration eligible beneficiaries who live in an area where a participating health plan operates—the demonstration group—to those who meet the same eligibility criteria but live outside those operating areas—the comparison

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[33] [Joint Rate Setting Process for the Financial Alignment Initiative's Capitated Model (cms.gov)](#)
[34] For the MOU, see [https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/Downloads/RIMOU.pdf;](#) for the three-way contract (original), see [https://www.cms.gov/files/document/ricontract.pdf](#).
[35] The enrollment percentages reported in this section may be different than what was reported in *Section 3.2, Eligibility and Enrollment* because of the timing for completion and submitting the finder file versus the SDRS; and they may be different from those reported in *Section 5, Demonstration Impact on Service Utilization and Quality of Care* because of the inclusion of beneficiaries enrolled in Medicare Advantage.

group. The comparison group methodology is identical to the service utilization analyses (see *Appendix C* for details).

We made several adjustments to the monthly Medicare expenditures to ensure that observed expenditure variations are not due to differences in Medicare payment policies in different areas of the country or the construction of the capitation rates (see *Appendix F*). *Table F-2* in *Appendix F* summarizes each adjustment and the application of the adjustments to FFS expenditures or to the capitation rate.

6.2 Demonstration Impact on Medicare Parts A and B Costs

Table 6-1 shows the magnitude of the DinD estimate of the cumulative demonstration impact on Medicare Parts A and B cost, both in absolute dollar amount and relative to the adjusted mean expenditure level in the comparison group during the demonstration period. The adjusted mean for monthly expenditure increased from the predemonstration period to the demonstration period in both the demonstration and comparison groups, though it increased by a smaller amount in the comparison group than in the demonstration group. The cumulative DinD estimate of $83.99 PMPM, which amounts to a relative difference of 7.16 percent of the adjusted mean expenditure for the comparison group during the demonstration period, is statistically significant (p = 0.0055). This suggests that overall, the Rhode Island demonstration was associated with statistically significant increases relative to the comparison group.

Table 6-1
Cumulative demonstration impact on monthly Medicare Parts A and B costs in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Group	Adjusted mean for predemonstration period ($)	Adjusted mean for demonstration period ($)	Adjusted coefficient DinD ($)	Relative difference (%)	*p*-value
Demonstration	1,060.09	1,185.55	83.99	7.16	0.0055
Comparison	1,122.86	1,173.85			

DinD = difference-in-differences.
SOURCE: RTI analysis of Medicare claims.

In the current report, we were able to use the Medicaid MAX and TAF enrollment and eligibility files to identify and remove beneficiary-month observations from the demonstration and comparison group that were not eligible for FAI due to meeting the medically needy criteria. This exclusion resulted in approximately 41 to 47 percent and 5 to 12 percent of beneficiaries in the comparison group and demonstration group, respectively, to be excluded per year. In this way, the sample more accurately reflects the demonstration eligible population than the one reported in the Combined First and Second Evaluation Report. Despite the change in the sample, the overall implications for the impact analysis remain the same.

In addition, we estimated the effect of the demonstration in each demonstration year. As shown in *Figure 6-1*, the coefficients for demonstration years 1, 3, and 4 were statistically significant, indicating an increased Medicare Parts A and B cost of $54.94, $117.31, and $140.19 PMPM, respectively, relative to the comparison group. The demonstration had no statistically

significant effect in demonstration year 2 (as shown by the confidence interval crossing $0), though the direction of the coefficient is consistent with the estimates for the other years. Note that these estimates rely on the ITT analytic framework, only account for Medicare Parts A and B cost, and use the capitation rate for the MMP rather than the actual amount the plan paid for services.

Figure 6-1
Cumulative and annual demonstration effects on monthly Medicare Parts A and B costs in Rhode Island, demonstration years 1-4, July 1, 2016–December 31, 2020
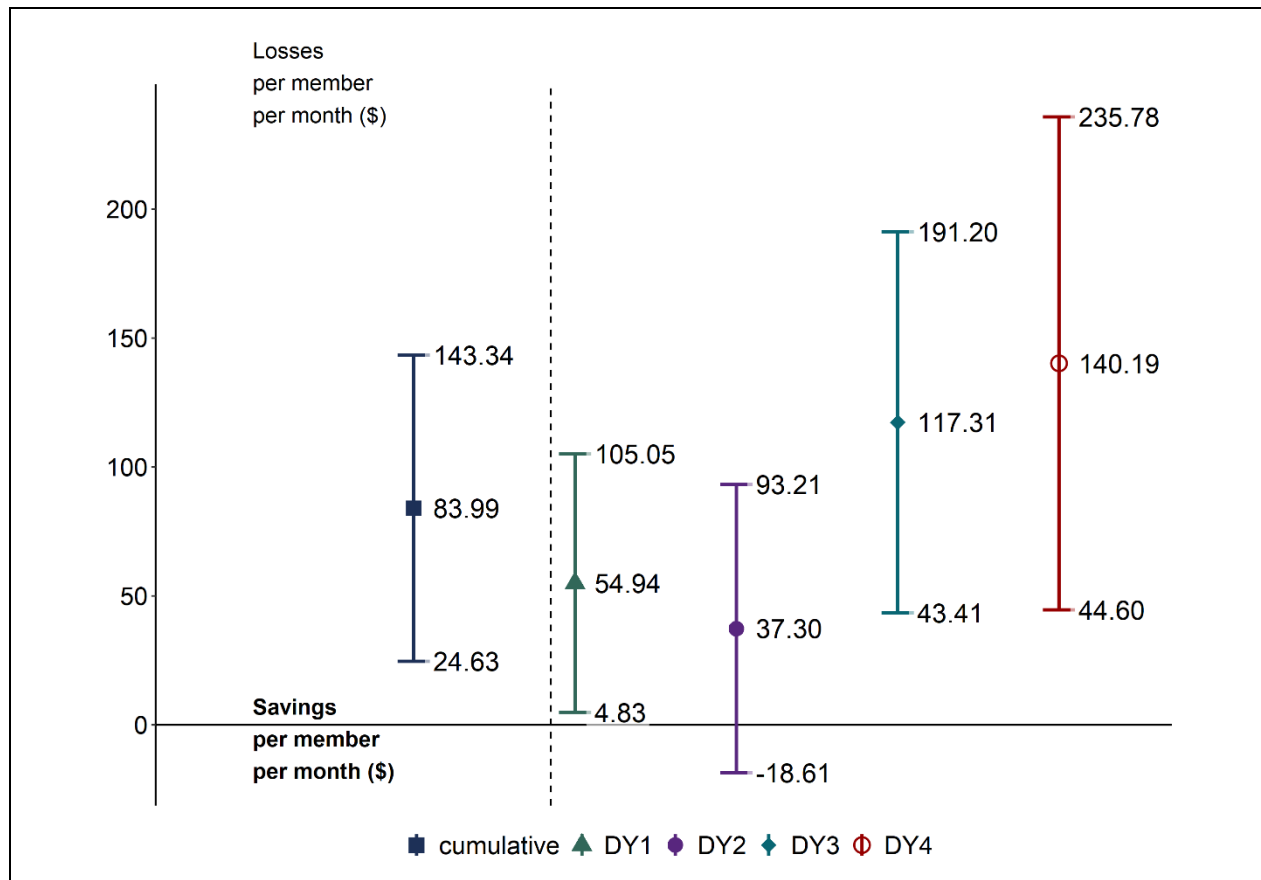
DY = demonstration year.
NOTE: 95 percent confidence intervals are shown. "Losses"/"**Savings**" indicate increased/decreased costs for eligible beneficiaries in the demonstration group, relative to the comparison group.
SOURCE: RTI analysis of Medicare claims.

To better understand these results, we conducted additional descriptive analyses. The details of these analyses are provided in *Appendix G*, along with an interpretation and discussion of the results. In the first analysis we compared MMP rates with the expected FFS expenditures that would have otherwise occurred for the enrolled population, in demonstration years 1 and 4. The extent to which the MMP capitated payment rates are set higher or lower relative to what CMS would have paid under traditional FFS Medicare could affect the impact estimates. Overall, we found that MMP rates are higher than enrollees' anticipated FFS experience in both demonstration year 1 and demonstration year 4 (see *Appendix G, Tables G-4* and *G-5*). The PHE

in 2020 could be a contributor to this difference between the RTI normalized FFS rate (which reflects actual 2020 utilization and expenditures) and the MMP rates in demonstration year 4, which are set prospectively (e.g., 2020 rates are set in 2019) and reflect historical costs.

We also conducted an analysis of spending and hierarchical condition category (HCC) characteristics among the enrolled population during the predemonstration period. We found that enrollees had lower costs and were healthier than the demonstration eligible but never enrolled (see *Appendix G*, *Figures G-4* and *G-5*). Finally, we graphed cross-sectional annual PMPM amounts for the demonstration eligible not enrolled, demonstration enrolled, and the comparison group to better understand the DinD estimates, especially in demonstration year 3 and 4 (see *Appendix F*, *Figure F-2*). We found steeper increases in PMPM amounts for the demonstration enrollees in demonstration year 3, than among either the demonstration eligible but not enrolled (ENE) group or the comparison group.

Conclusions

7.1 Implementation Successes, Challenges, and Lessons Learned

During the reporting period, EOHHS, the MMP, and stakeholders such as the Implementation Council and the ombudsman services program continued to voice strong support for an integrated system of care as the best option for providing care to dually eligible beneficiaries. Although there have been differences of opinions and perspectives around the specific details of operational and financial design, all reported that the integration of Medicare and Medicaid services has been successful in terms of beneficiary experience and in meeting the complex needs of dually eligible beneficiaries.

The State and MMP believed that this care model was especially advantageous during the PHE because enrollees benefitted from care management and other supports offered by the MMP which were not available to beneficiaries in Rhode Island's Medicaid FFS system. In 2021, more than three-quarters (78 percent) of CAHPS respondents reported being highly satisfied with the MMP—the highest percentage since the start of the demonstration. In 2022, the MMP offered additional benefits to attract and retain enrollees such as gym memberships, food benefits, and companionship services to help mitigate social isolation.

Although the demonstration has a single MMP, enrollment exceeded 40 percent of eligible beneficiaries from 2017 through 2019, with slightly lower but stable enrollment of approximately 35 percent in 2020 and 2021. In 2021, EOHHS and CMS began to passively enroll a small number of beneficiaries per month into the MMP for the first time since 2018, to offset a decline in enrollment. Also in 2021, the MMP restructured its processes to focus resources on contacting hard-to-reach enrollees and providing them with initial care assessments so that they can fully access care management services.

Aspects of the ICI demonstration financing model continued to be challenging. Except for 2020, the MMP described significant losses. In 2021, the key driver of loss was a change in rate methodology that reduced the Medicaid portion of the capitation rate. Although EOHHS acknowledged that the rates did not adequately account for administrative and other costs required by the demonstration, officials said they were prohibited from providing relief due to Federal requirements limiting the overall cost of the demonstration to those costs that would have been incurred absent the demonstration. As in prior years, EOHHS continued to express concerns as to whether the demonstration's alignment of savings between the State and CMS adequately recognized Medicaid's contribution in reducing Medicare services and costs. However, our impact analyses show little impact on the utilization of Medicare covered services and no Medicare savings realized.

As the ICI demonstration transitions to a FIDE-SNP model as contemplated by Federal guidance, both EOHHS and the MMP hoped to address some of their respective financing concerns. EOHHS remained interested in attracting other health plans to participate in future integrated care models.

In reflecting on the demonstration overall, EOHHS described it as a significant learning opportunity, especially as it related to the technical complexities of integrating Medicare and Medicaid operations and systems. EOHHS believed that its experience with the demonstration

would benefit the State as it transitions into its next phase of integrated care. EOHHS expressed no regrets about its decision to participate in the FAI opportunity because the ICI demonstration has benefitted beneficiaries in ways that would not have been possible otherwise.

7.2   Demonstration Impact on Service Utilization and Costs

Cumulative demonstration impact analyses on service utilization and quality of care measures over demonstration years 1 and 4 reveal that the demonstration had limited to no impact on service utilization and quality of care measures.

As described in greater detail in ***Section 10.2.1, Cumulative Impact over Demonstration Years 1 and 4,*** the favorable impacts on physician visits should be interpreted with caution. It is unlikely these results are evidence of improvements in outreach to enrollees and outpatient management of chronic conditions due to the non-parallel outcome trends in the predemonstration period. The introduction of Rhody Health Options (RHO) in 2013, a managed Medicaid health plan with LTSS services for the dually eligible population,[36] may have contributed to an overestimation of our findings on E&M visits by facilitating greater increases in the predemonstration and demonstration periods than in the comparison group. Additionally, implementation challenges described in ***Section 5.1.4, Implementation Experience with Care Planning*** in the [Combined First and Second Evaluation Report](#) may explain why, regardless of improvements in physician E&M visits, the demonstration did not have a broad impact on reducing the use of acute services or improving most quality of care measures, relative to the comparison group.

The demonstration had a favorable decrease in the monthly percent of beneficiaries with any ED use among those using LTSS services, relative to those without LTSS use. Enrollees with LTSS use were targeted for more intensive care management services, which may have facilitated this favorable finding despite implementation challenges reported early in the demonstration. Even so, these results may also be confounded by the implementation of MLTSS for the Rhode Island dually eligible population in 2013 by over-estimating the decline in ED use among those with LTSS that is attributable to the demonstration.[37]

The mixed findings among those with SPMI should also be interpreted with caution. Despite findings showing a greater decrease in SNF use, and greater increases in ACSC admissions (overall) and 30-day readmission, there were not demonstration impacts independently for either the SPMI or non-SPMI populations.

Finally, as shown in ***Appendix G, Supplemental Analysis***, Rhode Island demonstration enrollees had lower inpatient, SNF use, and mortality than the eligible non-enrolled population during the predemonstration period. The population enrolling in the demonstration were less sick and used less services than the non-enrolled population, suggesting there may have been less opportunity to further lower the trajectory of utilization for acute services for enrollees.

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[36] See ***Section 2.2, Overview of State Context*** in the [Combined First and Second Evaluation Report](#).
[37] Weighted means statistics show a greater decline in ED use among LTSS users in the demonstration during the predemonstration period than LTSS users in the comparison group.

The cumulative cost analysis found a statistically significant cost increase to the Medicare program over the 4 demonstration years. The analysis of individual demonstration years also found increased costs (statistically significant) to the Medicare program for demonstration years 1, 3, and 4. The cost analyses consider the costs of Medicare Parts A and B through FFS expenditures, and capitation rates paid to MMP plans and MA plans. Capitation rates do not provide information on how much the plan paid for services and are based on characteristics of the beneficiary. Thus, capitation rates are not necessarily linked to actual service utilization. Further, the cost analyses do not consider Part D or Medicaid costs.

An assumption as part of the ITT study design is that enrollment in the demonstration will be large enough to statistically observe a change in the monthly average PMPM, relative to the comparison group. In Rhode Island enrollment was approximately 39 percent of the eligible demonstration population, so any potential savings might not be large enough to observe when averaged across the entire demonstration-eligible population. Moreover, *Appendix G, Figure G–4* shows that demonstration enrollees were less sick, relative the eligible non-enrolled group, which resulted in lower monthly spending for the enrolled population from the predemonstration to the demonstration periods (see *Appendix G, Figure G-5*). With a healthier enrolled population using fewer services, it may be more difficult to achieve savings through care management.

We also graphed cross-sectional annual PMPM amounts for the demonstration eligible not enrolled, demonstration enrolled, and the comparison group to better understand the DinD estimates, especially in demonstration year 3 and 4 (see *Appendix F, Figure F-2*). We found steeper increases in PMPM amounts for the demonstration enrollees in demonstration year 3 than among either the demonstration ENE or the comparison group, and steeper increases among demonstration enrollees and demonstration ENE in demonstration year 4, than in the comparison group. This suggests that the payments for demonstration enrollees contributed to the results observed in demonstration year 3 and demonstration year 4.

7.3   Summary

The ICI demonstration, launched in 2015, was part of a broader State initiative focused on integrated care. Based on implementation experience, modifications were made in operational requirements and processes, but these did not alter the fundamental design of the ICI demonstration's integrated model of care. Through passive enrollment and retention strategies, enrollment reached 13,000 in December 2021, representing 35 percent of the eligible population. Although typically over one-third of enrollees could not be reached within 90 days, the timeline for completing assessments, in 2021, the MMP restructured its processes to focus resources on contacting hard-to-reach enrollees to more effectively connect them to care management.

The demonstration's integration of Medicare and Medicaid services provided enrollees with a single card and point of contact; zero copayments; access to supplemental benefits; and coordination of primary care, acute care, behavioral health services, and LTSS. Implementing the ICI demonstration was a heavy lift for the State and the MMP. Key challenges at the State level included a lack of dedicated implementation funding; the need for new eligibility and enrollment systems and processes; and the learning curve associated with gaining knowledge about Medicare. The MMP also had not previously operated as an MA plan, which highlighted the need of ensuring Medicare expertise at the State and MMP levels.

Over time, the demonstration had experienced changes in leadership and staff at the State, CMS, and the MMP, but support for an integrated care model remained unchanged. Notably, the State, CMS, ICI plan, and other stakeholders reported that the overall beneficiary experience under the demonstration has been positive and a key success of the demonstration. Most enrollees who responded to CAHPS surveys and those who participated in beneficiary interviews expressed high rates of satisfaction with their MMP and the care coordination provided. This favorable perception was also shared by Implementation Council members and ICI ombudsman.

Despite the widely perceived benefits of the demonstration for beneficiaries, cumulative demonstration impact analyses over demonstration years 1 through 4 shows limited to no impact on service utilization and quality of care measures. Favorable increases in physician E&M visits were likely overestimated due to non-parallel predemonstration trends between the comparison and demonstration groups. The opportunity to positively impact quality of care and service utilization measures may have also been mitigated by (1) enrollment of a generally healthier population who used fewer services, and (2) the less intensive care management provided to community dwelling enrollees without LTSS needs or otherwise determined to be high risk. Finally, the State's MLTSS program, which operated from 2013–2019 may have caused favorable trends in outcomes prior to the start of the demonstration; thus there may have been less room for improvement on high cost services in the demonstration eligible population.

The demonstration was associated with an increase in Medicare costs over the first 4 years of the demonstration. Factors other than demonstration effectiveness, such as favorable selection into the demonstration and MMP rates, may have contributed to this cost finding.

After engaging stakeholders, including the Implementation Council, the State filed a Transition Plan in September 2022 for the ICI demonstration consistent with the CMS Final Rule. The plan sought a 2-year extension[38] and set forth a high-level overview of an implementation plan and timeline for transitioning to a Fully Integrated Dual Eligible Special Needs Plan (FIDE-SNP). Looking forward, the State and MMP view this as an opportunity to address financing and administrative challenges of the ICI demonstration while retaining the person-centered, integrated care model, widely considered the centerpiece of the demonstration's design.

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[38] CMS and Rhode Island updated the three-way contract in August 2022 to extend the demonstration through December 31, 2025

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Appendix A
Data Sources

We used the following data sources to prepare this report.

Key informant interviews. The RTI evaluation team conducted virtual site visits in Rhode Island in 2020, 2021, and 2022. The team interviewed the following individuals: MMP, State, and CMS officials, Implementation Council members, and beneficiary advocates. To monitor demonstration progress, the RTI evaluation team also engaged in periodic phone conversations with the Rhode Island Executive Office of Health and Human Services (EOHHS) and CMS. These might have included discussions about new policy clarifications designed to improve plan performance, quality improvement work group activities, and contract management team actions.

Beneficiary interviews. RTI conducted 15 individual interviews with beneficiaries enrolled in the ICI demonstration in Rhode Island. The interviews took place between August 2022 and October 2022. Three of the 15 interviews were conducted in Spanish. Additional Spanish speakers elected to have the interviews in English.

Surveys. Medicare requires all Medicare Advantage (MA) plans, including Medicare-Medicaid Plans, to conduct an annual assessment of beneficiary experiences using the Medicare Advantage and Prescription Drug Plan Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey instrument. This report includes survey results for a subset of the 2018through 2021 survey questions. In response to the PHE, CMS did not require MA plans, including MMPs, to collect CAHPS data for 2020. Findings are available at the MMP level. Some CAHPS items are case mix-adjusted. Case mix refers to the respondent's health status and sociodemographic characteristics, such as age or educational level, that may affect the ratings that the respondent provides. Without an adjustment, differences between entities could be due to case mix differences rather than true differences in quality. The frequency count for some survey questions is suppressed because too few enrollees responded to the question. Comparisons with findings from all MA plans are available for core CAHPS survey questions.

Demonstration data. The RTI evaluation team reviewed data provided quarterly by Rhode Island through the State Data Reporting System (SDRS). These reports include eligibility, enrollment, opt-out, and disenrollment data, and information reported by Rhode Island on its integrated delivery system, care management, benefits and services, quality management, stakeholder engagement, financing and payment, and a summary of successes and challenges. This report also uses data for quality measures reported by Medicare-Medicaid Plans and submitted to CMS' implementation contractor, NORC.[39,40] Data reported to NORC include core quality measures that all Medicare-Medicaid Plans are required to report, as well as State-specific measures that the Integrated Care Initiative (ICI) plan is required to report. Due to reporting inconsistencies, plans occasionally resubmit data for prior demonstration years; therefore, the data included in this report are considered preliminary.

Demonstration policies, contracts, and other materials. The RTI evaluation team reviewed a wide range of demonstration documents, including demonstration and State-specific

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[39] Data are reported for 2014–2021.
[40] The technical specifications for reporting requirements are in the Medicare-Medicaid Capitated Financial Alignment Model Core Reporting Requirements.

information on the CMS website[41]; and other publicly available materials on the Rhode Island ICI webpage[42] and other pages in the EOHSS website.[43]

Complaints and appeals data. Complaint (also referred to as grievance) data are from three separate sources: (1) complaints from beneficiaries reported by Medicare-Medicaid Plans to EOHHS, and reported separately to CMS' implementation contractor, NORC[44], through Core Measure 4.2; (2) complaints received by EOHHS or 1-800-Medicare and entered into the CMS electronic Complaint Tracking Module (CTM); and (3) qualitative data obtained by RTI on complaints. Appeals data are generated by MMPs and reported to EOHHS and NORC, for Core Measure 4.2, and to the Medicare Independent Review Entity (IRE). This report also includes critical incidents and abuse data reported by the Rhode Island MMP to EOHHS and CMS' implementation contractor, NORC.

HEDIS measures. We report on a subset of Medicare Healthcare Effectiveness Data and Information Set (HEDIS) measures, a standard measurement set used extensively by managed care plans, that are required of all MA plans. Due to the PHE, in 2020 MA plans, including MMPs, were not required to report results for the 2019 measurement year.

Service utilization data. Evaluation Report analyses used data from many sources. First, the State provided quarterly finder files containing identifying information on all demonstration eligible beneficiaries in the demonstration period. Second, RTI obtained administrative data on beneficiary demographic, enrollment, and service use characteristics from CMS data systems for both demonstration and comparison group members. Third, these administrative data were merged with Medicare claims and encounter data, as well as the Minimum Data Set.

Medicaid service data on use of long-term services and supports (LTSS), behavioral health, and other Medicaid-reimbursed services were either not available or not useable in current form for the demonstration period and therefore are not included in this report.

Medicare and Medicaid Cost data. Two primary data sources were used to support the savings analyses, capitation payments and fee-for-service (FFS) Medicare claims. Medicare capitation payments paid to ICI plans during the demonstration period were obtained for all demonstration enrollees from CMS Medicare Advantage and Part D Inquiry System (MARx) data. The capitation payments were the final reconciled payments paid by the Medicare program after taking into account risk score reconciliation and any associated retroactive adjustments in the system at the time of the data pull (January 2023). Quality withholds were applied to the capitation payments (quality withholds are not reflected in the MARx data), as well as quality withhold repayments and risk corridor payments or recoupments based on data provided by CMS. Capitation payments and FFS Medicare claims were used to calculate expenditures for all comparison group beneficiaries, demonstration beneficiaries in the predemonstration period, and

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[41] https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/FinancialModelstoSupportStatesEffortsinCareCoordination.html

[42] https://eohhs.ri.gov/initiatives/integrated-care-initiative

[43] https://eohhs.ri.gov/

[44] The technical specifications for reporting requirements are in the Medicare-Medicaid Capitated Financial Alignment Model Core Reporting Requirements document.

demonstration eligible beneficiaries who were not enrolled during the demonstration period. FFS claims included all Medicare Parts A and B services. For a comprehensive list of adjustments please refer to ***Appendix F, Table F-1***.

Medicaid research identifiable files were used to identify and exclude beneficiaries in the demonstration group and in the comparison group who were not eligible for the demonstration. These Medicaid files were used to identify and exclude beneficiaries in both the demonstration group and the comparison group who were medically needy. The source of Rhode Island Medicaid data for all years used in this analysis was the Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF).

Appendix B
Rhode Island ICI MMP Performance on Select HEDIS Quality Measures, 2017–2021

Table B-1 provides 2017 through 2021 HEDIS performance data for the Rhode Island Integrated Care Initiative MMP. Using correlation coefficients that were 0.9 and above, or −0.9 and below, we have applied green and red shading to indicate where MMP performance over time for a given measure was steadily improving or worsening; green indicates a favorable trend, and red indicates an unfavorable one. We did not perform any testing for statistical significance for differences across years because of the limited data available. For measures without green or red shading, year-over-year MMP performance remained relatively stable between 2017 and 2021.

Neighborhood Health Plan of Rhode Island worsened performance over time on measures for breast cancer screening, engagement of alcohol and other drug (AOD) treatment (within initiation and engagement of AOD dependence treatment), and plan all-cause readmissions rates for ages 18–64.

Table B-1
**Rhode Island Integrated Care Initiative MMP performance on select HEDIS quality measures
for 2017–2021[1]**

Measure	National MA Plan Mean	Neighborhood Health Plan of Rhode Island (NHPRI)			
	(2021)	(2017)	(2018)	(2020)	(2021)
Adults' access to preventive/ambulatory health services	94.2	94.5	94.4	94.2	94.6
Adult BMI assessment[2]	N/A	N/A	95.4	—	—
Blood pressure control[3]	70.1	78.6	75.2	N/A	74.2
Breast cancer screening	68.3	N/A	69.1[R]	64.1[R]	63.8[R]
Colorectal cancer screening	68.6	N/A	66.4	60.8	69.6
Disease modifying anti-rheumatic drug therapy in rheumatoid arthritis[4]	N/A	83.1	85.9	84.6	—
Follow-up after hospitalization for mental illness (30 days)[5]	48.7	79.9	84.3	81.6	83.7
Antidepressant medication management					
Effective acute phase treatment[6]	79.5	77.9	72.3	76.5	74.9
Effective continuation phase treatment[7]	64.5	72.5	60.6	61.2	62.3
Care for older adults					
Advance care planning	N/A	39.7	62.5	69.6	71.5
Medication review	N/A	68.4	85.6	81.4	89.3
Functional status assessment	N/A	50.4	71.8	60.6	82.3
Pain assessment	N/A	65.2	89.1	77.4	91.5

(continued)

Table B-1 (continued)
Rhode Island Integrated Care Initiative MMP performance on select HEDIS quality measures
for 2017–2021[1]

Measure	National MA Plan Mean	Neighborhood Health Plan of Rhode Island (NHPRI)			
	(2021)	(2017)	(2018)	(2020)	(2021)
Comprehensive diabetes care					
Received Hemoglobin A1c (HbA1c) testing	93.7	93.2	91.2	87.4	89.9
Poor control of HbA1c level (>9.0%) (higher is worse)	24.1	33.6	28.0	30.9	24.7
Good control of HbA1c level (<8.0%)	66.0	53.5	60.3	56.7	66.7
Received eye exam (retinal)	70.7	75.2	75.9	69.3	75.3
Received medical attention for nephropathy	94.9	94.9	90.8	92.8	92.1
Blood pressure control (<140/90 mm Hg)	67.4	71.3	80.3	71.9	76.3
Initiation and engagement of alcohol and other drug (AOD) dependence treatment					
Initiation of AOD treatment [8]	33.7	42.0	38.2	40.6	36.3
Engagement of AOD treatment [9]	5.4	13.3R	11.6R	9.3R	8.1R
Plan all-cause readmissions (Observed-to-expected ratio[10])					
Age 18-64	1.07	0.75R	0.89R	1.21R	1.27R
Age 65+	1.10	0.92	1.04	1.48	1.38
Ambulatory care (per 1,000 members[11])					
Outpatient visits	N/A	7,990.3	8,364.2	—	—
Emergency department visits (higher is worse)	N/A	913.3	793.2	—	—

(continued)

Table B-1 (continued)
Rhode Island Integrated Care Initiative MMP performance on select HEDIS quality measures for 2017–2021[1]

— = not available, where the plan did not provide HEDIS data for this measure; AOD = alcohol and other drug; BMI = body mass index; HEDIS = Healthcare Effectiveness Data and Information Set; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; N/A = not applicable, where MA plans do not report such data, or where the number of enrollees in the MMP's HEDIS data available for inclusion in the measure was less than 30, and therefore not reported per RTI's decision rule for addressing low sample size.

[1] In response to the COVID-19 Public Health Emergency, CMS did not require Medicare plans (including MMPs) to submit HEDIS data covering the 2019 measurement year. Therefore, we omitted a column for the 2019 measurement year.

[2] Adult BMI assessment was retired from HEDIS in 2020. Therefore, MMPs did not provide HEDIS data for this measure for measurement years 2020 and 2021.

[3] The following criteria were used to determine adequate blood pressure control: less than 140/90 mm Hg for members 18–59 years of age; diagnosis of diabetes and <140/90 mm Hg for members 60–85 years of age; no diagnosis of diabetes and <150/90 mm Hg for members 60–85 years of age.

[4] Disease modifying anti-rheumatic drug therapy in rheumatoid arthritis measure was retired from HEDIS in 2021. Therefore, MMPs did not provide HEDIS data for this measure for the 2021 measurement year.

[5] NCQA implemented a significant specification change with HEDIS 2017, disallowing same-day follow-up visits. National benchmarks fell from HEDIS 2017 to HEDIS 2018.

[6] Represents the percentage of members who remained on an antidepressant medication for at least 84 days (12 weeks).

[7] Represents the percentage of members who remained on an antidepressant medication for at least 180 days (6 months.

[8] Represents percentage of members who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization within 14 days of the diagnosis

[9].Represents the percentage of members who initiated treatment and who had two or more additional services with a diagnosis of AOD within 30 days of the initiation visit

[10] Plan all-cause readmissions are reported as an observed-to-expected ratio. A value below 1.0 is favorable and indicates that MMPs had fewer readmissions than expected for their populations based on case mix.

[11] Measures for Outpatient visits and Emergency department visits (both within Ambulatory Care per 1,000 members) were retired from HEDIS in 2019. Therefore, MMPs did not provide HEDIS data for these measures for measurement years 2020 and 2021.

NOTES: Green and red color-coded shading indicates where performance over time for a given measure was steadily improving or worsening; green indicates a favorable trend, where red indicates an unfavorable one. To ensure accessibility for text readers and individuals with sight disabilities, cells shaded green or red receive, respectively, a superscript "G" or "R." Detailed descriptions of HEDIS measures presented can be found in the RTI Aggregate Evaluation Plan.

SOURCE: RTI analysis of 2017 through 2021 HEDIS measures.

Comparison Group Methodology for Rhode Island Demonstration Years 3 and 4

This appendix presents the comparison group selection and assessment results for the FAI demonstration in Rhode Island.

This appendix describes the comparison group identification methodology in detail and provides analytic results for the third and fourth performance years of the Rhode Island demonstration (January 1, 2019–December 31, 2020). Results for the third demonstration year are nearly identical to those for the fourth demonstration year and are omitted to conserve space. The Combined First and Second Evaluation Report for the first 2 demonstration years of the Rhode Island demonstration was publicly released in January 2022. Because eligible beneficiaries are identified separately for each time period, comparison group selection and assessment is conducted for each demonstration year.

C.1   Demonstration and Comparison Group Characteristics

The Rhode Island demonstration area consists of 5 counties that are part of one Metropolitan Statistical Area (MSA) (Providence-Warwick). The comparison area consists of 17 counties in eight MSAs from two states. New York contributed the largest share of comparison beneficiaries (89 percent), with the remainder coming from Pennsylvania. Our protocol attempts to limit the contribution of any single comparison state to 50 percent or less, but this was not feasible for the Rhode Island evaluation. The pool of comparison states was limited to those with timely submission of Medicaid data to CMS. These geographic areas have not changed since the Combined First and Second Evaluation Report.

Beneficiaries who are ineligible for the demonstration include those who are younger than 21, are not enrolled in Medicare Part A and Part B, are receiving care in a long-term care hospital, are enrolled in PACE, meet Medicaid medically needy eligibility category, or are enrolled in hospice prior to the start of the demonstration. We assess these exclusion criteria on a quarterly basis for the demonstration and comparison group in the predemonstration period and for the comparison group in the demonstration period. We use finder files provided by the State to identify the eligible population for the demonstration group during the demonstration period, applying the exclusion criteria to the state finder file in the demonstration period to ensure comparability with the comparison group and the demonstration group during the predemonstration period. Additionally, this analysis incorporates Medicaid-specific exclusion criteria (e.g., medically needy eligibility) using the Medicaid MAX and TAF enrollment and eligibility files.

Medicare Advantage enrollees are eligible and may opt-in to the Rhode Island demonstration. This report includes the Medicare Advantage population in the cost savings analysis, described in *Appendix F*. However, due to concerns of the completeness and accuracy of Medicare Advantage encounter data for years prior to 2016, RTI excluded the Medicare Advantage population from the service utilization analysis, described in *Appendix E*. The population analyzed for the service utilization outcomes includes only demonstration eligible full-benefit Medicare and Medicaid beneficiaries enrolled in Medicare Fee-for-Service (FFS) or in MMPs. *Table C-1* displays the number and percentage of beneficiaries who were in Medicare Advantage during the study period and included in the cost savings analysis but excluded from the service use analysis. The prevalence of beneficiaries ever enrolled in Medicare Advantage

ranges from 37.3 to 45.0 percent in the demonstration group and from 49.1 to 53.0 percent in the comparison group across the study period.

Table C-1
Number and percentage of beneficiaries in the Rhode Island demonstration and comparison groups enrolled in Medicare Advantage at any point during each period

Group	Pre-demonstration year 1	Pre-demonstration year 2	DY 1	DY 2	DY 3	DY 4
Demonstration						
Initial count of beneficiaries	347,623	354,141	547,473	401,524	408,224	413,240
Count of beneficiaries with Medicare Advantage	129,798	134,135	227,577	175,606	183,634	177,810
Percentage of beneficiaries with Medicare Advantage	37.3%	37.9%	41.6%	43.7%	45.0%	43.0%
Comparison						
Initial count of beneficiaries	506,789	549,578	909,854	602,605	616,793	632,671
Count of beneficiaries with Medicare Advantage	248,781	279,796	475,402	319,156	326,038	323,418
Percentage of beneficiaries with Medicare Advantage	49.1%	50.9%	52.3%	53.0%	52.9%	51.1%

DY = demonstration year

Further analytic exclusions were performed such as: (1) removing beneficiaries with missing geographic information, (2) removing beneficiaries with zero months of eligibility during each analytic period, (3) removing beneficiaries who moved between the demonstration area and the comparison area any time during the entire study period, (4) removing beneficiaries with missing Hierarchical Condition Category (HCC) risk scores, and (5) removing beneficiaries who died before the beginning of each analytic period. After applying these exclusions, the number of demonstration group beneficiaries remained relatively stable over the 2 predemonstration years and 4 demonstration years, ranging between 29,701 and 34,923 beneficiaries per year. The number of beneficiaries in the comparison group ranged between 42,946 and 53,444 over the predemonstration and demonstration years.

C.2   Propensity Score Estimates

RTI's methodology examines initial differences between the demonstration and comparison groups in each analysis period to produce propensity scores, a rating of how likely a beneficiary is to be part of the demonstration group based on certain characteristics. Weights are calculated based on these scores and applied to the data to improve comparability between the two groups. Comparability is evaluated in terms of individual beneficiary characteristics and the overall distributions of propensity scores.

A propensity score (PS) is the predicted probability that a beneficiary is a member of the demonstration group conditional on a set of observed variables. Our PS models include a combination of beneficiary-level and region-level characteristics measured at the ZIP code (ZIP Code Tabulation Area) level.

The logistic regression coefficients and z-values for the covariates included in the PS model for Rhode Island demonstration year 4 are shown in *Table C-2*, and the magnitude of the group differences for all variables prior to PS weighting is shown in *Table C-3*. The largest relative differences are that demonstration participants were older on average, less likely to be Black, more likely to be Hispanic, less likely to have disability as the original reason for entitlement, less likely to be participating in other Medicare shared savings programs (abbreviated as other MDM), and had a smaller share of months of non-MMP MA plan enrollment in demonstration year 4 than beneficiaries in the comparison group. In addition, there are ZIP code-level group differences associated with rates of marriage, households with members younger than 18 years, and adults with self-care limitations, as well as differences associated with distances to the nearest hospital and the nearest nursing facility. These differences are very similar to those that exist in prior demonstration years.

C.3   Propensity Score Overlap

The distributions of PSs by group for demonstration year 4 are shown in *Figure C-1* before and after propensity score weighting. Estimated scores for the demonstration and comparison group topped out at around 0.99. Predicted probabilities for the unweighted comparison group (dashed line) are concentrated in the range from 0.01 to 0.10. Inverse probability of treatment weighting pulls the distribution of weighted comparison group PSs (dotted line) very close to that of the demonstration group (solid line).

Any beneficiaries who have estimated PSs below the smallest estimated value in the demonstration group are removed from the comparison group. This resulted in the removal of 1,005 and 1,148 beneficiaries from the comparison group in demonstration years 3 and 4, respectively.

Table C-2
Logistic regression estimates for Rhode Island propensity score models
in demonstration year 4, January 1, 2020–December 31, 2020

Characteristic	Demonstration Year 4		
	Coef.	Standard error	z-score
Age (years)	0.020	0.001	27.04
Died during year (0/1)	−0.204	0.038	−5.33
Female (0/1)	−0.164	0.018	−9.32
Black (0/1)	−0.548	0.027	−20.37
Hispanic (0/1)	0.574	0.034	16.77
Disability as original reason for entitlement (0/1)	0.189	0.024	8.02
ESRD (0/1)	−0.489	0.070	−6.96
Share of months eligible during year	−0.286	0.037	−7.84
Share of months Medicare Advantage plan enrollment during year	−1.036	0.019	−53.92
HCC risk score	0.050	0.010	4.93
Other MDM participation (0/1)	−0.929	0.024	−38.27
% of population living in married household	0.022	0.001	20.66
% of households w/member >= 60 yrs.	0.039	0.002	24.71
% of households w/member < 18 yrs.	0.076	0.002	49.25
% of adults with college education	0.030	0.001	29.57
% of adults with self-care limitations	0.332	0.007	50.11
Distance to nearest hospital (mi.)	0.106	0.003	37.01
Distance to nearest nursing facility (mi.)	−0.680	0.008	−86.33
Intercept	−6.490	0.112	−57.75

ESRD = end-stage renal disease; HCC = Hierarchical Condition Category; MDM = Master Data Management

Figure C-1
Distribution of beneficiary-level propensity scores in the Rhode Island demonstration and comparison groups, weighted and unweighted, January 1, 2020–December 31, 2020
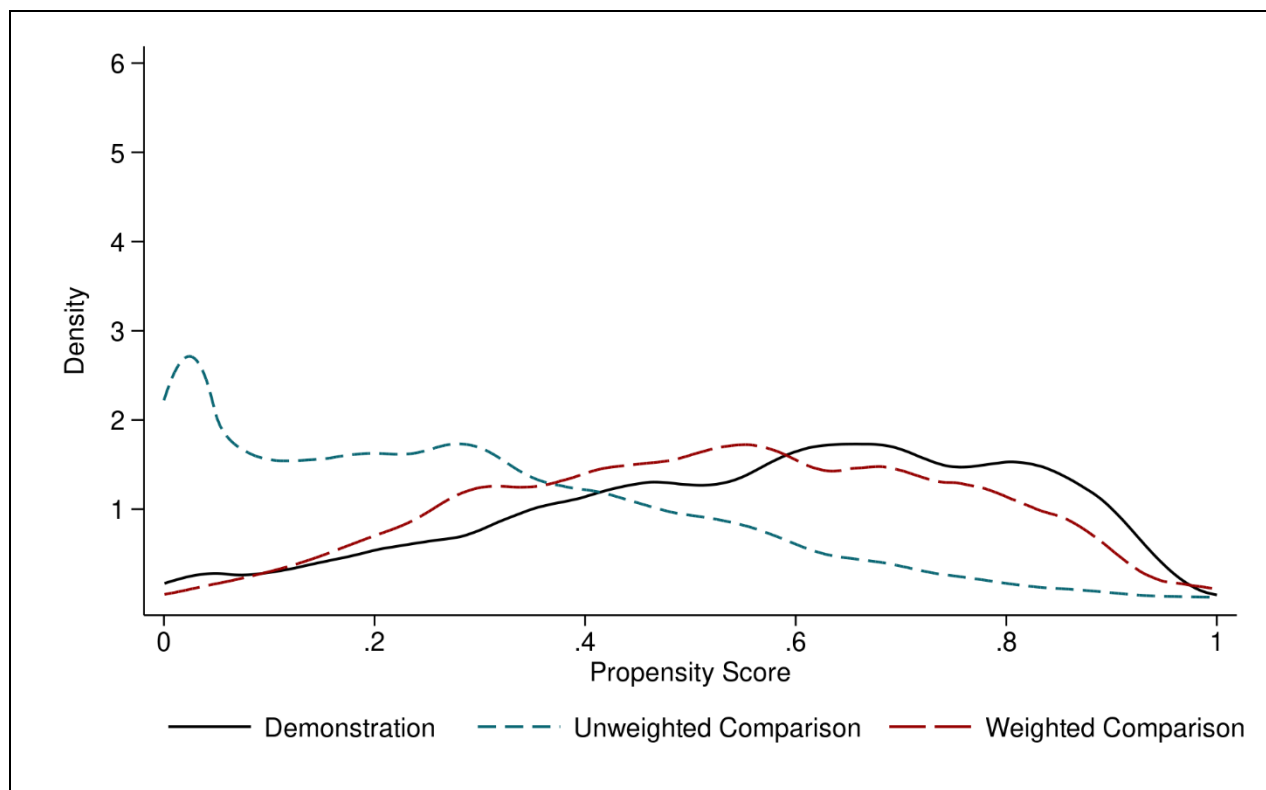
C.4   Group Comparability

Covariate balance refers to the extent to which the characteristics used in the PS are similar (or "balanced") between the demonstration and comparison groups. Group differences are measured by a standardized difference (the difference in group means divided by the pooled standard deviation of the covariate). An informal standard has been developed such that groups are considered comparable if the standardized covariate difference is less than 0.10 standard deviations.

Table C-3
Rhode Island dually eligible beneficiary covariate means by group before and after weighting—demonstration year 4: January 1, 2020–December 31, 2020

Characteristic	Demonstration group mean	Comparison group mean	PS-weighted comparison group mean	E-balance-weighted comparison group mean	Unweighted standardized difference	PS-weighted standardized difference	E-balance-weighted standardized difference
Age (years)	63.921	59.645	64.099	63.372	0.255	0.011	0.033
Died during year (%)	6.872	5.050	7.372	6.709	0.077	0.019	0.006
Female (%)	60.897	57.417	59.238	62.494	0.071	0.034	0.033
Black (%)	9.220	13.466	8.068	9.696	0.134	0.041	0.016
Hispanic (%)	10.812	3.737	6.474	9.604	0.275	0.155	0.040
Disability as original reason for entitlement (%)	53.432	60.808	52.421	54.750	0.149	0.020	0.026
ESRD (%)	1.151	1.700	1.226	1.259	0.046	0.007	0.010
Share of months eligible during year	0.879	0.898	0.865	0.883	0.079	0.054	0.017
Share of months Medicare Advantage plan enrollment during year	0.289	0.423	0.303	0.310	0.293	0.030	0.046
HCC score	1.158	1.090	1.166	1.160	0.083	0.009	0.002
Other MDM participation (%)	12.012	19.421	13.448	12.387	0.205	0.043	0.011
% of population living in married household	65.604	67.893	69.977	65.370	0.180	0.348	0.019
% of households w/member >= 60	40.237	40.790	41.981	40.253	0.076	0.238	0.002
% of households w/member < 18	29.437	27.051	28.190	28.857	0.375	0.197	0.095
% of adults with college education	27.581	27.380	30.937	26.740	0.018	0.286	0.080
% of adults with self-care limitations	3.727	2.996	3.249	3.592	0.423	0.222	0.082
Distance to nearest hospital (mi.)	3.879	6.077	4.360	3.717	0.477	0.126	0.048
Distance to nearest nursing facility (mi.)	2.269	4.158	2.534	2.316	0.787	0.175	0.032

ESRD = end-stage renal disease; HCC = Hierarchical Condition Category; MDM = Master Data Management; PS = propensity score.

The group means and standardized differences for all beneficiary characteristics are shown for demonstration year 4 in ***Table C-3***. The column of unweighted standardized differences indicates that several of these variables were not balanced prior to weighting. Eleven variables had unweighted standardized differences exceeding 0.10 in absolute value: age, percent Black, percent Hispanic, percent with disability as original reason for entitlement, share of months enrolled in a non-MMP MA plan during the year, percent participating in other Medicare shared savings programs (abbreviated as other MDM), percent of population living in a married household, percent of households with a member younger than 18 years, percent of adults with self-care limitations, and the distances (in miles) to the nearest hospital and nursing facility.

The results of PS weighting for Rhode Island demonstration year 4 are illustrated in the column labeled "PS-weighted standardized difference" in ***Table C-3***. After applying PS weights, standardized differences for eight covariates exceeded the threshold level of 0.10 in absolute value: percent Hispanic, percent of population living in a married household, percent of households with a member younger than 18 years or older than 60 years, percent of adults with a college education or self-care limitations, and distance to the nearest hospital. We found very similar results for demonstration year 3.

When more than two covariates remain out of balance after PS weighting, we consider e-balance weights as an alternative. We took this approach for the Rhode Island evaluation because of the number of area-level covariates with relatively large standardized differences after weighting. Standardized differences after applying e-balance weights (shown in the column labeled e-balance-weighted standardized differences, ***Table C-3***) were reduced to below the threshold level of 0.10 in absolute value for all covariates and for all years of this evaluation. This indicates that the demonstration and comparison groups are adequately comparable after applying e-balance weights.

C.5   Enrollee-only Results

We also applied our weighting methodology to the demonstration's enrollee-only population (approximately 39 percent of the eligible demonstration population in demonstration year 4) to produce weights for use in the impact analyses on cost savings among the demonstration enrollee population. We define the enrollee group, along with its comparison group, as follows: (1) the demonstration enrollees are those with at least 3 months of enrollment during the 4-year demonstration period as well as 3 months of eligibility during the 2-year predemonstration period, and (2) the corresponding comparison group beneficiaries are those with at least 3 months of eligibility in both the 4-year demonstration period and the 2-year predemonstration period.

As was the case among all eligible beneficiaries, the unweighted values of several covariates differed substantially between the demonstration and comparison group among enrollees in each predemonstration and demonstration year. After e-balance weighting, the standardized differences of all covariates were reduced to less than 0.10 in absolute value.

C.6 Weights for Service Utilization Analyses

A third set of e-balance weights was produced specifically for the analyses of service utilization with one adaptation to the methodology used to produce weights for all eligible beneficiaries. Due to concerns of the completeness and accuracy of MA encounter data for years prior to 2016, RTI excluded the MA population from the service utilization analysis. The resulting demonstration group sample ranged between 18,217 and 19,973 beneficiaries each year, and the comparison group sample ranged between 21,700 and 25,988 beneficiaries each year.

Despite a difference in sample sizes, the results of the weighting analysis were similar to those for demonstration eligible beneficiaries and for demonstration enrollees. While the unweighted values of several covariates differed substantially between the demonstration and comparison group in each baseline and demonstration year, the standardized differences of all covariates but one (percent of households with member younger than 18 years) were reduced to less than 0.10 in absolute value after score weighting.

C.7 Summary

The Rhode Island demonstration and comparison groups were initially distinguished by differences in six individual-level covariates and five area-level variables. However, e-balance weighting successfully reduced discrepancies below the generally accepted threshold for standardized differences for all covariates. As a result, the weighted Rhode Island groups are adequately balanced with respect to the 18 variables we consider for comparability. Further analysis of the enrollee sample and the service utilization sample yielded similar results to the main analysis on the all-eligible population presented in this appendix.

Service Utilization Methodology

D.1   Methodology

This appendix briefly describes the overall quantitative evaluation design, the data used, and the populations and measures analyzed.

D.1.1   Evaluation Design

RTI International is using an intent-to-treat (ITT) approach for the quantitative analyses conducted for the evaluation, comparing the eligible population under each State demonstration with a similar population that is not affected by the demonstration (i.e., a comparison group). We use a quasi-experimental DinD regression analysis with e-balance weighting to estimate the impact of the demonstration on the change in the probability or frequency of service utilization outcomes, relative to the comparison group.

ITT refers to an evaluation design in which all dually eligible beneficiaries eligible for the demonstration constitute the evaluation sample, regardless of whether they actively participated in demonstration models. This approach alleviates concerns of selection bias and supports generalizability of the results among the demonstration eligible population. Given the design of the demonstration, some eligible beneficiaries enroll in the demonstration to receive the interventions while others do not enroll, even though they are eligible. The relative proportion of the enrolled versus the eligible but not enrolled beneficiaries varies across the demonstration states. Impact estimates resulting from an ITT analysis—which includes the entire eligible population in the demonstration group and its comparison group counterpart—best approximate what might occur given a real-world implementation of the demonstration, accounting for the variability in voluntary enrollment across different states. A limitation to this approach is that if total enrollment in the demonstration is low, observable impacts for the enrolled population may be more difficult to observe.

D.1.2   Sample Selection

The study population includes all full-benefit Medicare-Medicaid eligible beneficiaries residing in the demonstration and comparison areas who meet the demonstration eligibility criteria. For details on applying the demonstration eligibility criteria and the comparison group identification strategy, see *Appendix C*. This analysis also includes the application of the demonstration's medically needy exclusion criteria, identified in the three-way contract on the FAI website.[45] The Combined First and Second Evaluation Report did not include this exclusion due to the availability and reliability at the time of that report of Medicaid eligibility data for all years.

Medicare Advantage enrollees are eligible and may opt into the Rhode Island demonstration. This report includes the MA population in the cost savings analysis, described in *Appendix F*. However, due to concerns on the completeness and accuracy of MA encounter data for years prior to 2016, RTI excluded demonstration eligible beneficiaries with any MA enrollment from the service utilization analysis. Therefore, the service utilization analysis includes only beneficiaries enrolled in Medicare FFS or in an MMP throughout the study period.

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[45] For the three-way contract (original), please see https://www.cms.gov/files/document/ricontract.pdf

The prevalence of beneficiaries with any month of MA during a year, prior to exclusion, ranges from 37.3 to 45.0 percent in the demonstration group, and 49.1 to 53.0 percent in the comparison group during the predemonstration and demonstration periods (see *Appendix C, Table C-1*).

D.1.3   Data

We used several sources of data to conduct this analysis. First, we used state provided quarterly finder files containing identifying information on all demonstration eligible beneficiaries in the demonstration period. Second, we obtained administrative data on beneficiary demographic, enrollment, and service use characteristics from CMS data systems for both demonstration and comparison group members. Third, we merged this administrative data with Medicare claims data on utilization and costs of Medicare services, MMP Medicare and Medicaid encounter data, as well as the Minimum Data Set (MDS).

D.1.4   Populations and Services Analyzed

The populations analyzed in the report include all demonstration eligible beneficiaries, as well as the following special populations: those receiving any Long-term services and supports (LTSS); those with any behavioral health service use in the last 2 years for serious and persistent mental illness (SPMI); demonstration enrollees; and groups by race/ethnicity.

- *Demonstration eligible beneficiaries.* A full-benefit Medicare-Medicaid eligible beneficiary in a quarter who met any other specific demonstration eligibility criteria.
  - Beneficiaries in the demonstration period are identified from quarterly State finder files.
  - Beneficiaries in the 2-year predemonstration period are identified by applying the eligibility criteria in each separate predemonstration quarter.

- *LTSS.* A demonstration eligible beneficiary with any use of institutional or home and community-based services (HCBS) during the observation year.

- *SPMI.* A demonstration eligible beneficiary with at least one inpatient or outpatient mental health visit for schizophrenia or episodic mood disorder within the previous 2 years of the observation year.

- *Enrollees.* A demonstration eligible beneficiary with any month of enrollment in the demonstration during the demonstration year.

The analyses were conducted for each year in the 2-year predemonstration period (July 1, 2014, to June 30, 2016) and for the 4 demonstration years (July 1, 2016, to December 31, 2020) for both the demonstration and comparison groups.

The PHE began in 2020 and may have influenced beneficiary access to, and use of, services differently depending on where the beneficiary resides, and how the pandemic spread through their community. To control for the influence of the PHE on service utilization outcomes, we included the Pandemic Vulnerability Index (PVI) (Marvel et al., 2021). The PVI is a continuous county-based measure that incorporates current infection rates, testing and

vaccination rates, and health and environmental factors to create an overall regression adjusted risk score.

Table D-1 presents weighted descriptive statistics on the independent variables used in multivariate DinD regressions for impact analyses. Independent variables include demographic and health characteristics and market- and area-level characteristics.

This section also includes descriptive results presented for six groups: all demonstration eligible beneficiaries in the FAI State, its comparison group, all MMP enrollees, all non–MMP enrollees, demonstration eligible beneficiaries with any LTSS use, and demonstration eligible beneficiaries with an SPMI.

The most prevalent age group was age 64 and under, ranging from 52.1 to 62.3 percent. White beneficiaries represented the majority of beneficiaries in both the demonstration and comparison groups. People with SPMI and those who used LTSS services were majority White (73.1 and 84.0 percent respectively).

Across all groups, most beneficiaries were female (54.2 to 62.8 percent), had disability as the primary reason for Medicare entitlement, and did not have end-stage renal disease. All beneficiaries resided in a metropolitan area.

The HCC score is a measure of the predicted relative annual cost of a Medicare beneficiary based on the diagnosis codes present in recent Medicare claims. Beneficiaries with a score of 1 are predicted to have average cost in terms of annual Medicare expenditures. Beneficiaries with HCC scores less than 1 are predicted to have below average costs, whereas beneficiaries with scores of 2 are predicted to have twice the average annual cost. HCC scores ranged between 1.1 and 1.3 among all groups.

Table D-1
Characteristics of eligible beneficiaries in Rhode Island in demonstration year 4 by group

Characteristics	Demonstration group	Comparison group	Demonstration group, enrollees	Demonstration group, non-enrollees	Demonstration group, LTSS users	Demonstration group, SPMI diagnosis
Weighted number of eligible beneficiaries	19,973	25,988	10,754	9,219	2,464	10,200
Demographic characteristics						
Age						
0 to 64	53.31	55.51	54.31	52.14	57.91	62.25
65 to 74	26.46	24.21	25.27	27.84	17.82	21.03
75 and older	20.23	20.28	20.41	20.01	24.27	16.73
Female						
No	42.21	40.83	41.13	43.48	45.82	37.19
Yes	57.79	59.17	58.87	56.52	54.18	62.81
Race/ethnicity						
White	67.46	70.65	65.09	70.21	83.97	73.11
African American	9.60	10.22	10.46	8.60	5.40	8.78
Hispanic	10.97	8.11	13.46	8.08	3.73	9.58
Asian	2.54	3.51	2.61	2.46	2.48	1.49
Other	9.42	7.52	8.38	10.64	4.42	7.04
Disability as reason for original Medicare entitlement						
No	38.51	37.90	35.11	42.48	29.02	28.73
Yes	61.49	62.10	64.89	57.52	70.98	71.27
ESRD status						
No	98.52	98.36	98.60	98.43	98.94	98.50
Yes	1.48	1.64	1.40	1.57	1.06	1.50
MSA						
No	0.00	0.00	0.00	0.00	0.00	0.00
Yes	100.00	100.00	100.00	100.00	100.00	100.00

(continued)

Table D-1 (continued)
Characteristics of eligible beneficiaries in Rhode Island in demonstration year 4 by group

Characteristics	Demonstration group	Comparison group	Demonstration group, enrollees	Demonstration group, non-enrollees	Demonstration group, LTSS users	Demonstration group, SPMI diagnosis
Participating in Shared Savings Program						
No	81.47	80.46	99.51	60.43	72.40	81.11
Yes	18.53	19.54	0.49	39.57	27.60	18.89
HCC score	1.08	1.09	1.09	1.07	1.25	1.19
Market characteristics						
Medicare spending per dual, ages 19+ ($)	15,065.23	14,359.45	15,065.23	15,065.23	15,065.23	15,065.23
MA penetration rate	0.35	0.33	0.35	0.35	0.35	0.35
Medicaid-to-Medicare fee index (FFS)	0.38	0.59	0.38	0.38	0.38	0.38
Medicaid spending per dual, ages 19+ ($)	22,271.67	22,712.81	22,271.67	22,271.67	22,271.67	22,271.67
Fraction of dually eligible beneficiaries using NF, ages 65+	0.34	0.40	0.34	0.34	0.34	0.34
Fraction of dually eligible beneficiaries using HCBS, ages 65+	0.12	0.04	0.12	0.12	0.12	0.12
Fraction of dually eligible beneficiaries using personal care, ages 19+	0.11	0.07	0.11	0.11	0.11	0.11
Fraction of dually eligible beneficiaries with Medicaid managed care, ages 19+	0.00	0.01	0.00	0.00	0.00	0.00
Population per square mile, all ages	1,018.43	294.30	1,018.43	1,018.43	1,018.43	1,018.43
Patient care physicians per 1,000 population	0.95	0.74	0.95	0.95	0.95	0.95

Table D-1 (continued)
Characteristics of eligible beneficiaries in Rhode Island in demonstration year 4 by group

Characteristics	Demonstration group	Comparison group	Demonstration group, enrollees	Demonstration group, non-enrollees	Demonstration group, LTSS users	Demonstration group, SPMI diagnosis
Area characteristics						
% of population living in married households	65.43	65.16	64.55	66.45	69.51	65.53
% of adults with college education	27.65	26.64	26.99	28.42	31.67	27.75
% of adults with self-care limitations	3.70	3.58	3.81	3.56	3.29	3.74
% of adults unemployed	5.97	6.37	6.09	5.83	5.21	5.91
% of household with individuals younger than 18	29.49	28.80	29.71	29.23	28.80	29.30
% of household with individuals older than 60	40.12	40.09	39.63	40.68	42.24	40.27
Distance to nearest hospital	3.89	3.71	3.71	4.10	4.43	3.92
Distance to nearest nursing facility	2.26	2.33	2.15	2.39	2.61	2.28
Pandemic Vulnerability Index	0.48	0.48	0.48	0.47	0.46	0.48

ESRD = end-stage renal disease; FFS = fee-for-service; HCBS = home and community-based services; HCC = Hierarchical Condition Category; LTSS = long-term services and supports; NF = nursing facility; MA = Medicare Advantage; MSA = metropolitan statistical area; SPMI = serious and persistent mental illness.
NOTE: Analysis conducted on demonstration eligible FFS population and Medicare-Medicaid Plan enrollees.

There were some differences in area- and market-level characteristics. Those who were in the comparison group resided in MSAs with lower Medicare spending per dually eligible beneficiary ($14,359 versus $15,065 in the demonstration group), lower population density (294 people per square mile versus 1,018 people per square mile in the demonstration group), a lower fraction of dually eligible beneficiaries using HCBS (0.04 versus 0.12 in the demonstration group), and less patient care physicians per 1,000 people (0.74 versus 0.95 in the demonstration group). Other area- and market-level characteristics were comparable.

D.1.5 Descriptive and Regression Outcomes

This report presents several measures on various aspects of service utilization, access to care, cost, quality of care and care coordination. There are 12 settings analyzed using Medicare claims data which include both institutional and community settings: inpatient admission, including psychiatric and non-psychiatric, ED visits and ED psychiatric visits, observational stays, skilled nursing facility stays, hospice use, primary care, outpatient therapy (PT, OT, ST), independent therapy, and other hospital outpatient services.

We also calculate descriptive statistics for the following quality of care measures: 30-day all-cause risk-standardized readmission rate, preventable ED visits, 30-day follow-up after hospitalization for mental illness, ambulatory care sensitive condition (ACSC) admissions overall and chronic (Agency for Healthcare Research and Quality [AHRQ] Prevention Quality Indicator [PQI] #90 and PQI #92), and depression screening.

Table D-2 presents additional details on these measures and the service utilization measures used in the outcome regression models.

D.1.6 Nursing Facility-Related Measures

Two measures of annual NF-related utilization are derived from the MDS.

- Nursing facility admission rate per 1,000 eligible beneficiaries.
- Percentage of long-stay nursing facility users.

Characteristics of new long-stay NF residents at admission are also included to monitor nursing facility case mix and acuity levels.

- Functional status of new long-stay nursing facility residents.
- Percent of new long-stay nursing facility residents with severe cognitive impairment.
- Percent of new long-stay nursing facility residents with a low level of care need.

The rate of new long-stay NF admissions per 1,000 eligible beneficiaries is calculated as the number of NF admissions for whom there is no record of NF use in the 100 days prior to the current admission and who subsequently stay in the NF for 101 days or more. Individuals are included in this measure only if their NF admission occurred after their first month of demonstration eligibility.

The percentage of long-stay NF users is calculated as the number of individuals who have stayed in an NF for 101 days or more, who were long-stay in their last quarter of demonstration eligibility. The probability of any long-stay NF use includes both new admissions from the community and continuation of a stay in an NF.

Characteristics of new long-stay NF residents at admission are also included to monitor nursing facility case mix and acuity levels. Functional status and low level of care need are determined by the Resource Utilization Groups Version IV (RUG-IV). Residents with low care need are defined as those who did not require physical assistance in any of the four late-loss activities of daily living and who were in the three lowest RUG-IV categories. Severe cognitive impairment is assessed by the Brief Interview for Mental Status.

Table D-2
Detailed definitions and measure specifications for the utilization, quality of care, and nursing facility-related outcome measures

Outcome measure	Definition	Detailed specifications
Monthly probability of any inpatient admission	The monthly probability of having any inpatient admission in which a beneficiary has an admission date within the observed month. Inpatient admissions include acute, inpatient rehabilitation, and long-term care hospital admissions.	We used the CLM_ACTV_CARE_FROM_DT to calculate the number of admissions occurring within the month. • Created a 0–1 indicator for the presence of at least one admission in the month.
Monthly probability of any ED visit	The monthly probability of having any ED visit that occurred during the month that did not result in an inpatient admission.	• Identified any claim with a revenue center code = 0450, 0451, 0452, 0456, 0459, or 0981 AND not followed by an inpatient admission. • Created a 0–1 indicator for the presence of at least one ED claim in the month.
Monthly number of physician E&M visits per 1,000 beneficiaries	The count of any E&M visit within the month, multiplied by 1,000, where the visit occurred in the outpatient or office setting, NF, domiciliary, rest home, or custodial care setting, a federally qualified health center or a rural health center.	• Identified physician office visits on either any physician claim line, federally qualified health center claim line, or rural health center claim line: – Office or Other Outpatient = 99201–99205 or 99211–99215 – Nursing Facility Services = 99304–99310, 99315, 99316, or 99318 – Domiciliary, Rest Home, or Custodial Care Services = 99324–99328, 99334–99337 or 99339-99340 – Home Services = 99341-99345 or 99347–99350 – Initial Medicare Visit = G0402 – Annual Wellness Visit = G0438, G0439 • Calculated the total number of physician office visits that occurred in the month.

(continued)

Table D-2 (continued)
Detailed definitions and measure specifications for the utilization, quality of care, and
nursing facility-related outcome measures

Outcome measure	Definition	Detailed specifications
Monthly probability of any SNF admissions	The monthly probability of having any SNF admission within the month.	• Identified any SNF claims with a clam type code = 4018, 4021, or 4028. • Created a 0-1 indicator for the presence of at least one *admission* in the month using CLM_ACTV_CARE_FROM_DT.
Annual probability of any long-stay NF use	The annual probability of residing in an NF for 101 days or more during the year.	• Long-stay use is defined as a stay in an NF for 101 days or more as of a beneficiary's last quarter of demonstration eligibility and is derived from the Minimum Data Set (MDS).
30-day all-cause risk-standardized readmission	The rate of risk-standardized readmission, defined as the percentage of enrollees who were readmitted within 30 days following a hospital discharge, and the number of risk-standardized readmissions that occur during the year.	For both the numerator and denominator, identified all acute inpatient stays with a discharge date during the measurement period. Beneficiaries are included only if eligible during the month(s) of admission and discharge and during the 30-day follow-up period. $$\frac{\left(\frac{\sum_{ig} x_{ig}}{\sum_{ig} n_{ig}} * C\right)}{Prob_g} * 100$$ Numerator: • C = the national average of 30-day readmission rate, 0.238. • x_{ig} = the total number of readmissions for individual i in group g. • n_{ig} = the total number of hospital admissions for individual i in group g. Denominator: $Prob_g$ = the annual average adjusted probability of readmission for individuals in group g. Multiply by 100 to get the final measure score.
Number of all-cause 30-day readmissions per 1,000 discharges	The annual count of the number of readmissions per beneficiary period, multiplied by 1,000.	Among beneficiaries with any index inpatient admission, defined above, a readmission is defined as the having any inpatient admission within 30-days of the index discharge date

Table D-2 (continued)
Detailed definitions and measure specifications for the utilization, quality of care, and nursing facility-related outcome measures

Outcome measure	Definition	Detailed specifications
Monthly number of preventable ED visits per 1,000 beneficiaries	A continuous variable of weighted ED visits that occur during the month, multiplied by 1,000.	Numerator: Sum of the relative percentage of ED visits per diagnosis (see 1–4 below) for conditions that are either preventable/avoidable or treatable in a primary care setting.[1] The algorithm uses four categories for ED utilization, 1–3 are included in the numerator for this measure, and 4 is excluded: (1) Non-emergent (2) Emergent/primary care treatable (3) Emergent/ED care needed – preventable/avoidable (4) *Excluded* – Emergent/ED care needed – not preventable/avoidable Denominator: All demonstration eligible Medicare-Medicaid beneficiaries.
Probability of 30-day follow-up after mental health discharge (NQF #576)	The monthly probability of any follow-up visits within 30-days post-hospitalization for a mental illness.	Numerator: Outpatient or carrier visit with a mental health provider within 30 days from the inpatient discharge. One of the following must be met to be included: • Visit with a mental health practitioner AND SPMI diagnosis • Visit to a behavioral health care facility • Visit to a non-behavioral health care facility with a diagnosis of mental illness Denominator: Discharges for an acute inpatient setting (including acute-care psychiatric facilities) for treatment of SPMI AND no readmission within 30 days. Beneficiaries are included only if eligible during both the month of the discharge and the 30-day follow-up period.
Monthly probability of any ACSC admission—overall composite (AHRQ PQI #90)	The monthly probability of any acute discharge that meet the AHRQ PQI #90 (Prevention Quality Overall Composite) criteria within the month.	Numerator: Total number of discharges that meet the inclusion and exclusion criteria for 12 PQIs for ambulatory care sensitive conditions, including diabetes—short-term complications (PQI #1); diabetes—long-term complications (PQI #3); COPD or asthma (PQI #5); hypertension (PQI #7); heart failure (PQI #8); dehydration (PQI #10); bacterial pneumonia (PQI #11); UTI (PQI #12); angina without procedure (PQI #13); uncontrolled diabetes (PQI #14); asthma in younger adults (PQI #15); lower-extremity amputations among diabetics (PQI #16) Denominator: All demonstration eligible Medicare-Medicaid beneficiaries.

(continued)

Table D-2 (continued)
Detailed definitions and measure specifications for the utilization, quality of care, and nursing facility-related outcome measures

Outcome measure	Definition	Detailed specifications
Monthly probability of any ACSC admission—chronic composite (AHRQ PQI #92)	The monthly probability of any acute discharge that meet the AHRQ PQI #92 criteria within the month.	Numerator: Total number of discharges that meet the inclusion and exclusion criteria for eight PQIs for ambulatory care sensitive chronic conditions including diabetes—short-term complications (PQI #1); diabetes—long-term complications (PQI #3); COPD or asthma (PQI #5); hypertension (PQI #7); heart failure (PQI #8); uncontrolled diabetes (PQI #14); asthma in younger adults (PQI #15); lower-extremity amputations among diabetics (PQI #16) Denominator: All demonstration eligible Medicare-Medicaid beneficiaries.
Depression screening and follow-up	Number of depression screenings and positive tests, and per eligible beneficiary per month.	Numerator: Demonstration eligible Medicare-Medicaid beneficiaries whose screening for clinical depression using an age-appropriate standardized tool: • Received a depression screening, tested positive and had a follow-up plan is identified by CLM_LINE_HCPCS_CD = 'G8431'. • Received a depression screening, tested positive and follow-up plan not required is identified by CLM_LINE_HCPCS_CD = 'G8510'. • Received a depression screening, tested positive and not eligible for follow-up plan is identified by CLM_LINE_HCPCS_CD = 'G8940'. • Received a depression screening, tested positive, no follow-up plan and reason not documented is identified by CLM_LINE_HCPCS_CD = 'G8511'. Denominator: All demonstration eligible Medicare-Medicaid beneficiaries.

[1] Definition derived from the Wagner School of Public Service, available at https://wagner.nyu.edu/faculty/billings/nyued-background.

ACSC = ambulatory care sensitive condition; AHRQ = Agency for Healthcare Research and Quality; ED = emergency department; E&M = evaluation and management; NF = nursing facility; PQI = Prevention Quality Indicator; SNF = skilled nursing facility; SPMI = serious and persistent mental illness.

D.1.7 *Descriptive Statistics and Regression Methodology for Determining Demonstration Impact*

Descriptive statistics. For any health care service type, we calculate average monthly utilization per 1,000 eligible months, the average monthly utilization per 1,000 user months (i.e. a user month is month in which there was any use of the service), and the average monthly percentage with any use of the service. Because full-benefit dual eligibility status for the

demonstration can vary by month over time for any individual, the analytic observations are at the monthly level. We calculate monthly averages by predemonstration and demonstration year, which account for the variation in demonstration eligibility that any one beneficiary may have.

Specifically, the utilization measures were calculated as the aggregate sum of the unit of measurement (counts, admissions, etc.) divided by the aggregated number of eligible member months (and user months) within each demonstration and comparison group by analytic year. We weight all of the descriptive statistics using inverse propensity score weighting, described in *Appendix B*. *Appendix E* contains the descriptive tables with these results.

In addition, six quality of care and care coordination measures representing specific utilization types of interest are presented in the report. Similar to the utilization and expenditure measures, the quality of care and care coordination measures were calculated as the aggregated sum of the numerator divided by the aggregated sum of the denominator for each respective outcome within each beneficiary group.

Table D-3 displays the average adjusted probabilities for the overall eligible population used for defining the 30-day all-cause risk-standardized readmission measure.

Table D-3
Average adjusted probability of readmission by demonstration group in Rhode Island, by demonstration group

Demonstration group	Average adjusted probability of readmission
Predemonstration year 1	
Rhode Island	0.2078
Comparison	0.2089
Predemonstration year 2	
Rhode Island	0.2078
Comparison	0.2115
Demonstration year 1	
Rhode Island	0.1983
Comparison	0.2044
Demonstration year 2	
Rhode Island	0.1927
Comparison	0.2000
Demonstration year 3	
Rhode Island	0.1969
Comparison	0.1994
Demonstration year 4	
Rhode Island	0.1969
Comparison	0.1995

DinD approach. To estimate the demonstration impact on our selected outcome measures, we conducted a multivariate DinD regression model with e-balance weighting. We estimated two general types of models. The first model estimated the demonstration effect on the outcome over the entire demonstration period.

$$\text{Dependent variable}_i = F(\beta_0 + \beta_1 \text{PostYear} + \beta_2 \text{Demonstration} + \beta_3 \text{PostYear} * \text{Demonstration} + \beta_4 \text{Demographics} + \beta_{5\text{-}j} \text{Market} + \varepsilon)$$

where *PostYear* is an indicator of whether the observation is post the demonstration start, *Demonstration* is an indicator of whether the beneficiary was in the demonstration group, and *PostYear * Demonstration* is an interaction term. *Demographics* and *Market* represent vectors of beneficiary and market characteristics, respectively.

Under this specification, the coefficient β_0 reflects the comparison group predemonstration period mean adjusted for demographic and market effects, β_1 reflects the average difference between post period and predemonstration period in the comparison group, β_2 reflects the difference in the demonstration group and comparison group at predemonstration, and β_3 is the overall average demonstration effect during the demonstration period. This last term is the DinD estimator and the primary policy variable of interest, but in all regression models, because of nonlinearities in the underlying distributions, post-regression predictions of demonstration impact are performed to obtain the marginal effects of demonstration impact.

In addition, we also produce an annual effects model to estimate the demonstration impact per year:

$$\text{Dependent variable} = F(\beta_0 + \beta_{1\text{-}k} \text{PostYear}_{1\text{-}n} + \beta_2 \text{Demonstration} + \beta_{3\text{-}k} \text{PostYear}_{1\text{-}n} * \text{Demonstration} + \beta_4 \text{Demographics} + \beta_{5\text{-}j} \text{Market} + \varepsilon)$$

This equation differs from the previous one in that separate DinD coefficients are estimated for each year. Under this specification, the coefficients $\beta_{3\text{-}k}$ would reflect the impact of the demonstration in each respective year, whereas the previous equation reflects the impact of the entire demonstration period. Depending on the outcome of interest, we estimated the equations using logistic regression, Generalized Linear Models with a log link and gamma distribution, or count models such as negative binomial (e.g., for the number of monthly physician visits).

We used regression results to calculate the marginal effects of demonstration impact. To account for correlation in the error terms, we used clustered standard errors at the county level.

Two outcomes are modelled at a beneficiary-period level. Both the annual probability of any long stay nursing home visit and the annual number of readmissions are estimated at a beneficiary–period level. This approach requires the use of an additional control variable to account for the variation of exposure to the potential outcome.

Impact estimates across the entire demonstration period are determined using the DinD methodology and presented in figures for all demonstration eligible beneficiaries. We present a table displaying the cumulative estimate along with the adjusted means for each group and time period for the eligible population. We also display figures showing the annual effects of the

demonstration among the overall eligible population. In each figure, the point estimate is displayed for each measure, as well as the 95 percent confidence interval. If the confidence interval includes the value of zero, it is not statistically significant at that confidence level.

To determine whether the demonstration had an effect on the SPMI and LTSS populations, a triple interaction term is used to estimate the interaction effect of each special population (i.e., Demonstration * Post * LTSS). In **Section 5, Demonstration Impact on Service Utilization and Quality of Care** we report the cumulative DinD estimates for both the special population of interest and the rest of the eligible population and test the difference in the demonstration effect for each estimate. Annual triple-DinD results are shown in **Appendix E, Tables E-2** and **E-3.**

The adjusted means tables presented for the full demonstration eligible population in the report provide both DinD results as well as accompanying adjusted mean values that allow direct comparisons regarding service utilization and costs across the predemonstration and demonstration periods, separately for the demonstration and comparison groups. To make meaningful comparisons for the adjusted mean value results, we needed to take into account any differences in population characteristics across the four groups. To do this, we replaced the data values for all demographic, health, and area-related characteristics in each group to be those of the comparison group in the demonstration period, which we selected as the reference group.

The steps involved in this process for each type of outcome measure are:

1. *Run* the regression estimating the probability or level of service use or costs.

2. *Predict* DinD (last two columns in each adjusted means table).

3. *Replace* the data values for three of the four groups to be those of the comparison group in the demonstration period so all four groups have the same population characteristics.

4. *Predict* the regression adjusted mean for each of the four groups using the regression coefficients stored from Step 1.

The DinD estimate is also provided for reference, along with the *p*-value and the relative percent change of the DinD estimate compared to an average mean value for the comparison group in the entire demonstration period. The relative percent annual change for the DinD estimate for each outcome measure is calculated as [Overall DinD effect] / [Adjusted mean outcome value of comparison group in the demonstration period].

Table D-4 provides an illustrative example of the regression output for each independent variable in the logistic regression on monthly inpatient admissions across the entire demonstration period.

Table D-4
Logistic regression results on monthly inpatient admissions in Rhode Island
(n = 2,922,347 person months)

Independent variables	Coefficient	Standard error	z-value	p-value
Post period	−0.0484	0.0332	−1.46	0.145
Demonstration group	−0.0576	0.0403	−1.43	0.153
Interaction of post period x demonstration group	−0.0394	0.0413	−0.95	0.340
Age (continuous)	0.0032	0.0012	2.70	0.007
Female	0.0065	0.0303	0.21	0.830
Black	0.0365	0.0209	1.75	0.080
Hispanic	−0.2065	0.0739	−2.80	0.005
Asian	−0.4129	0.0376	−10.98	<0.001
Other race/ethnicity	−0.3144	0.0434	−7.25	<0.001
Disability as reason for Medicare entitlement	−0.0003	0.0235	−0.01	0.991
End-stage renal disease	1.6766	0.0710	23.63	<0.001
Participation in other Shared Savings Program	0.0466	0.0331	1.41	0.159
Hierarchical Condition Category score	0.4192	0.0173	24.23	<0.001
Percent of population married	−0.0047	0.0012	−3.91	<0.001
Medicare Advantage penetration rate	0.5760	0.4896	1.18	0.239
Medicare spending per dual, ages 19+	0.0001	0.0000	2.56	0.010
Medicaid spending per dual, ages 19+	0.0000	0.0000	−5.58	<0.001
Fraction of dually eligible beneficiaries using personal care, ages 19+	3.2794	0.5475	5.99	<0.001
Percent of adults with college education	−0.0011	0.0010	−1.08	0.278
Percent of adults who are unemployed	−0.0015	0.0049	−0.30	0.761
Percent of adults with self-care limitation	0.0003	0.0069	0.05	0.963
Distance to nearest hospital	−0.0047	0.0030	−1.59	0.112
Distance to nearest nursing facility	−0.0065	0.0061	−1.07	0.285
Percent of households with individuals younger than 18	−0.0038	0.0013	−2.84	0.004
Percent of households with individuals older than 60	−0.0016	0.0014	−1.13	0.258
Pandemic Vulnerability Index	−0.2791	0.0347	−8.04	<0.001
Intercept	−4.1143	0.3797	−10.84	<0.001

HCBS = home and community-based services.

Appendix E
Descriptive and Special Population Supplemental Analysis

Tables *E-1*, *E-2*, and *E-3* provide the regression-adjusted DinD service utilization estimates cumulatively and for each demonstration year, for all measures and populations. We provide both the 95 and 90 percent confidence intervals for a clearer understanding of the estimate's precision.

Table E-1
Cumulative and annual demonstration impacts on service utilization and quality of care measures for eligible beneficiaries in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Adjusted DinD estimate	Relative difference (%)	p-value	95% confidence interval	90% confidence interval
Monthly probability of any inpatient admission (%)					
Cumulative	−0.12	NS	0.3457	−0.36, 0.13	−0.32, 0.09
Demonstration year 1	−0.06	NS	0.6292	−0.29, 0.17	−0.25, 0.14
Demonstration year 2	−0.07	NS	0.6176	−0.36, 0.21	−0.31, 0.17
Demonstration year 3	−0.18	NS	0.3075	−0.52, 0.16	−0.46, 0.11
Demonstration year 4	−0.18	NS	0.2496	−0.49, 0.13	−0.44, 0.08
Number of all-cause 30-day readmissions per 1,000 discharges					
Cumulative	−1.77	NS	0.9107	−32.69, 29.15	−27.72, 24.18
Demonstration year 1	−3.09	NS	0.8047	−27.56, 21.39	−23.63, 17.45
Demonstration year 2	−0.31	NS	0.9893	−45.30, 44.68	−38.07, 37.45
Demonstration year 3	−10.42	NS	0.6247	−52.16, 31.32	−45.45, 24.61
Demonstration year 4	7.40	NS	0.7389	−36.12, 50.93	−29.13, 43.93
Monthly probability of any ACSC admission, overall (%)					
Cumulative	0.04	NS	0.2288	−0.03, 0.11	−0.02, 0.10
Demonstration year 1	0.05	NS	0.1597	−0.02, 0.12	−0.01, 0.11
Demonstration year 2	0.01	NS	0.8243	−0.06, 0.08	−0.05, 0.07
Demonstration year 3	0.04	NS	0.4680	−0.07, 0.15	−0.05, 0.13
Demonstration year 4	0.06	NS	0.1091	−0.01, 0.14	−0.00, 0.13
Monthly probability of any ACSC admission, chronic (%)					
Cumulative	0.01	NS	0.7788	−0.05, 0.07	−0.04, 0.06
Demonstration year 1	0.02	NS	0.4286	−0.04, 0.09	−0.03, 0.08
Demonstration year 2	−0.03	NS	0.4010	−0.09, 0.04	−0.08, 0.03
Demonstration year 3	0.01	NS	0.9122	−0.10, 0.12	−0.09, 0.10
Demonstration year 4	0.03	NS	0.4298	−0.04, 0.10	−0.03, 0.08

(continued)

Table E-1 (continued)
Cumulative and annual demonstration impacts on service utilization and quality of care measures for eligible beneficiaries in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Adjusted DinD estimate	Relative difference (%)	p-value	95% confidence interval	90% confidence interval
Monthly probability of any ED visit (%)					
Cumulative	–0.04	NS	0.7205	–0.27, 0.18	–0.23, 0.15
Demonstration year 1	0.04	NS	0.7628	–0.21, 0.29	–0.17, 0.25
Demonstration year 2	–0.09	NS	0.5136	–0.34, 0.17	–0.30, 0.13
Demonstration year 3	0.09	NS	0.6755	–0.32, 0.49	–0.25, 0.43
Demonstration year 4	–0.26	NS	0.1793	–0.65, 0.12	–0.59, 0.06
Monthly number of preventable ED visits per 1,000 persons					
Cumulative	–1.54	NS	0.2429	–4.12, 1.04	–3.70, 0.63
Demonstration year 1	–1.01	NS	0.3504	–3.12, 1.11	–2.78, 0.77
Demonstration year 2	–1.69	NS	0.2041	–4.30, 0.92	–3.88, 0.50
Demonstration year 3	0.90	NS	0.7262	–4.15, 5.95	–3.34, 5.14
Demonstration year 4	–3.57	NS	0.0513	–7.15, 0.02	–6.58, –0.56
Monthly probability of any SNF admission (%)					
Cumulative	–0.04	NS	0.4031	–0.13, 0.05	–0.12, 0.04
Demonstration year 1	0.06	NS	0.1561	–0.02, 0.15	–0.01, 0.13
Demonstration year 2	–0.04	NS	0.6278	–0.21, 0.13	–0.19, 0.10
Demonstration year 3	–0.03	NS	0.6720	–0.16, 0.11	–0.14, 0.08
Demonstration year 4	–0.19	–25.8	0.0116	–0.33, –0.04	–0.31, –0.07
Annual probability of any long-stay NF use (%)					
Cumulative	–0.04	NS	0.9672	–2.16, 2.07	–1.82, 1.73
Demonstration year 1	–0.45	NS	0.4496	–1.63, 0.72	–1.44, 0.53
Demonstration year 2	0.02	NS	0.9855	–2.10, 2.14	–1.76, 1.80
Demonstration year 3	–0.08	NS	0.9522	–2.70, 2.54	–2.28, 2.12
Demonstration year 4	–0.05	NS	0.9738	–2.81, 2.71	–2.36, 2.27
Probability of 30-day follow-up after mental health discharge (%)					
Cumulative	1.28	NS	0.5925	–3.41, 5.98	–2.66, 5.22
Demonstration year 1	–3.75	NS	0.1124	–8.39, 0.88	–7.64, 0.14
Demonstration year 2	0.61	NS	0.8407	–5.38, 6.60	–4.41, 5.64
Demonstration year 3	10.45	24.9	0.0108	2.41, 18.49	3.71, 17.19
Demonstration year 4	0.51	NS	0.8621	–5.29, 6.32	–4.36, 5.39

(continued)

Table E-1 (continued)
Cumulative and annual demonstration impacts on service utilization and quality of care measures for eligible beneficiaries in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Adjusted DinD estimate	Relative difference (%)	p-value	95% confidence interval	90% confidence interval
Monthly number of physician E&M visits per 1,000 persons					
Cumulative	29.96	3.8	0.0072	8.11, 51.82	11.62, 48.30
Demonstration year 1	47.85	5.7	0.0035	15.78, 79.93	20.93, 74.77
Demonstration year 2	27.58	3.3	0.0388	1.42, 53.74	5.63, 49.54
Demonstration year 3	90.73	11.4	<0.0001	58.94, 122.51	64.05, 117.40
Demonstration year 4	–43.95	–6.2	0.0206	–81.15, –6.76	–75.17, –12.74

ACSC = ambulatory care sensitive condition; ED = emergency department; E&M = evaluation and management; NS = not statistically significant; SNF = skilled nursing facility.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data, and Minimum Data Set data.

Table E-2
Cumulative and annual demonstration impacts on service utilization and quality of care measures on beneficiaries with LTSS use versus those without LTSS use in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Demonstration year	Special population	Demonstration effect relative to the comparison group	Relative difference (%)	p-value	95% confidence interval	90% confidence interval	Difference in demonstration effect (LTSS versus non-LTSS)
Service Utilization Measures								
Monthly probability of any inpatient admission (%)	Cumulative	LTSS users	−0.08	NS	0.6328	−0.43, 0.26	−0.38, 0.21	−0.15
		Non-LTSS users	0.06	NS	0.6056	−0.17, 0.30	−0.14, 0.26	
	Demonstration year 1	LTSS users	0.13	NS	0.5005	−0.25, 0.52	−0.19, 0.46	0.03
		Non-LTSS users	0.11	NS	0.4050	−0.15, 0.36	−0.10, 0.32	
	Demonstration year 2	LTSS users	−0.06	NS	0.7748	−0.44, 0.32	−0.37, 0.26	−0.20
		Non-LTSS users	0.15	NS	0.2274	−0.09, 0.39	−0.05, 0.35	
	Demonstration year 3	LTSS users	−0.52	NS	0.0760	−1.09, 0.05	−1.00, −0.04	−0.56
		Non-LTSS users	0.04	NS	0.8397	−0.34, 0.42	−0.28, 0.36	
	Demonstration year 4	LTSS users	−0.10	NS	0.6733	−0.57, 0.37	−0.50, 0.29	−0.05
		Non-LTSS users	−0.05	NS	0.7814	−0.42, 0.31	−0.36, 0.26	
Monthly probability of any ED visit (%)	Cumulative	LTSS users	−0.70	−12.6	0.0005	−1.10, −0.30	−1.03, −0.37	−0.85***
		Non-LTSS users	0.15	NS	0.2942	−0.13, 0.44	−0.09, 0.40	
	Demonstration year 1	LTSS users	−0.57	−10.0	0.0137	−1.03, −0.12	−0.95, −0.19	−0.88***
		Non-LTSS users	0.31	5.5	0.0338	0.02, 0.59	0.07, 0.55	
	Demonstration year 2	LTSS users	−0.82	−14.4	0.0136	−1.47, −0.17	−1.37, −0.27	−0.96*
		Non-LTSS users	0.14	NS	0.3613	−0.16, 0.44	−0.11, 0.39	
	Demonstration year 3	LTSS users	−0.72	−12.2	0.0130	−1.28, −0.15	−1.19, −0.24	−1.03
		Non-LTSS users	0.31	NS	0.4020	−0.42, 1.04	−0.30, 0.92	
	Demonstration year 4	LTSS users	−0.86	−18.1	0.0055	−1.46, −0.25	−1.36, −0.35	−0.63*
		Non-LTSS users	−0.22	NS	0.3159	−0.66, 0.21	−0.59, 0.14	

(continued)

Cumulative and annual demonstration impacts on service utilization and quality of care measures on beneficiaries with LTSS use versus those without LTSS use in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Demonstration year	Special population	Demonstration effect relative to the comparison group	Relative difference (%)	p-value	95% confidence interval	90% confidence interval	Difference in demonstration effect (LTSS versus non-LTSS)
Service Utilization Measures (continued)								
Monthly number of physician E&M visits per 1,000 persons	Cumulative	LTSS users	5.29	NS	0.8986	−75.99, 86.57	−62.93, 73.50	−28.95
		Non-LTSS users	34.23	5.4	0.0040	10.92, 57.55	14.67, 53.80	
	Demonstration year 1	LTSS users	14.80	NS	0.6808	−55.74, 85.34	−44.40, 74.00	−51.49
		Non-LTSS users	66.30	9.9	<0.0001	39.36, 93.23	43.69, 88.90	
	Demonstration year 2	LTSS users	20.74	NS	0.6923	−81.98, 123.46	−65.47, 106.94	−7.03
		Non-LTSS users	27.77	4.1	0.0150	5.39, 50.14	8.99, 46.55	
	Demonstration year 3	LTSS users	40.62	NS	0.4082	−55.65, 136.89	−40.17, 121.41	−54.70
		Non-LTSS users	95.32	15.0	<0.0001	51.49, 139.16	58.53, 132.11	
	Demonstration year 4	LTSS users	−71.11	NS	0.2331	−188.00, 45.77	−169.21, 26.98	−20.74
		Non-LTSS users	−50.37	−9.0	0.0025	−82.99, −17.76	−77.74, −23.00	
Monthly probability of any SNF admission (%)	Cumulative	LTSS users	0.14	NS	0.0597	−0.01, 0.29	0.02, 0.27	0.10
		Non-LTSS users	0.04	NS	0.1006	−0.01, 0.09	−0.00, 0.09	
	Demonstration year 1	LTSS users	0.38	42.4	0.0002	0.18, 0.59	0.22, 0.55	0.27**
		Non-LTSS users	0.12	68.1	0.0156	0.02, 0.21	0.04, 0.19	
	Demonstration year 2	LTSS users	0.06	NS	0.6024	−0.17, 0.30	−0.14, 0.26	−0.01
		Non-LTSS users	0.07	NS	0.3562	−0.08, 0.22	−0.06, 0.20	
	Demonstration year 3	LTSS users	−0.21	NS	0.1255	−0.49, 0.06	−0.44, 0.02	−0.28*
		Non-LTSS users	0.07	43.6	0.0375	0.00, 0.13	0.01, 0.12	
	Demonstration year 4	LTSS users	0.11	NS	0.5198	−0.23, 0.45	−0.17, 0.40	0.22
		Non-LTSS users	−0.11	NS	0.1055	−0.23, 0.02	−0.21, 0.00	

(continued)

Table E-2 (continued)
Cumulative and annual demonstration impacts on service utilization and quality of care measures on beneficiaries with LTSS use versus those without LTSS use in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Demonstration year	Special population	Demonstration effect relative to the comparison group	Relative difference (%)	p-value	95% confidence interval	90% confidence interval	Difference in demonstration effect (LTSS versus non-LTSS)
Quality of Care Measures								
Monthly number of preventable ED visits per 1,000 persons	Cumulative	LTSS users	−4.47	−14.0	0.0131	−8.00, −0.94	−7.43, −1.51	−4.01
		Non-LTSS users	−0.46	NS	0.7909	−3.87, 2.95	−3.32, 2.40	
	Demonstration year 1	LTSS users	−3.55	−11.2	0.0068	−6.13, −0.98	−5.71, −1.39	−3.89
		Non-LTSS users	0.34	NS	0.8137	−2.49, 3.17	−2.03, 2.71	
	Demonstration year 2	LTSS users	−2.28	NS	0.4313	−7.94, 3.39	−7.03, 2.48	−1.24
		Non-LTSS users	−1.03	NS	0.5438	−4.37, 2.30	−3.84, 1.77	
	Demonstration year 3	LTSS users	−5.12	NS	0.1650	−12.34, 2.11	−11.18, 0.95	−7.78
		Non-LTSS users	2.66	NS	0.4764	−4.67, 9.99	−3.49, 8.81	
	Demonstration year 4	LTSS users	−7.08	−26.6	0.0018	−11.53, −2.63	−10.81, −3.34	−4.10
		Non-LTSS users	−2.97	NS	0.1807	−7.32, 1.38	−6.62, 0.68	
Monthly probability of any ACSC admission, overall (%)	Cumulative	LTSS users	0.07	11.7	0.0044	0.02, 0.12	0.03, 0.11	0.04
		Non-LTSS users	0.04	NS	0.5218	−0.07, 0.14	−0.06, 0.13	
	Demonstration year 1	LTSS users	0.10	NS	0.0686	−0.01, 0.21	0.01, 0.20	0.09
		Non-LTSS users	0.02	NS	0.7897	−0.10, 0.14	−0.08, 0.12	
	Demonstration year 2	LTSS users	0.04	NS	0.3351	−0.04, 0.12	−0.03, 0.11	−0.01
		Non-LTSS users	0.05	NS	0.3120	−0.05, 0.15	−0.03, 0.13	
	Demonstration year 3	LTSS users	0.04	NS	0.4523	−0.06, 0.13	−0.04, 0.12	0.00
		Non-LTSS users	0.03	NS	0.7100	−0.15, 0.22	−0.12, 0.19	
	Demonstration year 4	LTSS users	0.08	NS	0.1013	−0.02, 0.17	−0.00, 0.15	0.03
		Non-LTSS users	0.05	NS	0.3994	−0.06, 0.16	−0.05, 0.14	

Cumulative and annual demonstration impacts on service utilization and quality of care measures on beneficiaries with LTSS use versus those without LTSS use in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Demonstration year	Special population	Demonstration effect relative to the comparison group	Relative difference (%)	p-value	95% confidence interval	90% confidence interval	Difference in demonstration effect (LTSS versus non-LTSS)
Quality of Care Measures (continued)								
Monthly probability of any ACSC admission, chronic (%)	Cumulative	LTSS users	0.04	NS	0.1333	–0.01, 0.09	–0.00, 0.09	0.04
		Non-LTSS users	–0.00	NS	0.9768	–0.10, 0.09	–0.08, 0.08	
	Demonstration year 1	LTSS users	0.08	22.0	0.0143	0.02, 0.15	0.03, 0.14	0.08
		Non-LTSS users	0.00	NS	0.9534	–0.10, 0.11	–0.08, 0.09	
	Demonstration year 2	LTSS users	–0.02	NS	0.5000	–0.10, 0.05	–0.08, 0.04	–0.02
		Non-LTSS users	–0.01	NS	0.8606	–0.10, 0.08	–0.09, 0.07	
	Demonstration year 3	LTSS users	0.04	NS	0.4563	–0.07, 0.15	–0.05, 0.13	0.06
		Non-LTSS users	–0.02	NS	0.8485	–0.21, 0.18	–0.18, 0.15	
	Demonstration year 4	LTSS users	0.03	NS	0.5596	–0.07, 0.12	–0.05, 0.11	0.01
		Non-LTSS users	0.02	NS	0.7015	–0.08, 0.12	–0.07, 0.11	
Probability of 30-day follow-up after mental health discharge (%)	Cumulative	LTSS users	–6.26	NS	0.3720	–20.01, 7.49	–17.80, 5.28	–7.38
		Non-LTSS users	1.11	NS	0.7090	–4.74, 6.97	–3.80, 6.03	
	Demonstration year 1	LTSS users	–7.11	NS	0.4456	–25.40, 11.17	–22.46, 8.23	–2.81
		Non-LTSS users	–4.30	NS	0.1970	–10.84, 2.23	–9.79, 1.18	
	Demonstration year 2	LTSS users	–2.63	NS	0.7610	–19.61, 14.34	–16.88, 11.61	–1.05
		Non-LTSS users	–1.59	NS	0.7005	–9.69, 6.51	–8.38, 5.21	
	Demonstration year 3	LTSS users	–2.39	NS	0.8296	–24.20, 19.42	–20.70, 15.91	–13.56
		Non-LTSS users	11.17	24.5	0.0141	2.25, 20.08	3.69, 18.65	
	Demonstration year 4	LTSS users	–15.66	NS	0.1198	–35.40, 4.07	–32.23, 0.90	–17.50
		Non-LTSS users	1.83	NS	0.5596	–4.33, 8.00	–3.34, 7.01	

Table E-2 (continued)

Cumulative and annual demonstration impacts on service utilization and quality of care measures on beneficiaries with LTSS use versus those without LTSS use in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Demonstration year	Special population	Demonstration effect relative to the comparison group	Relative difference (%)	p-value	95% confidence interval	90% confidence interval	Difference in demonstration effect (LTSS versus non-LTSS)
Quality of Care Measures (continued)								
Number of all-cause 30-day readmissions per 1,000 discharges	Cumulative	LTSS users	20.51	NS	0.2497	−14.41, 55.44	−8.80, 49.82	31.53
		Non-LTSS users	−11.02	NS	0.6174	−54.27, 32.22	−47.31, 25.27	
	Demonstration year 1	LTSS users	17.20	NS	0.4117	−23.87, 58.28	−17.27, 51.68	35.10
		Non-LTSS users	−17.89	NS	0.4443	−63.73, 27.95	−56.36, 20.58	
	Demonstration year 2	LTSS users	33.24	NS	0.4467	−52.38, 118.86	−38.62, 105.09	55.60
		Non-LTSS users	−22.36	NS	0.4595	−81.61, 36.88	−72.08, 27.36	
	Demonstration year 3	LTSS users	−11.03	NS	0.7799	−88.43, 66.37	−75.99, 53.92	−15.36
		Non-LTSS users	4.33	NS	0.8657	−45.84, 54.50	−37.77, 46.43	
	Demonstration year 4	LTSS users	49.03	NS	0.1962	−25.32, 123.38	−13.37, 111.42	56.90
		Non-LTSS users	−7.87	NS	0.7298	−52.54, 36.79	−45.36, 29.61	

* p < 0.05; ** p < 0.01; *** p < 0.001
ACSC = ambulatory care sensitive condition; ED = emergency department; E&M = evaluation and management; LTSS = long-term services and supports; NS = not statistically significant; SNF = skilled nursing facility.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

Table E-3
Cumulative and annual demonstration impacts on service utilization and quality of care measures on beneficiaries with SPMI versus those without SPMI in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Demonstration year	Special population	Demonstration effect relative to the comparison group	Relative difference (%)	p-value	95% confidence interval	90% confidence interval	Difference in demonstration effect (SPMI versus non-SPMI)
Service Utilization Measures								
Monthly probability of any inpatient admission (%)	Cumulative	SPMI	−0.21	NS	0.2537	−0.58, 0.15	−0.52, 0.09	−0.20
		Non-SPMI	−0.02	NS	0.8783	−0.22, 0.19	−0.19, 0.15	
	Demonstration year 1	SPMI	−0.08	NS	0.6428	−0.41, 0.25	−0.36, 0.20	−0.10
		Non-SPMI	0.02	NS	0.8834	−0.29, 0.33	−0.24, 0.28	
	Demonstration year 2	SPMI	−0.15	NS	0.5654	−0.68, 0.37	−0.60, 0.29	−0.19
		Non-SPMI	0.03	NS	0.7742	−0.18, 0.25	−0.15, 0.21	
	Demonstration year 3	SPMI	−0.25	NS	0.3343	−0.75, 0.26	−0.67, 0.18	−0.12
		Non-SPMI	−0.12	NS	0.3560	−0.39, 0.14	−0.35, 0.10	
	Demonstration year 4	SPMI	−0.43	NS	0.0940	−0.94, 0.07	−0.86, −0.01	−0.43
		Non-SPMI	−0.00	NS	0.9967	−0.11, 0.11	−0.09, 0.09	
Monthly probability of any ED visit (%)	Cumulative	SPMI	−0.06	NS	0.7863	−0.50, 0.38	−0.43, 0.31	0.04
		Non-SPMI	−0.10	NS	0.3389	−0.29, 0.10	−0.26, 0.07	
	Demonstration year 1	SPMI	0.21	NS	0.3705	−0.25, 0.67	−0.18, 0.60	0.34
		Non-SPMI	−0.13	NS	0.2785	−0.37, 0.11	−0.33, 0.07	
	Demonstration year 2	SPMI	−0.10	NS	0.6840	−0.56, 0.37	−0.49, 0.29	0.04
		Non-SPMI	−0.14	NS	0.4969	−0.53, 0.26	−0.47, 0.19	
	Demonstration year 3	SPMI	−0.07	NS	0.8397	−0.74, 0.60	−0.63, 0.49	−0.16
		Non-SPMI	0.09	NS	0.5774	−0.22, 0.39	−0.17, 0.34	
	Demonstration year 4	SPMI	−0.45	NS	0.1269	−1.03, 0.13	−0.94, 0.03	−0.24
		Non-SPMI	−0.22	NS	0.1479	−0.51, 0.08	−0.46, 0.03	

(continued)

Table E-3 (continued)
Cumulative and annual demonstration impacts on service utilization and quality of care measures on beneficiaries with SPMI versus those without SPMI in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Demonstration year	Special population	Demonstration effect relative to the comparison group	Relative difference (%)	p-value	95% confidence interval	90% confidence interval	Difference in demonstration effect (SPMI versus non-SPMI)
Service Utilization Measures (continued)								
Monthly number of physician E&M visits per 1,000 persons	Cumulative	SPMI	21.01	NS	0.2394	−13.99, 56.02	−8.36, 50.39	−1.10
		Non-SPMI	22.11	3.9	0.0487	0.13, 44.09	3.66, 40.55	
	Demonstration year 1	SPMI	55.99	5.2	0.0042	17.65, 94.34	23.81, 88.17	25.05
		Non-SPMI	30.94	5.1	0.0431	0.95, 60.93	5.78, 56.11	
	Demonstration year 2	SPMI	6.58	NS	0.7799	−39.55, 52.71	−32.14, 45.29	−27.46
		Non-SPMI	34.04	5.8	0.0007	14.25, 53.83	17.43, 50.65	
	Demonstration year 3	SPMI	83.81	7.8	0.0016	31.90, 135.72	40.24, 127.37	12.47
		Non-SPMI	71.34	12.7	<0.0001	35.54, 107.14	41.30, 101.38	
	Demonstration year 4	SPMI	−69.56	−7.1	0.0362	−134.65, −4.48	−124.19, −14.94	−28.33
		Non-SPMI	−41.23	−8.5	0.0088	−72.10, −10.37	−67.14, −15.33	
Monthly probability of any SNF admission (%)	Cumulative	SPMI	−0.12	NS	0.1016	−0.27, 0.02	−0.25, 0.00	−0.18*
		Non-SPMI	0.05	NS	0.0941	−0.01, 0.12	0.00, 0.11	
	Demonstration year 1	SPMI	0.04	NS	0.5474	−0.09, 0.18	−0.07, 0.16	−0.06
		Non-SPMI	0.10	33.2	0.0026	0.04, 0.17	0.05, 0.16	
	Demonstration year 2	SPMI	−0.11	NS	0.4397	−0.37, 0.16	−0.33, 0.12	−0.14
		Non-SPMI	0.03	NS	0.5136	−0.06, 0.13	−0.05, 0.11	
	Demonstration year 3	SPMI	−0.08	NS	0.3114	−0.23, 0.07	−0.21, 0.05	−0.10
		Non-SPMI	0.02	NS	0.7346	−0.12, 0.17	−0.09, 0.14	
	Demonstration year 4	SPMI	−0.43	−34.8	0.0005	−0.67, −0.19	−0.63, −0.23	−0.47***
		Non-SPMI	0.04	NS	0.4459	−0.07, 0.15	−0.05, 0.13	

(continued)

Table E-3 (continued)
Cumulative and annual demonstration impacts on service utilization and quality of care measures on beneficiaries with SPMI versus those without SPMI in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Demonstration year	Special population	Demonstration effect relative to the comparison group	Relative difference (%)	p-value	95% confidence interval	90% confidence interval	Difference in demonstration effect (SPMI versus non-SPMI)
Quality of Care Measures								
Monthly number of preventable ED visits per 1,000 persons	Cumulative	SPMI	−1.39	NS	0.4679	−5.15, 2.36	−4.54, 1.76	−0.03
		Non-SPMI	−1.36	−6.6	0.0444	−2.68, −0.03	−2.47, −0.25	
	Demonstration year 1	SPMI	−0.84	NS	0.6174	−4.15, 2.47	−3.62, 1.93	−0.29
		Non-SPMI	−0.55	NS	0.4332	−1.92, 0.82	−1.70, 0.60	
	Demonstration year 2	SPMI	−0.51	NS	0.8021	−4.52, 3.50	−3.88, 2.85	1.35
		Non-SPMI	−1.86	−8.4	0.0481	−3.71, −0.02	−3.41, −0.31	
	Demonstration year 3	SPMI	1.66	NS	0.6606	−5.75, 9.08	−4.56, 7.88	1.56
		Non-SPMI	0.10	NS	0.9398	−2.55, 2.76	−2.13, 2.33	
	Demonstration year 4	SPMI	−4.61	NS	0.0757	−9.69, 0.48	−8.87, −0.34	−1.91
		Non-SPMI	−2.70	−16.9	0.0157	−4.89, −0.51	−4.53, −0.86	
Monthly probability of any ACSC admission, overall (%)	Cumulative	SPMI	0.09	NS	0.0941	−0.02, 0.20	0.00, 0.18	0.10*
		Non-SPMI	−0.01	NS	0.5779	−0.05, 0.03	−0.04, 0.02	
	Demonstration year 1	SPMI	0.09	NS	0.0962	−0.02, 0.19	0.00, 0.18	0.07
		Non-SPMI	0.02	NS	0.5745	−0.04, 0.08	−0.03, 0.07	
	Demonstration year 2	SPMI	0.06	NS	0.3292	−0.06, 0.18	−0.04, 0.16	0.10
		Non-SPMI	−0.04	NS	0.1863	−0.11, 0.02	−0.10, 0.01	
	Demonstration year 3	SPMI	0.11	NS	0.2783	−0.09, 0.30	−0.06, 0.27	0.14
		Non-SPMI	−0.03	NS	0.1592	−0.08, 0.01	−0.07, 0.01	
	Demonstration year 4	SPMI	0.11	NS	0.0532	−0.00, 0.23	0.02, 0.21	0.10*
		Non-SPMI	0.01	NS	0.7002	−0.04, 0.06	−0.03, 0.05	

(continued)

Table E-3 (continued)
Cumulative and annual demonstration impacts on service utilization and quality of care measures on beneficiaries with SPMI versus those without SPMI in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Measure	Demonstration year	Special population	Demonstration effect relative to the comparison group	Relative difference (%)	p-value	95% confidence interval	90% confidence interval	Difference in demonstration effect (SPMI versus non-SPMI)
Quality of Care Measures (continued)								
Monthly probability of any ACSC admission, chronic (%)	Cumulative	SPMI	0.05	NS	0.4298	−0.07, 0.17	−0.05, 0.15	0.08
		Non-SPMI	−0.03	NS	0.0695	−0.06, 0.00	−0.05, −0.00	
	Demonstration year 1	SPMI	0.06	NS	0.2524	−0.04, 0.16	−0.03, 0.15	0.06
		Non-SPMI	−0.00	NS	0.9334	−0.07, 0.06	−0.06, 0.05	
	Demonstration year 2	SPMI	0.03	NS	0.7127	−0.11, 0.16	−0.09, 0.14	0.11
		Non-SPMI	−0.08	−27.6	0.0016	−0.13, −0.03	−0.12, −0.04	
	Demonstration year 3	SPMI	0.05	NS	0.6361	−0.16, 0.27	−0.13, 0.23	0.09
		Non-SPMI	−0.04	NS	0.1205	−0.09, 0.01	−0.08, 0.00	
	Demonstration year 4	SPMI	0.05	NS	0.3771	−0.06, 0.17	−0.04, 0.15	0.05
		Non-SPMI	0.00	NS	0.9437	−0.05, 0.05	−0.04, 0.04	
Number of all-cause 30-day readmissions per 1,000 discharges	Cumulative	SPMI	15.80	NS	0.3763	−19.20, 50.80	−13.57, 45.17	48.54*
		Non-SPMI	−32.74	NS	0.1001	−71.76, 6.28	−65.49, 0.01	
	Demonstration year 1	SPMI	6.33	NS	0.7409	−31.19, 43.85	−25.16, 37.82	21.48
		Non-SPMI	−15.15	NS	0.5679	−67.16, 36.85	−58.80, 28.49	
	Demonstration year 2	SPMI	23.34	NS	0.3412	−24.72, 71.39	−17.00, 63.67	64.66**
		Non-SPMI	−41.32	NS	0.1440	−96.76, 14.11	−87.85, 5.20	
	Demonstration year 3	SPMI	9.31	NS	0.7910	−59.51, 78.12	−48.45, 67.06	58.88
		Non-SPMI	−49.58	NS	0.1144	−111.13, 11.98	−101.23, 2.08	
	Demonstration year 4	SPMI	25.89	NS	0.2059	−14.23, 66.02	−7.78, 59.57	54.43
		Non-SPMI	−28.54	NS	0.3900	−93.61, 36.54	−83.15, 26.07	

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
ACSC = ambulatory care sensitive condition; ED = emergency department; E&M = evaluation and management; NS = not statistically significant; SNF = skilled nursing facility; SPMI = serious and persistent mental illness.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

Table E-4 presents results on the average percentage of demonstration eligible beneficiaries using selected Medicare service types during the months in which they met demonstration eligibility criteria in the predemonstration and demonstration periods. In addition, average counts of service use are presented across all such eligible months, and for the subset of these months in which eligible beneficiaries were users of each respective service type.

Data are shown for the predemonstration and demonstration period for both Rhode Island eligible beneficiaries (i.e., the demonstration group) and the comparison group. We also provide tables for the RTI quality of care and care coordination measures (*Table E-5*) and NF-related measures derived from the MDS (*Table E-6*). These descriptive results reflect the underlying experience of the two groups; changes over time are descriptive and not intended to be interpreted as caused by the demonstration.

The demonstration and comparison groups were similar across many of the service utilization measures in each of the predemonstration (baseline) years and the demonstration years (see *Table E-4*). However, there were a few outcomes where some differences were apparent. For example, outpatient therapy and hospital outpatient service use were higher for the comparison group compared to the demonstration group. However, percent with use of hospice, inpatient admissions, and inpatient nonpsychiatric services was higher in the demonstration group, compared to the comparison group for most years.

As with the service utilization measures, the Rhode Island demonstration eligible beneficiaries were similar to the comparison group in many, but not all, of the RTI quality of care and care coordination measures (see *Table E-5*). In general, the demonstration group had more clinical depression screenings, admissions for overall and chronic ACSC diagnoses, and 30-day all-cause readmissions for the predemonstration and demonstration periods. On the other hand, the rate of 30-day follow-up after hospitalization for mental illness was higher in the comparison group than in the demonstration group for most years. No clear pattern was evident for the number of preventable ED visits.

There were differences in some characteristics of long-stay NF residents at admission. Across all years, there were differences in some characteristics of long-stay NF residents at admission: relative to the comparison group, demonstration eligible beneficiaries had lower average levels of functional impairment and generally had a lower proportion of beneficiaries with severe cognitive impairment (see *Table E-6*).

Table E-4
Proportion and utilization for institutional and non-institutional services for the demonstration and comparison groups in Rhode Island, January 1, 2014–December 31, 2020

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
Number of demonstration eligible beneficiaries		18,549	18,732	18,217	19,139	18,840	19,973
Number of comparison eligible beneficiaries		21,700	22,809	25,162	23,952	24,402	25,988
Institutional setting							
Inpatient admissions[1]	Demonstration						
% with use		3.8	3.6	3.5	3.3	3.1	2.7
Utilization per 1,000 user months		1,159.7	1,153.4	1,158	1,138.1	1,141.3	1,136.9
Utilization per 1,000 eligible months		43.7	41.5	40.1	37.0	35.6	30.2
Inpatient admissions[1]	Comparison						
% with use		3.3	3.1	3.1	3.0	3.0	2.5
Utilization per 1,000 user months		1,133.2	1,152.9	1,139.5	1,122.5	1,112.3	1,135.1
Utilization per 1,000 eligible months		37.0	36.2	34.9	33.2	33.0	28.9
Inpatient psychiatric	Demonstration						
% with use		0.6	0.6	0.5	0.5	0.4	0.3
Utilization per 1,000 user months		1,120.1	1,117.5	1,123.5	1,099.2	1,125.1	1,117.6
Utilization per 1,000 eligible months		6.4	6.5	5.8	5.2	4.9	3.3
Inpatient psychiatric	Comparison						
% with use		0.4	0.4	0.4	0.3	0.3	0.3
Utilization per 1,000 user months		1,065.5	1,120.2	1,079.6	1,060.4	1,070	1,082.5
Utilization per 1,000 eligible months		4.2	4.4	4.1	2.9	2.9	2.8

(continued)

Table E-4 (continued)
Proportion and utilization for institutional and non-institutional services for the demonstration and comparison groups in Rhode Island, January 1, 2014–December 31, 2020

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
Inpatient non-psychiatric							
% with use	Demonstration	3.3	3.1	3.0	2.8	2.7	2.4
Utilization per 1,000 user months		1,144.9	1,134.7	1,140.6	1,123.7	1,123.3	1,120.4
Utilization per 1,000 eligible months		37.3	34.9	34.2	31.7	30.6	26.8
Inpatient non-psychiatric							
% with use	Comparison	2.9	2.8	2.7	2.7	2.7	2.3
Utilization per 1,000 user months		1,129.1	1,137.6	1,131.7	1,121.3	1,109.6	1,131.9
Utilization per 1,000 eligible months		32.8	31.7	30.8	30.2	30.0	26.1
Emergency department use (non-admit)							
% with use	Demonstration	6.5	6.6	6.3	5.8	5.6	4.3
Utilization per 1,000 user months		1,267.5	1,266.1	1,260.5	1,256.4	1,311.8	1,306.6
Utilization per 1,000 eligible months		82.3	83.0	79.3	72.8	73.7	56.1
Emergency department use (non-admit)							
% with use	Comparison	6.2	6.3	5.9	5.6	5.3	4.4
Utilization per 1,000 user months		1,281	1,272.9	1,271.4	1,237.3	1,244.8	1,268.7
Utilization per 1,000 eligible months		79.6	80.1	75.2	69.4	66.5	55.8

(continued)

Table E-4 (continued)
Proportion and utilization for institutional and non-institutional services for the demonstration and comparison groups in Rhode Island, January 1, 2014–December 31, 2020

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
Emergency department use (psychiatric)	Demonstration						
% with use		0.6	0.6	0.5	0.5	0.5	0.4
Utilization per 1,000 user months		1,294.3	1,244.4	1,226.7	1,278.6	1,366.8	1,365.3
Utilization per 1,000 eligible months		7.4	7.0	6.3	6.1	6.5	5.3
Emergency department use (psychiatric)	Comparison						
% with use		0.6	0.5	0.4	0.4	0.3	0.4
Utilization per 1,000 user months		1,361.9	1,243.5	1,196.8	1,270	1,321.5	1,311.5
Utilization per 1,000 eligible months		7.7	6.1	4.5	5.5	4.5	4.8
Observation stays	Demonstration						
% with use		0.7	0.7	0.4	0.3	0.3	0.3
Utilization per 1,000 user months		1,036.7	1,036.8	1,055.5	1,059.3	1,112.1	1,145.7
Utilization per 1,000 eligible months		7.5	7.0	4.6	3.5	3.5	3.5
Observation stays	Comparison						
% with use		0.6	0.7	0.6	0.5	0.5	0.4
Utilization per 1,000 user months		1,030.9	1,056.2	1,048.1	1,028.3	1,024.6	1,033
Utilization per 1,000 eligible months		6.6	7.0	6.1	5.1	5.2	4.3

(continued)

Proportion and utilization for institutional and non-institutional services for the demonstration and comparison groups in Rhode Island, January 1, 2014–December 31, 2020

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
Skilled nursing facility							
% with use		0.8	0.8	0.8	0.7	0.7	0.8
Utilization per 1,000 user months	Demonstration	1,101.8	1,086.8	1,083.1	1,094.6	1,081.7	1,057.9
Utilization per 1,000 eligible months		9.2	8.2	8.7	8.1	7.3	7.9
Skilled nursing facility							
% with use		0.5	0.7	0.6	0.6	0.5	0.7
Utilization per 1,000 user months	Comparison	1,067.2	1,108.7	1,102.5	1,060.1	1,075.8	1,058.1
Utilization per 1,000 eligible months		5.4	7.4	6.1	6.4	5.7	7.7
Hospice							
% with use		0.5	1.0	0.7	0.8	0.7	0.7
Utilization per 1,000 user months	Demonstration	1,015.2	1,017.4	1,217.1	1,017.1	1,014.2	1,009.7
Utilization per 1,000 eligible months		5.4	9.9	8.8	7.7	7.5	6.8
Hospice							
% with use		0.3	0.5	0.5	0.5	0.4	0.4
Utilization per 1,000 user months	Comparison	1,006.5	1,000.6	1,010.3	1,003.5	1,018.3	1,010.7
Utilization per 1,000 eligible months		2.7	5.2	4.9	5.2	4.4	4.5

Table E-4 (continued)

Proportion and utilization for institutional and non-institutional services for the demonstration and comparison groups in Rhode Island, January 1, 2014–December 31, 2020

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
Non-institutional setting							
Primary care E&M visits							
% with use	Demonstration	47.3	48.3	47.7	47.3	48.9	38.8
Utilization per 1,000 user months		1,732.3	1,759.9	1,849.4	1,802.8	1,820.6	1,730.3
Utilization per 1,000 eligible months		819.1	849.7	883	853.4	889.5	671.0
Primary care E&M visits							
% with use	Comparison	48.0	47.7	47.8	47.2	45.4	40.5
Utilization per 1,000 user months		1,736.8	1,744.6	1,736.6	1,727.2	1,747.8	1,747.8
Utilization per 1,000 eligible months		833.4	833	830.6	814.9	793.2	707.7
Outpatient therapy (PT, OT, ST)							
% with use	Demonstration	3.0	2.9	2.0	2.3	2.3	2.2
Utilization per 1,000 user months		23,976.1	22,956.6	20,417.1	23,308.5	20,923.2	21,938.2
Utilization per 1,000 eligible months		712.9	676.4	418.2	528.5	483.8	487.4
Outpatient therapy (PT, OT, ST)							
% with use	Comparison	3.5	3.6	3.7	3.9	3.7	3.2
Utilization per 1,000 user months		17,833.5	17,219.2	16,948.9	17,975.2	15,086.0	17,408.0
Utilization per 1,000 eligible months		629.4	626.3	619.1	702.1	552.5	552.4

(continued)

Table E-4 (continued)
Proportion and utilization for institutional and non-institutional services for the demonstration and comparison groups in Rhode Island, January 1, 2014–December 31, 2020

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
Independent therapy (PT, OT, ST)	Demonstration						
% with use		1.5	1.7	1.1	0.8	0.8	0.7
Utilization per 1,000 user months		12,090.6	12,159.3	9,875.3	10,788.7	9,106.3	9,057.6
Utilization per 1,000 eligible months		180.3	204.5	111.4	86.9	73.4	66.1
Independent therapy (PT, OT, ST)	Comparison						
% with use		1.8	1.5	2.2	2.2	2.4	1.7
Utilization per 1,000 user months		10,202.7	10,581.3	9,664	10,028.8	9,020.3	8,688.6
Utilization per 1,000 eligible months		188.1	163.4	210.3	217.7	219.6	151.7
Other hospital outpatient services	Demonstration						
% with use		27.8	29.1	27.0	25.9	26.6	22.6
Utilization per 1,000 user months		—	—	—	—	—	—
Utilization per 1,000 eligible months		—	—	—	—	—	—
Other hospital outpatient services	Comparison						
% with use		35.0	33.7	34.2	33.6	33.8	31.4
Utilization per 1,000 user months		—	—	—	—	—	—
Utilization per 1,000 eligible months		—	—	—	—	—	—

— = data not available. E&M = evaluation and management; OT = occupational therapy, PT = physical therapy, ST = speech therapy.
[1] Includes acute admissions, inpatient rehabilitation, and long-term care hospital admissions.
SOURCE: RTI analysis of Medicare data.

Table E-5

Quality of care and care coordination outcomes for the demonstration and comparison groups in Rhode Island, January 1, 2014–December 31, 2020

Quality and care coordination measures	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
30-day all-cause risk-standardized readmission rate (%)	Demonstration	20.8	20.6	21.5	21.5	20.1	19.9
	Comparison	18.5	19.3	19.5	19.2	19.1	17.5
Preventable ED visits per 1,000 persons	Demonstration	36.9	36.5	34.9	31.7	32.5	21.9
	Comparison	36.8	36.2	34.4	31.6	30.8	24.3
Rate of 30-day follow-up after hospitalization for mental illness (%)	Demonstration	39.5	39.6	39.3	40.3	45.9	40.2
	Comparison	50.7	43.0	50.8	46.7	41.9	47.6
Ambulatory care sensitive condition admissions per 1,000 eligible months—overall composite (AHRQ PQI # 90)	Demonstration	6.3	6.1	6.2	5.5	5.2	4.3
	Comparison	6.2	5.5	5.6	5.7	5.1	3.8
Ambulatory care sensitive condition admissions per 1,000 eligible months—chronic composite (AHRQ PQI # 92)	Demonstration	4.8	4.6	4.9	4.1	4.1	3.3
	Comparison	3.9	3.5	3.8	3.9	3.6	2.7
Screening for clinical depression per 1,000 eligible months	Demonstration	4.7	7.1	8.9	9.4	9.9	8.6
	Comparison	2.1	2.6	3.1	3.1	5.6	4.6

AHRQ PQI = Agency for Healthcare Research and Quality Prevention Quality Indicator.
SOURCE: RTI analysis of Medicare FFS claims and encounter data.

Table E-6
MDS long-stay NF utilization and characteristics at admission for the demonstration and comparison groups in Rhode Island, January 1, 2014–December 31, 2020

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
Annual NF utilization							
Number of demonstration beneficiaries	Demonstration	15,773	15,936	15,304	15,999	16,410	17,060
New long-stay NF admissions per 1,000 eligible beneficiaries		11.8	7.7	11.4	7.5	8.3	6.4
Number of comparison beneficiaries	Comparison	18,483	19,385	20,945	20,067	21,257	22,281
New long-stay NF admissions per 1,000 eligible beneficiaries		6.8	8.1	11.1	8.8	7.9	8.3
Number of demonstration beneficiaries	Demonstration	16,952	17,048	16,181	16,999	17,414	18,029
Long-stay NF users as % of eligible beneficiaries		7.8	7.2	6.4	6.4	6.4	6.2
Number of comparison beneficiaries	Comparison	19,808	20,777	22,269	21,368	22,487	23,468
Long-stay NF users as % of eligible beneficiaries		7.2	7.2	7.1	6.9	5.9	6.0
Characteristics of new long-stay NF residents at admission							
Number of admitted demonstration beneficiaries	Demonstration	186	123	175	121	137	110
Number of admitted comparison beneficiaries	Comparison	126	157	233	176	167	184
Functional status (RUG-IV ADL scale)	Demonstration	7.5	7.4	6.9	7.1	7.3	6.7
Functional status (RUG-IV ADL scale)	Comparison	9.7	8.0	7.7	8.0	8.7	7.0
Percent with severe cognitive impairment	Demonstration	36.0	29.8	29.3	32.1	31.5	30.8
Percent with severe cognitive impairment	Comparison	40.1	49.8	32.4	35.3	33.7	30.2
Percent with low level of care need	Demonstration	2.2	2.6	1.5	0.0	3.6	2.2
Percent with low level of care need	Comparison	0.2	0.1	0.4	0.6	3.7	4.8

ADL = activities of daily living; MDS = Nursing Home Minimum Data Set; NF = nursing facility; RUG = Resource Utilization Group.
NOTE: A higher score on the RUG-IV ADL scale indicates greater impairment, or worse functional status.
SOURCE: RTI analysis of Nursing Home Minimum Data Set data.

Tables E-7 and *E-8* present descriptive statistics for the demonstration enrollees, compared to those demonstration eligible beneficiaries who were eligible but not enrolled (non-enrollees), for each service by demonstration year, to help understand the utilization experience over time.

Non-enrollees had higher utilization than the demonstration enrollees in most service settings (see *Table E-7*). For the quality of care and care coordination measures, non-enrollees had a higher probability of screening for clinical depression and 30-day all-cause readmission, as well as a lower number of preventable ED visits (see *Table E-8*).

Table E-7
Proportion and utilization of institutional and non-institutional services for demonstration enrollees and non-enrollees in Rhode Island, July 1, 2016–December 31, 2020

Measures by setting	Group	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
Number of demonstration enrollees		11,742	12,408	11,541	10,754
Number of demonstration non-enrollees		6,412	6,725	7,297	9,219
Institutional setting					
Inpatient admissions[1]	Enrollees				
% with use		3.1	3.0	3.0	2.4
Utilization per 1,000 user months		1,153.4	1,129.9	1,138.3	1,123
Utilization per 1,000 eligible months		35.4	33.5	34.4	27.5
Inpatient admissions[1]	Non-enrollees				
% with use		4.3	3.8	3.3	2.9
Utilization per 1,000 user months		1,159.1	1,146.7	1,147.9	1,142.8
Utilization per 1,000 eligible months		50.3	43.4	37.7	32.9
Inpatient psychiatric	Enrollees				
% with use		0.4	0.4	0.4	0.2
Utilization per 1,000 user months		1,099.4	1,089.2	1,132	1,084.3
Utilization per 1,000 eligible months		4.7	4.3	4.4	2.3
Inpatient psychiatric	Non-enrollees				
% with use		0.6	0.5	0.5	0.4
Utilization per 1,000 user months		1,135.9	1,102.2	1,119.8	1,125.7
Utilization per 1,000 eligible months		7	6	5.9	4.3
Inpatient non-psychiatric	Enrollees				
% with use		2.7	2.6	2.7	2.3
Utilization per 1,000 user months		1,142.9	1,120.5	1,121.4	1,113.3
Utilization per 1,000 eligible months		30.6	29.0	29.9	25.1
Inpatient non-psychiatric	Non-enrollees				
% with use		3.8	3.3	2.8	2.5
Utilization per 1,000 user months		1,138.5	1,129.7	1,127.7	1,122.1
Utilization per 1,000 eligible months		43.1	37.1	31.7	28.4

(continued)

Table E-7 (continued)
Proportion and utilization of institutional and non-institutional services for demonstration enrollees and non-enrollees in Rhode Island, July 1, 2016–December 31, 2020

Measures by setting	Group	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
Emergency department use (non-admit)					
% with use	Enrollees	6.2	5.7	5.7	4.4
Utilization per 1,000 user months		1,234.2	1,266.3	1,329.7	1,319.6
Utilization per 1,000 eligible months		77.1	72.6	75.9	57.8
Emergency department use (non-admit)					
% with use	Non-enrollees	6.0	5.7	5.4	4.1
Utilization per 1,000 user months		1,295.5	1,259.7	1,276.5	1,287.5
Utilization per 1,000 eligible months		77.8	72.2	69.1	53.2
Emergency department use (psychiatric)					
% with use	Enrollees	0.5	0.4	0.4	0.4
Utilization per 1,000 user months		1,223.3	1,287.6	1,372	1,272.3
Utilization per 1,000 eligible months		6.0	5.5	6.0	4.5
Emergency department use (psychiatric)					
% with use	Non-enrollees	0.5	0.5	0.5	0.4
Utilization per 1,000 user months		1,129.1	1,309.1	1,373.4	1,456.4
Utilization per 1,000 eligible months		5.8	7.0	7.5	6.4
Observation stays					
% with use	Enrollees	0.3	0.2	0.2	0.2
Utilization per 1,000 user months		1,119.7	1,125.5	1,224.9	1,287.2
Utilization per 1,000 eligible months		2.8	2.2	2.7	3.1
Observation stays					
% with use	Non-enrollees	0.6	0.5	0.5	0.4
Utilization per 1,000 user months		1,035.9	1,026.7	1,019.8	1,024.1
Utilization per 1,000 eligible months		6.2	5.2	4.9	3.8

(continued)

Table E-7 (continued)
Proportion and utilization of institutional and non-institutional services for demonstration enrollees and non-enrollees in Rhode Island, July 1, 2016–December 31, 2020

Measures by setting	Group	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
Skilled nursing facility	Enrollees				
% with use		0.7	0.6	0.6	0.5
Utilization per 1,000 user months		1,080	1,091.7	1,084.7	1,071
Utilization per 1,000 eligible months		8.0	6.8	6.7	5.6
Skilled nursing facility	Non-enrollees				
% with use		1.1	1.0	0.8	1.1
Utilization per 1,000 user months		1,075.7	1,098.4	1,077.6	1,049.9
Utilization per 1,000 eligible months		12.0	11.3	8.5	11.1
Hospice	Enrollees				
% with use		0.8	0.7	0.7	0.7
Utilization per 1,000 user months		1,436.8	1,022.1	1,017.3	1,009.7
Utilization per 1,000 eligible months		11.4	6.7	7.1	6.9
Hospice	Non-enrollees				
% with use		1.1	1.1	0.8	0.7
Utilization per 1,000 user months		1,018.1	1,010.4	1,009.7	1,008.6
Utilization per 1,000 eligible months		10.8	11.5	8.5	6.6
Non-institutional setting					
Primary care E&M visits	Enrollees				
% with use		46.1	46.3	49.4	38.1
Utilization per 1,000 user months		1,977.4	1,774.2	1815	1,658.9
Utilization per 1,000 eligible months		911.6	822.3	895.9	632.9
Primary care E&M visits	Non-enrollees				
% with use		49.8	48.8	47.9	39.6
Utilization per 1,000 user months		1,807.6	1,869.3	1,833.1	1,822.5
Utilization per 1,000 eligible months		900.1	911.6	879.0	722.4

(continued)

Table E-7 (continued)
Proportion and utilization of institutional and non-institutional services for demonstration enrollees and non-enrollees in Rhode Island, July 1, 2016–December 31, 2020

Measures by setting	Group	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
Outpatient therapy (PT, OT, ST)	Enrollees				
% with use		1.1	1.0	1.1	1
Utilization per 1,000 user months		22,800.9	26,542.7	24,159.4	25,156.9
Utilization per 1,000 eligible months		239.5	274.3	274.7	258.4
Outpatient therapy (PT, OT, ST)	Non-enrollees				
% with use		3.6	4.8	4.4	3.8
Utilization per 1,000 user months		21,729.2	22,848.2	19,392.0	20,728.2
Utilization per 1,000 eligible months		773.9	1,099.3	856.1	792.8
Independent therapy (PT, OT, ST)	Enrollees				
% with use		0.3	0.1	0.2	0.1
Utilization per 1,000 user months		8,261.8	6,858	5,534.2	4,039.2
Utilization per 1,000 eligible months		25.8	9.8	9.2	5.1
Independent therapy (PT, OT, ST)	Non-enrollees				
% with use		1.6	1.7	1.9	1.5
Utilization per 1,000 user months		10,231.8	106,70.7	9,615.4	9,605.1
Utilization per 1,000 eligible months		160.8	179.9	185.4	147.1
Other hospital outpatient services	Enrollees				
% with use		24.2	24.8	26.1	21.1
Utilization per 1,000 user months		—	—	—	—
Utilization per 1,000 eligible months		—	—	—	—
Other hospital outpatient services	Non-enrollees				
% with use		27.8	26.3	27.4	24.4
Utilization per 1,000 user months		—	—	—	—
Utilization per 1,000 eligible months		—	—	—	—

— = data not available. E&M = evaluation and management; OT = occupational therapy; PT = physical therapy; ST = speech therapy.
[1] Includes acute admissions, inpatient rehabilitation, and long-term care hospital admissions.
SOURCE: RTI analysis of Medicare data.

Table E-8

Quality of care and care coordination outcomes for demonstration enrollees and non-enrollees in Rhode Island, July 1, 2016–December 31, 2020

Quality and care coordination measures	Group	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
30-day all-cause risk-standardized readmission rate (%)	Enrollees	20.7	20.5	19.7	19.4
	Non-enrollees	23.1	23.5	20.7	20.6
Preventable emergency department visits per 1,000 persons	Enrollees	34.7	33.0	34.5	23.7
	Non-enrollees	33.1	28.6	28.3	19.1
Rate of 30-day follow-up after hospitalization for mental illness (%)	Enrollees	32.4	37.2	46.2	40.2
	Non-enrollees	43.2	44.5	45.5	40.7
Ambulatory care sensitive condition admissions per 1,000 eligible months—overall composite (AHRQ PQI # 90)	Enrollees	5.8	5.5	5.5	4.6
	Non-enrollees	7.6	5.6	4.8	3.6
Ambulatory care sensitive condition admissions per 1,000 eligible months—chronic composite (AHRQ PQI # 92)	Enrollees	4.6	4.3	4.4	3.6
	Non-enrollees	6.0	3.9	3.7	2.7
Screening for clinical depression per 1,000 eligible months	Enrollees	7.3	8.6	9.6	8.0
	Non-enrollees	10.4	10.3	10.4	9.4

Table E-9 presents unadjusted descriptive statistics for the demonstration enrollees for services traditionally paid by Medicaid, to help understand the Medicaid utilization experience over time. Nursing home and dental services are excluded from analysis due to encounter data deemed incomplete. LTSS nursing facility service use derived from MMP-submitted Medicaid encounters is excluded from analysis in all FAI States because CMS and RTI decided it was not possible to reliably create this measure because we could not correctly identify all LTSS nursing facility stays. Instead, each evaluation report includes an analysis of LTSS nursing facility use using MDS data. Second, CMS and RTI also decided that dental services in Rhode Island were either incomplete or had unexplained variation, precluding the use of those encounter data for analysis.

Table E-9
Medicaid use for demonstration enrollees in Rhode Island,
July 1, 2016–December 31, 2020

Measure	Demonstration year 1	Demonstration year 2	Demonstration year 3	Demonstration year 4
Personal care				
Users as percentage of enrollees per enrollee month (%)	7.52%	7.27%	8.69%	9.51%
Service days per enrollee month	1.26	1.24	1.43	1.61
Service days per user month	16.79	17.01	16.51	16.97
Other home and community-based services				
Users as percentage of enrollees per enrollee month (%)	11.43%	13.59%	15.21%	14.59%
Service days per enrollee month	1.69	1.94	2.22	1.93
Service days per user month	14.80	14.24	14.62	13.22
Behavioral health services				
Users as percentage of enrollees per enrollee month (%)	20.39%	22.38%	21.89%	21.58%
Service days per enrollee month	0.60	0.87	4.06	4.13
Service days per user month	2.96	3.89	18.55	19.15
Non-emergency medical transport				
Users as percentage of enrollees per enrollee month (%)	4.88%	4.76%	5.02%	4.33%
Service days per enrollee month	0.08	0.08	0.09	0.08
Service days per user month	1.73	1.76	1.72	1.77

HCBS = home and community-based services.

E.1   Service Use by Demographic Characteristics of Eligible Beneficiaries

To examine any differences in racial and ethnic groups, *Figures E-1, E-2*, and *E-3* provide month-level results for five settings of interest for Rhode Island eligible beneficiaries: inpatient admissions, ED visits (non-admit), hospice admissions, primary care E&M visits, and
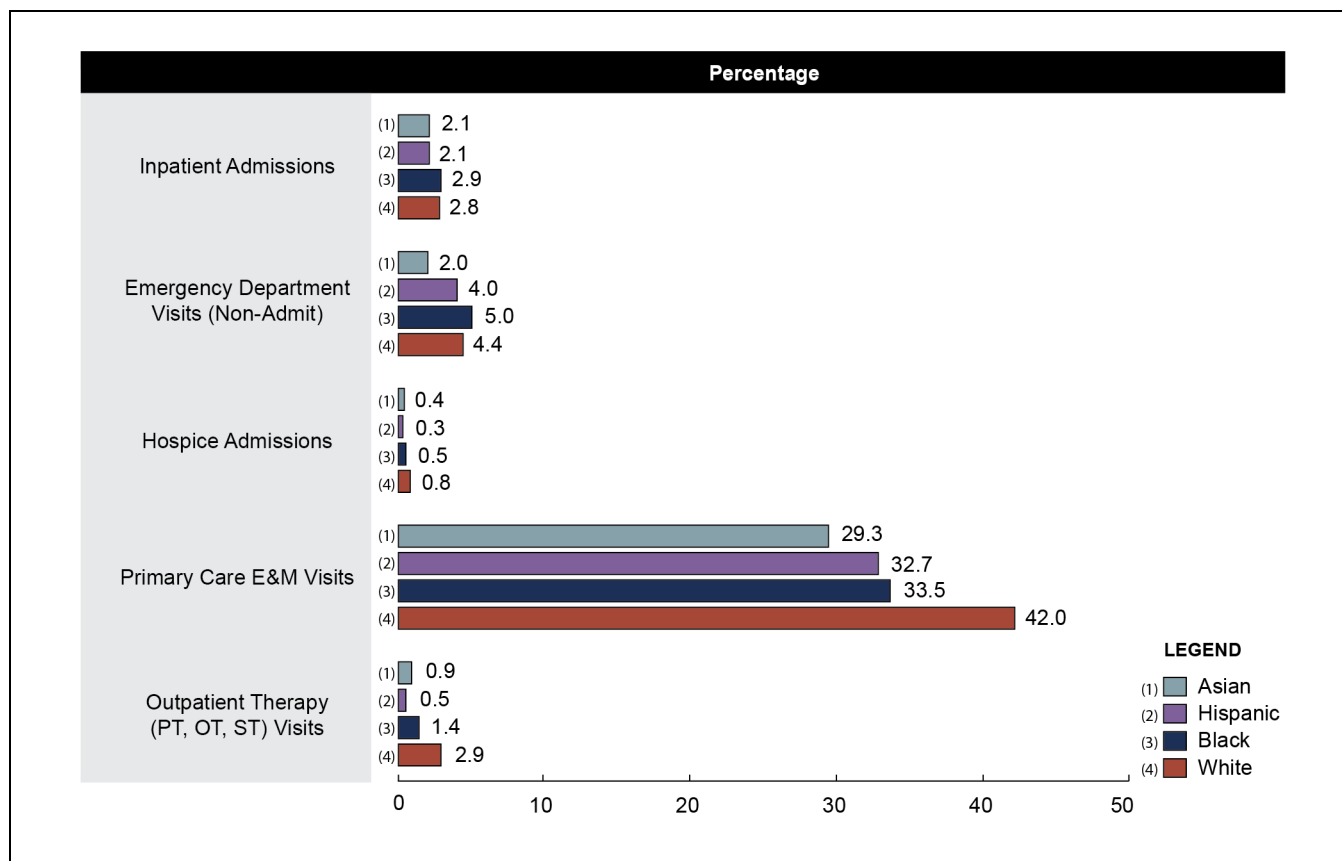
outpatient therapy (physical therapy, occupational therapy, and speech therapy visits). Results across these five settings are displayed using three measures: percentage with any use of the respective service, counts per 1,000 eligible beneficiaries with any use of the respective service, and counts per 1,000 demonstration eligible beneficiaries.

Figure E-1 presents the percentage of use of selected Medicare services. Black beneficiaries had slightly higher inpatient admissions and ED visits, relative to other racial categories. A slightly higher percentage of White beneficiaries had monthly primary care visits, relative to other races. White beneficiaries also received more outpatient therapy visits and hospice admissions, compared to other racial and ethnic groups.

Regarding counts of services used among users of each respective service, as presented in *Figure E-2*, there were limited differences across racial groups for inpatient admissions and hospice use. However, White beneficiaries had slightly more ED visits relative to other racial groups in months when there was any use. Additionally, White beneficiaries had the highest number of primary care E&M and outpatient therapy visits.

Figure E-3 presents counts of services across all Rhode Island demonstration eligible beneficiaries regardless of having any use of the respective services. When looking at service use among all eligible beneficiaries in all eligible months, the results are quite different from those of actual users of services in *Figure E-2*. Black beneficiaries had more inpatient admissions and ED visits relative to the other racial groups (see *Figure E-3*), yet for those with any ED visit or inpatient admission, the rate of use was similar across race categories (see *Figure E-2*). White beneficiaries had more primary care E&M visits relative to the other racial groups, in addition to more hospice admissions and outpatient therapy visits.

Figure E-1
Percent with use of selected Medicare services among Rhode Island demonstration eligible beneficiaries, January 1, 2020–December 31, 2020

E&M = evaluation and management; OT = occupational therapy; PT = physical therapy; ST = speech therapy.

Figure E-2
Service use per 1,000 user months among Rhode Island demonstration eligible beneficiaries,
January 1, 2020–December 31, 2020
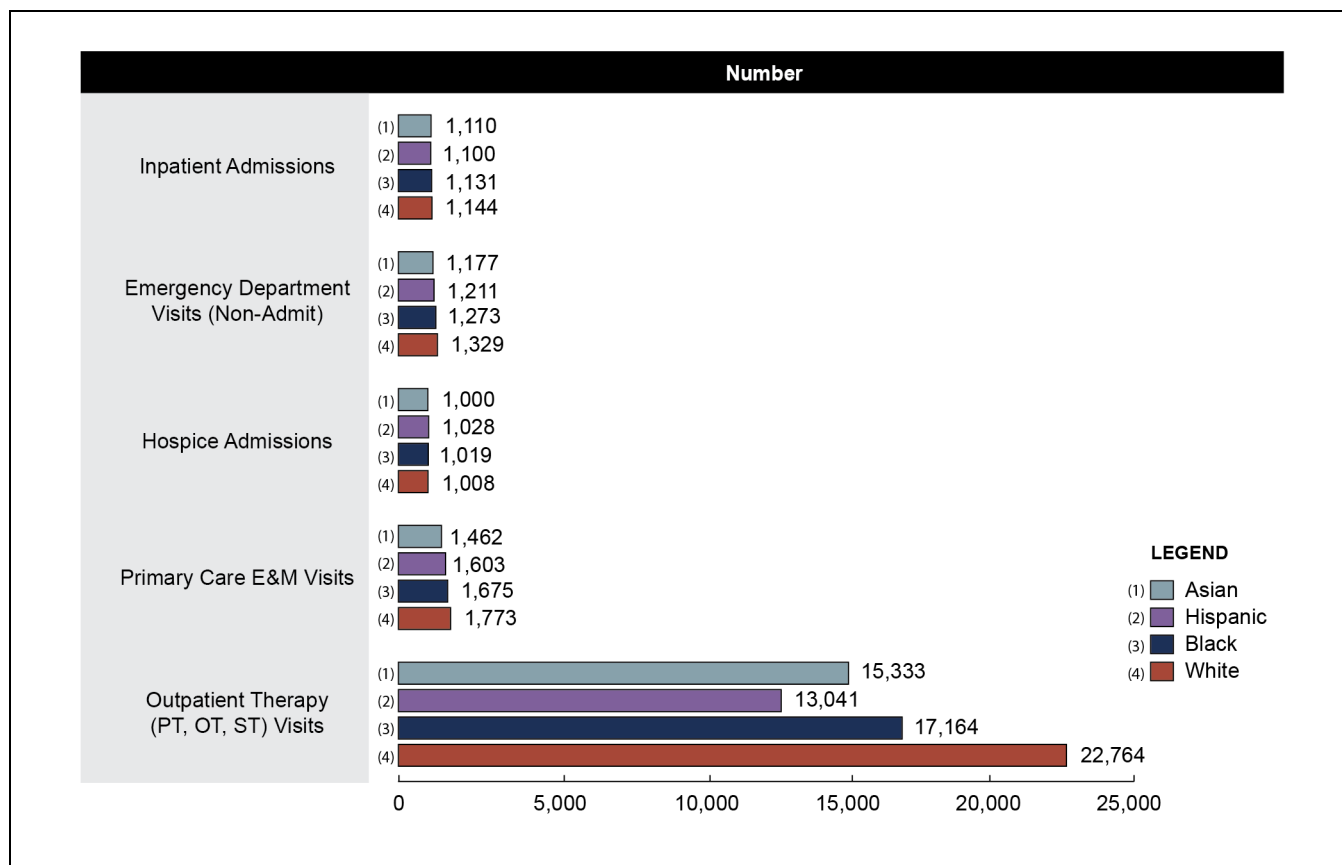
E&M = evaluation and management; OT = occupational therapy; PT = physical therapy; ST = speech therapy.

Figure E-3
Service use per 1,000 eligible months among Rhode Island demonstration eligible beneficiaries,
January 1, 2020–December 31, 2020
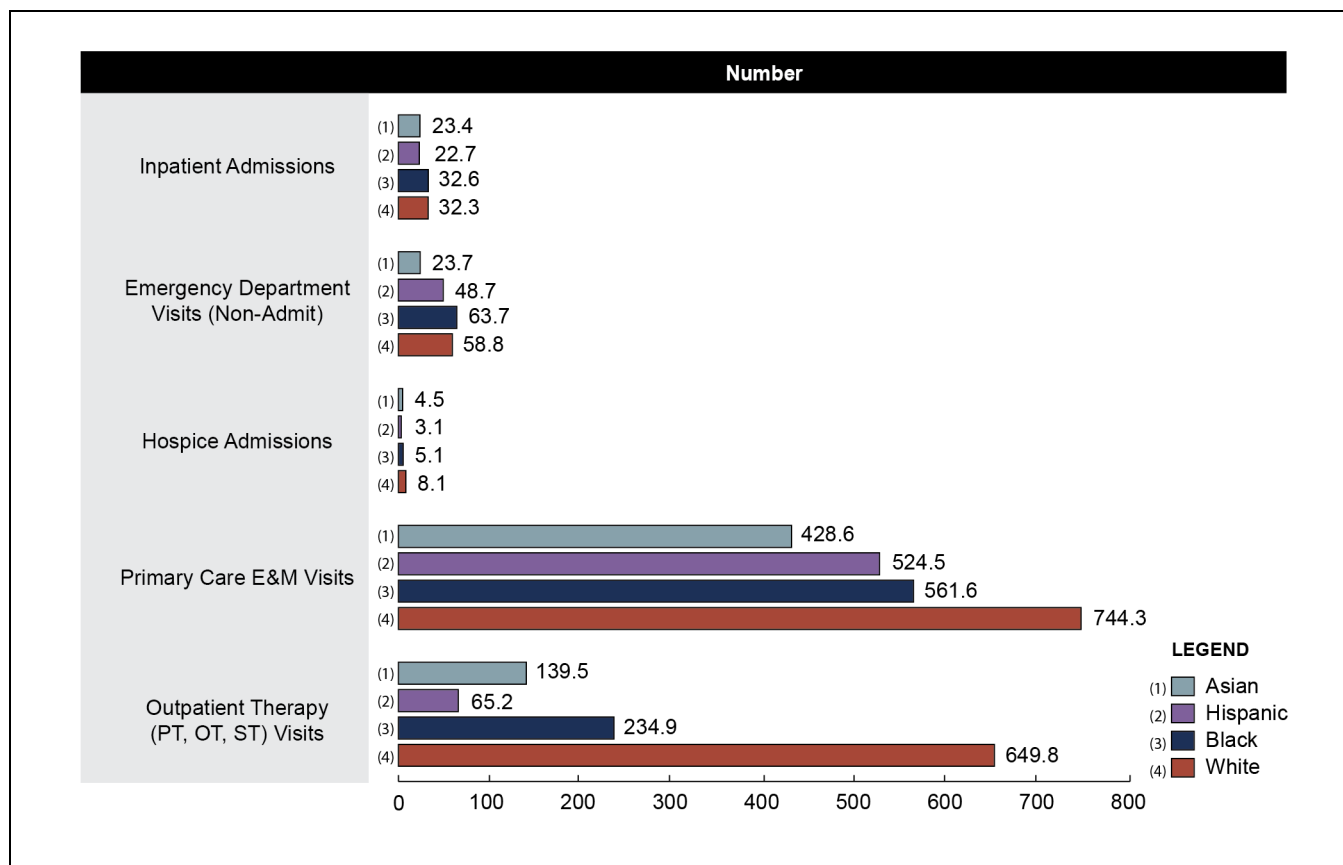
E&M = evaluation and management; OT = occupational therapy; PT = physical therapy; ST = speech therapy.

Appendix F

Cost Savings Methodology and Supplemental Tables

F.1 Cost Savings Methodology

To identify the demonstration group, RTI used quarterly files on demonstration eligible beneficiaries submitted by Rhode Island. Comparison group beneficiaries were identified through a two-step process. First, we identified comparison areas based on market characteristics. Second, we applied all available eligibility criteria to beneficiaries in the identified comparison areas. This process is further described in *Appendix C*. Once the two groups were finalized, we applied e-balance weighting in DinD analysis to balance key characteristics between the two groups.

RTI gathered predemonstration and demonstration monthly Medicare expenditure data for both the demonstration and comparison groups from two data sources, as summarized in *Table F-1*. We obtained capitation payments paid to participating plans during the demonstration period, and payments to MA plans in the predemonstration and demonstration periods from the CMS Medicare Advantage and Part D Inquiry System (MARx). Part D payments were not included in this analysis. The capitation payments were the final reconciled payments paid by the Medicare program after taking into account risk score reconciliation and any associated retroactive adjustments in the system at the time of the data pull (January 2023). Final risk corridor payments were incorporated into the dependent variable construction for demonstration years 1, 2, and 3. The Rhode Island demonstration did not continue implementing risk corridors after demonstration year 3 (calendar year 2019). We also used Medicare FFS claims to calculate expenditures for eligible beneficiaries who were not enrolled in an MMP or MA plan. These FFS claims included all Medicare Parts A and B services.

Table F-1
Data sources for monthly Medicare expenditures

Group	Predemonstration period July 1, 2014–June 30, 2016	Demonstration period July 1, 2016–December 31, 2020
Demonstration	Medicare FFS MA capitation	Capitation rate for enrollees MA capitation for non-enrollees Medicare FFS for non-enrollees
Comparison	Medicare FFS MA capitation	Medicare FFS MA capitation

FFS = fee-for-service; MA = Medicare Advantage.

To estimate the effect of the demonstration on Medicare expenditures, we ran a generalized linear model with gamma distribution and log link. This is a commonly used approach in analysis of health care expenditure data. The model controlled for individual demographic and area-level characteristics, employed e-balance weighting, and adjusted for clustering of observations at the county level. The key policy variable of interest in the model was an interaction term measuring the effect of being part of the demonstration eligible group during the demonstration period, which estimates the demonstrations effect on Medicare expenditures.

F.1.1 Adjustments to Medicare Expenditures

Several adjustments were made to the monthly Medicare expenditures to ensure that observed expenditures variations are not due to differences in Medicare payment policies in different areas of the country or the construction of the capitation rates. **Table F-2** summarizes each adjustment and the application of the adjustments to FFS expenditures or to the capitation rate.

Table F-2
Adjustments to Medicare expenditures variable

Data source	Adjustment description	Reason for adjustment	Adjustment detail
FFS	Indirect Medical Education (IME)	Capitation rates do not include IME.	Do not include IME amount from FFS payments.
FFS	Disproportionate Share Hospital (DSH) Payments and Uncompensated Care Payments (UCP)	The capitation rates reflect DSH and UCP adjustments.	Include DSH and UCP payments in total FFS payment amounts.
FFS	Medicare Sequestration Payment Reductions	Under sequestration Medicare payments were reduced by 2% starting April 1, 2013. Because the predemonstration period includes months prior to April 1, 2013, it is necessary to apply the adjustment to these months of data.	Reduced FFS claim payments incurred before April 2013 by 2%.
Capitation rate (MA and MMP)	Medicare Sequestration Payment Reductions	Under sequestration Medicare payments were reduced by 2% starting April 1, 2013. Sequestration is not reflected in the capitation rates.	Reduced capitation rate by 2%.
Capitation rate (MA)	Bad debt	The Medicare portion of the capitation rate includes an upward adjustment to account for bad debt. Bad debt is not included in the FFS claim payments and therefore needs to be removed from the capitation rate for the savings analysis. (Note: "bad debt" is reflected in the hospital "pass through" payment.)	Reduced capitation rate to account for bad debt load (historical bad debt baseline percentage). This is 0.89% for CY 2014, 0.89% for CY 2015, 0.97% for CY 2016, 0.81% for CY 2017, 0.82% for CY 2018, 0.84% for CY 2019, and 0.81% for CY 2020.

(continued)

Table F-2 (continued)
Adjustments to Medicare expenditures variable

Data source	Adjustment description	Reason for adjustment	Adjustment detail
Capitation rate (MMP)	Bad debt	The Medicare portion of the capitation rate includes an upward adjustment to account for bad debt. Bad debt is not included in the FFS claim payments and therefore needs to be removed from the capitation rate for the savings analysis. (Note, "bad debt" is reflected in the hospital "pass through" payment.)	Reduced blended capitation rate to account for bad debt load (historical bad debt baseline percentage). This is 0.97% for CY 2016, 0.81% for CY 2017, 0.82% for CY 2018, 0.84% for CY 2019, and 0.81% for CY 2020. Reduced the FFS portion of the capitation rate by an additional 0.38% for CY 2016, 0.37% for CY 2017, 0.37% for CY 2018, 0.45% for CY 2019, and 0.40% for CY 2020 to account for the disproportional share of bad debt attributable to MMP enrollees in Medicare FFS.
FFS and capitation rate (MA and MMP)	Average Geographic Adjustments (AGA)	The Medicare portion of the capitation rate reflects the most current hospital wage index and physician geographic practice cost index by county. FFS claims also reflect geographic payment adjustments. To ensure that change over time is not related to differential change in geographic payment adjustments, both the FFS and the capitation rates were "unadjusted" using the appropriate county-specific AGA factor.	Medicare FFS expenditures were divided by the appropriate county-specific 1-year AGA factor for each year. Capitation rates were divided by the appropriate county-specific 5-year AGA factor for each year. Note that the AGA factor applied to the capitated rates for 2014 reflected the 50/50 blend that was applicable to the payment year.
Capitation rate (MA and MMP)	Education user fee	No adjustment needed.	Capitation rates in the MARx database do not reflect the education user fee adjustment (this adjustment is applied at the contract level). Note, education user fees are not applicable in the FFS context and do not cover specific Part A and Part B services. While they result in a small reduction to the capitation payment received by MMPs, we did not account for this reduction in the capitated rate.
Capitation rate (MMP)	Quality withhold	A 1% quality withhold was applied in the first demonstration year, 2% was applied in the second demonstration year, and a 3% quality withhold was applied in the third and fourth demonstration years but was not reflected in the capitation rate used in the analysis.	Final quality withhold repayments for CY 2016, CY 2017, CY 2018, CY 2019, and CY 2020 were incorporated into the dependent variable construction.

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Table F-2 (continued)
Adjustments to Medicare expenditures variable

Data source	Adjustment description	Reason for adjustment	Adjustment detail
Capitation rate (MMP)	Risk Corridor	Risk corridor payment or recoupments are based on reconciliation after application of high cost risk pool or risk adjustment methodologies.	Final risk corridor payments and recoupments were incorporated into the dependent variable construction for demonstration years 1, 2, and 3.

CY = calendar year; FFS = fee-for-service; MA = Medicare Advantage; MARx = Medicare Advantage and Part D Inquiry System; MMP = Medicare-Medicaid Plan.

The capitation payments in MARx reflect the savings assumptions applied to the Medicare components of the rate (1 percent for the first demonstration year, 1.25 percent for the second demonstration year, and 3 percent for the third and fourth demonstration years), but do not reflect the quality withhold amounts.

F.1.2   Model Covariates

Model covariates included the following variables, which were also included in the comparison group selection process. Variables were included in the model after variance inflation factor testing.

- Demographic variables included in the Medicare models were:
  - Age
  - Sex
  - Race/ethnicity
  - Enrolled in another Medicare shared saving program
  - End-stage renal disease status
  - Disability as reason for Medicare entitlement
  - Medicare Advantage status
  - Medicare Secondary Payer (MSP)
- Area-level variables included in the Medicare savings models were:
  - Medicare spending per dually eligible beneficiary age 19 or older
  - MA penetration rate
  - Medicaid spending per dually eligible beneficiary age 19 or older
  - Percentage of population living in married household
  - Percentage of households with member greater than age 60
  - Percentage of households with member less than age 18
  - Percentage of adults with college degree

      – Unemployment rate

      – Percentage of adults with self-care limitation

      – Distance to nearest hospital

      – Distance to nearest nursing home

      – Pandemic vulnerability index (for analyses including 2020 data)

F.1.3 Populations Analyzed

The population analyzed for the Cost Savings outcome include all demonstration eligible beneficiaries, as well as demonstration enrollees. ***Table F-3*** presents descriptive statistics of select characteristics for four population subgroups in demonstration year 4: all demonstration eligible beneficiaries, the comparison group, all MMP enrollees, and all non-MMP enrollees.

The most prevalent age group among all groups was age 64 and younger (ranging from 39.7 to 51.9 percent). All four groups were predominantly White (ranging from 64.4 to 72.4 percent), with Hispanics making up the second-largest group in the demonstration group (10.8 percent) and African Americans making up the second-largest group in the comparison group (9.7 percent). Demonstration enrollees were younger than non-enrollees in the demonstration group (51.9 percent versus 39.7 percent) and were less likely to be White (64.4 percent versus 72.4 percent). There was a relatively higher percentage of Hispanics for demonstration group enrollees (14.3 percent) compared to demonstration group non-enrollees (8.6 percent). Among the comparison population, there was a relatively higher percentage of Asians (3.5 percent) compared to the other groups (ranging from 1.8 to 2.4 percent), and a lower percentage of other race/ethnicity (7.3 percent) relative to the other groups (ranging from 8.5 to 8.8 percent).

Across all groups, a larger proportion of beneficiaries were female (60.7 to 62.5 percent), did not have ESRD, and resided in a metropolitan area. Among demonstration group non-enrollees, more than half of beneficiaries did not have disability as the primary reason for Medicare entitlement (52.5 percent), while in other groups, more than half of beneficiaries did have disability as the primary reason for Medicare entitlement (53.4 to 62.5 percent). Demonstration enrollees were more likely to be disabled than non-enrollees (47.5 percent versus 62.5 percent).

The HCC score is a measure of the predicted relative annual cost of a Medicare beneficiary based on the diagnosis codes present in recent Medicare claims. Beneficiaries with a score of 1 are predicted to have average cost in terms of annual Medicare expenditures. Beneficiaries with HCC scores less than 1 are predicted to have below average costs, whereas those with scores of 2 are predicted to have twice the average annual cost. Average HCC scores ranged between 1.1 and 1.2 among all groups.

Table F-3
Characteristics of eligible beneficiaries in Rhode Island demonstration year 4 by group

Characteristics	Demonstration group	Comparison group	Demonstration group, enrollees	Demonstration group, non-enrollees
Weighted number of eligible beneficiaries	34,923	52,927	13,733	21,190
Demographic characteristics				
Age				
64 and younger	44.5	47.0	51.9	39.7
65 to 74	29.5	27.8	26.8	31.2
75 and older	26.1	25.2	21.4	29.1
Female				
No	39.1	37.5	39.3	39.0
Yes	60.9	62.5	60.7	61.0
Race/ethnicity				
White	69.3	69.8	64.4	72.4
African American	9.2	9.7	10.4	8.5
Hispanic	10.8	9.6	14.3	8.6
Asian	2.0	3.5	2.4	1.8
Other	8.7	7.3	8.5	8.8
Disability as reason for original Medicare entitlement				
No	46.6	45.3	37.5	52.5
Yes	53.4	54.7	62.5	47.5
ESRD status				
No	98.9	98.8	98.8	99.1
Yes	1.1	1.2	1.2	0.9
MSA				
No	0.0	0.0	0.0	0.0
Yes	100.0	100.0	100.0	100.0
Participating in Shared Savings Program				
No	88.4	87.9	99.7	81.1
Yes	11.6	12.1	0.3	18.9
HCC score	1.2	1.2	1.1	1.2

(continued)

Table F-3 (continued)
Characteristics of eligible beneficiaries in Rhode Island demonstration year 4 by group

Characteristics	Demonstration group	Comparison group	Demonstration group, enrollees	Demonstration group, non-enrollees
Market characteristics				
Medicare spending per dual, ages 19+ ($)	15,065.23	14,391.77	15,065.23	15,065.23
MA penetration rate	0.4	0.3	0.4	0.4
Medicaid-to-Medicare fee index (FFS)	0.4	0.6	0.4	0.4
Medicaid spending per dual, ages 19+ ($)	22,271.67	22,576.64	22,271.67	22,271.67
Fraction of dually eligible beneficiaries using NF, ages 65+	0.3	0.4	0.3	0.3
Fraction of dually eligible beneficiaries using HCBS, ages 65+	0.1	0.0	0.1	0.1
Fraction of dually eligible beneficiaries using personal care, ages 19+	0.1	0.1	0.1	0.1
Fraction of dually eligible beneficiaries with Medicaid managed care, ages 19+	0.0	0.0	0.0	0.0
Population per square mile, all ages	1,018.4	309.9	1,018.4	1,018.4
Patient care physicians per 1,000 population	1.0	0.7	1.0	1.0
Area characteristics				
% of population in Medicare Advantage	29.7	31.7	NA	48.1
% of population living in married households	65.6	65.4	64.3	66.4
% of adults with college education	27.6	26.7	26.8	28.1
% of adults with self-care limitations	3.7	3.6	3.8	3.6
% of adults unemployed	5.9	6.2	6.1	5.8
% of household with individuals younger than 18	29.4	28.9	29.8	29.2
% of household with individuals older than 60	40.2	40.3	39.5	40.7
Distance to nearest hospital	3.9	3.7	3.6	4.0
Distance to nearest nursing facility	2.3	2.3	2.1	2.4
Pandemic Vulnerability Index	0.5	0.5	0.5	0.5

ESRD = end-stage renal disease; FFS = fee-for-service; HCBS = home and community-based services; HCC = Hierarchical Condition Category; NF = nursing facility; MA = Medicare Advantage; MSA = metropolitan statistical area.
NOTE: Analysis conducted on demonstration eligible FFS population and Medicare-Medicaid Plan enrollees.
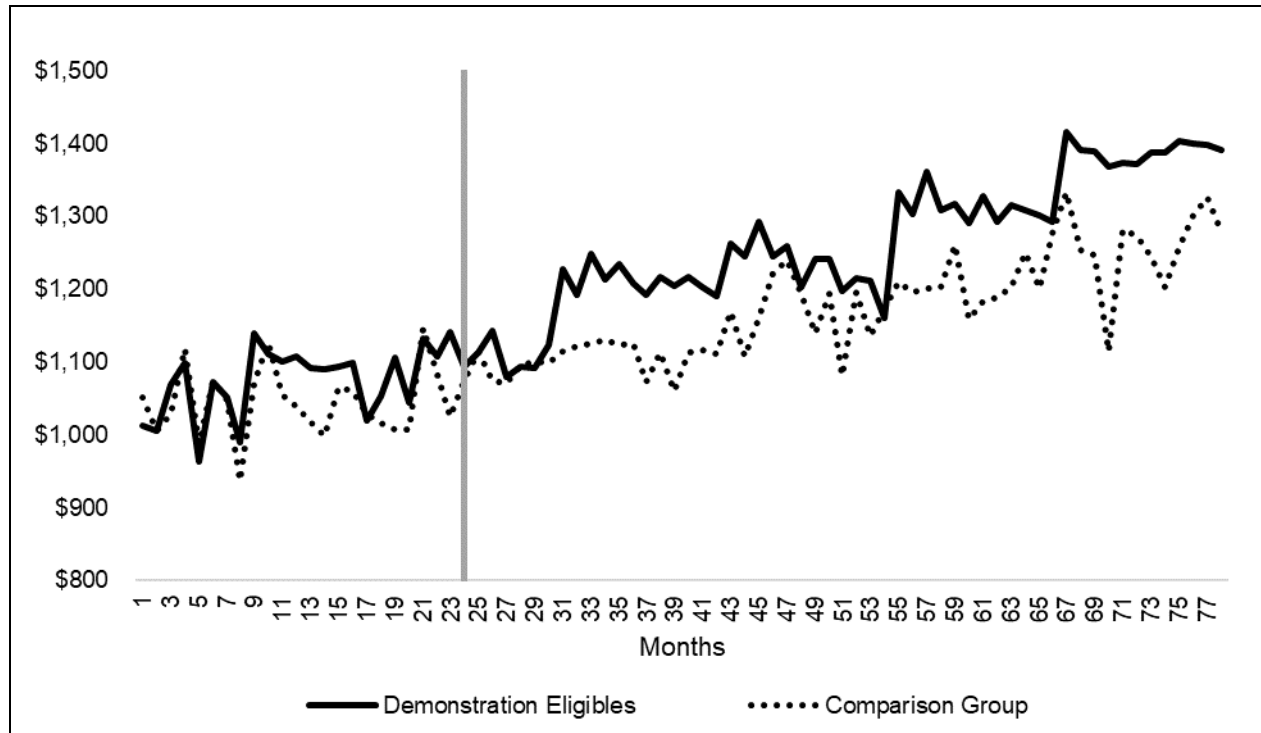SOURCE: RTI analysis of Rhode Island demonstration eligible and comparison group Medicare data.

F.2   Medicare Descriptive Results

Once we finalized the adjustments to the dependent variable, we tested a key assumption of a DinD model: parallel trends in the predemonstration period. We plotted the mean monthly Medicare expenditures for both the comparison group and demonstration group, with the PS weights applied. ***Figure F-1*** shows the resulting plot and suggests that there were parallel trends in the first predemonstration year (months 1-12), but not the second predemonstration year

(months 13-24). As part of a sensitivity analysis, we calculated a DinD model aimed at addressing the non-parallel trends observed in the predemonstration period, particularly those reflected in the trends during the second predemonstration year (months 13–24). In contrast to the primary DinD model, this sensitivity model yielded estimates of a lesser magnitude, yet they still pointed to the absence of savings.

Figure F-1
Mean monthly Medicare expenditures (weighted), predemonstration and demonstration periods in Rhode Island, demonstration and comparison group, July 2014–December 2020

SOURCE: RTI analysis of Rhode Island demonstration eligible and comparison group Medicare data.

The DinD values in *Tables F-4* through *F-11* represent the overall impact on savings using descriptive statistics. These effects are descriptive in that they are arithmetic combinations of simple means, without controlling for covariates. The change in the demonstration group minus the change in the comparison group is the DinD value. This value would be equal to zero if the differences between predemonstration and the demonstration year were the same for both the demonstration group and the comparison group. A negative value would indicate savings for the demonstration group, and a positive value would indicate losses for the demonstration group. However, if the DinD confidence interval includes zero, then the value is not statistically significant. These results are only meant to provide a descriptive exploration of the results; the regression results presented in *Section 6, Demonstration Impact on Cost Savings* and *Table F-12* represent the most accurate adjusted impact on Medicare costs.

Tables F-4 through *F-7* show the mean monthly Medicare expenditures for the demonstration group and comparison group in the predemonstration and each demonstration period, unweighted. The unweighted tables display no statistically significant increases or

decreases in mean monthly Medicare expenditures among the demonstration group, relative to the comparison group. Mean monthly Medicare expenditures increased for the demonstration group and for the comparison group during demonstration years 1 through 4, relative to the previous demonstration year. The weighted tables show a statistically significant positive DinD estimate for demonstration years 3 and 4, indicating an increase in mean monthly Medicare expenditures for the demonstration group, relative to the comparison group in the previous demonstration year. There were no statistically significant increases or decreases in mean monthly Medicare expenditures for the demonstration group, relative to the comparison group, in the earlier demonstration years (see *Tables F-8* through *F-11*). Similar to the unweighted results, mean monthly Medicare expenditures increased in the demonstration and comparison groups in demonstration years 1 through 4, relative to the previous demonstration year.

Table F-4
Mean monthly Medicare expenditures for demonstration group and comparison group in Rhode Island, predemonstration period and demonstration year 1, unweighted

Group	Predemonstration period (July 2014–June 2016) (95% confidence intervals)	Demonstration year 1 (July 2016–December 2017) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,074.93 ($1,014.11, $1,135.76)	$1,178.13 ($1,157.36, $1,198.89)	$103.19 ($43.38, $163.00)
Comparison	$1,021.31 ($900.97, $1,141.65)	$1,096.45 ($978.86, $1,214.04)	$75.14 ($50.85, $99.44)
DinD	N/A	N/A	$28.05 (−$19.30, $75.40)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicare claims.

Table F-5
Mean monthly Medicare expenditures for demonstration group and comparison group in Rhode Island, predemonstration period and demonstration year 2, unweighted

Group	Predemonstration period (July 2014–June 2016) (95% confidence intervals)	Demonstration year 2 (January 2018–December 2018) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,074.93 ($1,014.11, $1,135.76)	$1,230.47 ($1,207.91, $1,253.03)	$155.54 ($99.31, $211.76)
Comparison	$1,021.31 ($900.97, $1,141.65)	$1,179.02 ($1,058.51, $1,299.52)	$157.71 ($131.65, $183.77)
DinD	N/A	N/A	−$2.17 (−$48.33, $43.99)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicare claims.

Table F-6
Mean monthly Medicare expenditures for demonstration group and comparison group in Rhode Island, predemonstration period and demonstration year 3, unweighted

Group	Predemonstration period (July 2014–June 2016) (95% confidence intervals)	Demonstration year 3 (January 2019–December 2019) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,074.93 ($1,014.11, $1,135.76)	$1,312.87 ($1,292.56, $1,333.18)	$237.94 ($163.92, $311.95)
Comparison	$1,021.31 ($900.97, $1,141.65)	$1,249.69 ($1,120.80, $1,378.58)	$228.39 ($204.23, $252.54)
DinD	N/A	N/A	$9.55 (−$46.39, $65.49)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicare claims.

Table F-7
Mean monthly Medicare expenditures for demonstration group and comparison group in Rhode Island, predemonstration period and demonstration year 4, unweighted

Group	Predemonstration period (July 2014–June 2016) (95% confidence intervals)	Demonstration year 4 (January 2020–December 2020) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,074.93 ($1,014.11, $1,135.76)	$1,389.85 ($1,374.62, $1,405.08)	$314.92 ($215.17, $414.67)
Comparison	$1,021.31 ($900.97, $1,141.65)	$1,288.10 ($1,138.56, $1,437.65)	$266.80 ($225.90, $307.70)
DinD	N/A	N/A	$48.12 (−$31.03, $127.28)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicaid claims.

Table F-8
Mean monthly Medicare expenditures for demonstration group and comparison group in Rhode Island, predemonstration period and demonstration year 1, weighted

Group	Predemonstration period (July 2014–June 2016) (95% confidence intervals)	Demonstration year 1 (July 2016–December 2017) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,074.93 ($1,014.11, $1,135.76)	$1,178.13 ($1,157.36, $1,198.89)	$103.19 ($43.38, $163.00)
Comparison	$1,044.77 ($921.91, $1,167.62)	$1,104.54 ($979.68, $1,229.40)	$59.77 ($16.77, $102.78)
DinD	N/A	N/A	$43.42 (−$15.21, $102.04)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicare claims.

Table F-9
Mean monthly Medicare expenditures for demonstration group and comparison group in Rhode Island, predemonstration period and demonstration year 2, weighted

Group	Predemonstration period (July 2014–June 2016) (95% confidence intervals)	Demonstration year 2 (January 2018–December 2018) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,074.93 ($1,014.11, $1,135.76)	$1,230.47 ($1,207.91, $1,253.03)	$155.54 ($99.31, $211.76)
Comparison	$1,044.77 ($921.91, $1,167.62)	$1,167.60 ($1,041.43, $1,293.76)	$122.83 ($81.92, $163.74)
DinD	N/A	N/A	$32.71 (−$22.74, $88.16)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicare claims.

Table F-10
Mean monthly Medicare expenditures for demonstration group and comparison group in Rhode Island, predemonstration period and demonstration year 3, weighted

Group	Predemonstration period (July 2014–June 2016) (95% confidence intervals)	Demonstration year 3 (January 2019–December 2019) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,074.93 ($1,014.11, $1,135.76)	$1,312.87 ($1,292.56, $1,333.18)	$237.94 ($163.92, $311.95)
Comparison	$1,044.77 ($921.91, $1,167.62)	$1,211.26 ($1,090.28, $1,332.24)	$166.49 ($145.20, $187.79)
DinD	N/A	N/A	$71.44 ($16.62, $126.27)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicare claims.

Table F-11
Mean monthly Medicare expenditures for demonstration group and comparison group in Rhode Island, predemonstration period and demonstration year 4, weighted

Group	Predemonstration period (July 2014–June 2016) (95% confidence intervals)	Demonstration year 4 (January 2020–December 2020) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,074.93 ($1,014.11, $1,135.76)	$1,389.85 ($1,374.62, $1,405.08)	$314.92 ($215.17, $414.67)
Comparison	$1,044.77 ($921.91, $1,167.62)	$1,259.69 ($1,115.70, $1,403.67)	$214.92 ($181.61, $248.23)
DinD	N/A	N/A	$100.00 ($24.29, $175.71)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicaid claims.

F.3   Medicare Regression Results

Table F-12 shows the main results from the DinD analysis for demonstration years 1–4 and for the entire demonstration period, controlling for beneficiary demographics and market characteristics. Relative to the comparison group, the demonstration was associated with statistically significant cost increases to the Medicare program during demonstration years 1, 3, and 4, although it was not associated with a statistically significant increase in Medicare costs during demonstration year 2. The cumulative impact estimate over all 4 demonstration years was statistically significant suggesting that overall the demonstration was associated with increases in Medicare costs of $83.99 per member per month (PMPM).

Table F-12
Cumulative and annual demonstration effects on Medicare Parts A and B costs in Rhode Island, demonstration years 1–4, July 1, 2016–December 31, 2020

Period	Adjusted coefficient DinD ($)	*p*-value	95% confidence interval ($)	90% confidence interval ($)
Demonstration Year 1 (July 2016–December 2017)	54.94	0.0317	(4.83, 105.05)	(12.88, 96.99)
Demonstration Year 2 (January 2018–December 2018)	37.30	0.1910	(−18.61, 93.21)	(−9.62, 84.23)
Demonstration Year 3 (January 2019–December 2019)	117.31	0.0019	(43.41, 191.20)	(55.29, 179.32)
Demonstration Year 4 (January 2020–December 2020)	140.19	0.0040	(44.6, 235.78)	(59.97, 220.41)
Cumulative (Demonstration Years 1–4, July 2016–December 2020)	83.99	0.0055	(24.63, 143.34)	(34.18, 133.80)

DinD = difference-in-differences.
SOURCE: RTI analysis of Medicare claims.

   While the signs of the DinD coefficients are positive in all four demonstration years, and significant in three of the four years, the magnitudes of the DinD coefficients in demonstration years 3 and 4 are more than twice the size of the DinD coefficients in demonstration years 1 and 2. To further explore what may be driving the larger results in the later demonstration years, we compared annual PMPM amounts for the enrollees, the eligible but not enrolled, and the comparison group. As ***Figure F-2*** shows, relative to both the comparison group and the eligible but not enrolled (ENE) population, the PMPM increase between demonstration year 2 and 3 is steeper for MMP enrollees, though MMP and ENE populations have similar PMPM growth between demonstration year 3 and 4. This graph differs from ***Figure F-1*** in that the PMPM amounts are averaged at the demonstration period level to keep the focus on underlying trends in costs that can be obscured when observing monthly variations. Furthermore, it separately reports the PMPM amounts for enrollees and ENE populations to elucidate the relative contribution of each group to the overall PMPM trends observed in the demonstration group.

Figure F-2
Annual PMPM trends for demonstration ENEs, enrollees, and comparison group in Rhode Island, July 2014–December 2020
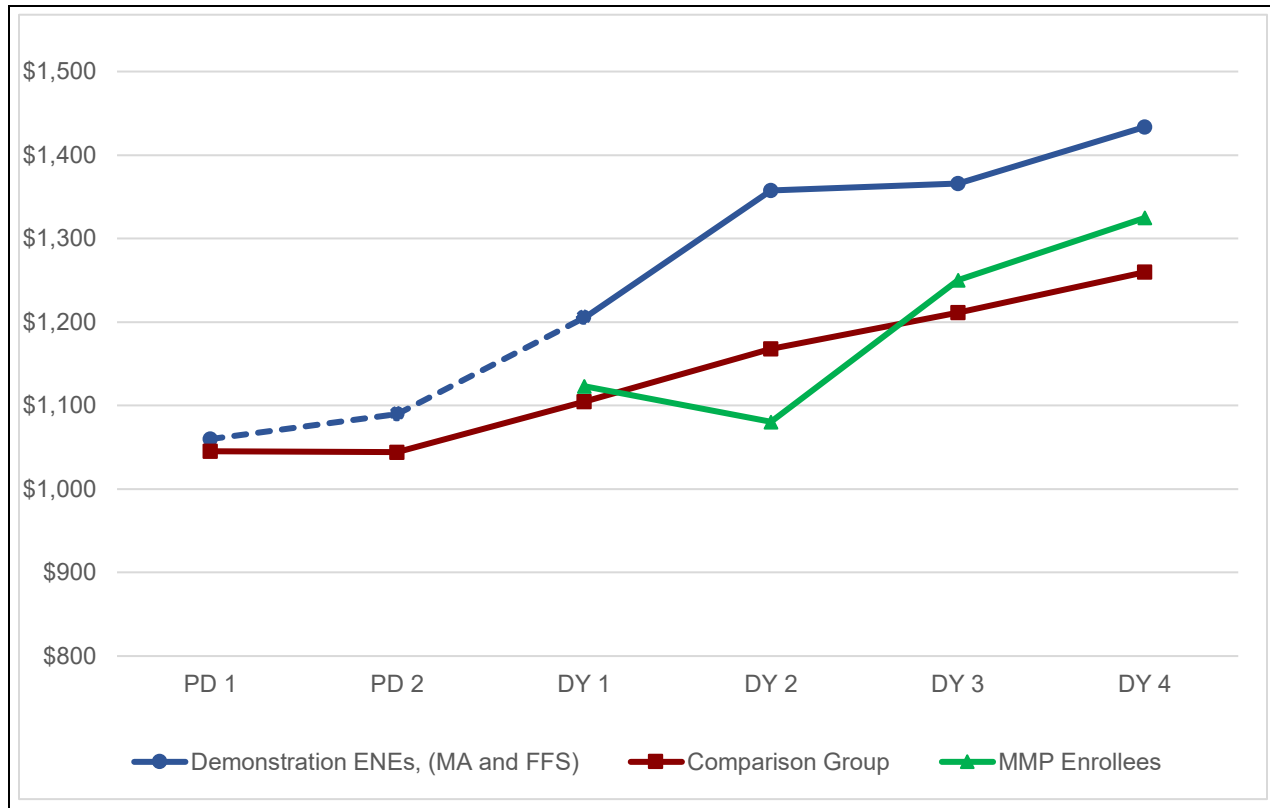
DY = demonstration year; ENE= eligible not enrolled; FFS = fee-for-service; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; PDY = predemonstration year; PMPM = per member per month.
NOTE: predemonstration data for the demonstration group includes FFS or MA payments for MMP enrollees.

Table F-13 provides an illustrative example of the generalized linear model output for each covariate on mean monthly Medicare expenditures across the entire demonstration period.

Table F-13
Generalized linear model results on monthly Medicare expenditures in Rhode Island
(n = 5,480,304 person months)

Independent variables	Coefficient	Standard error	z-value	*p*-value
Demonstration group	−0.0575	0.0313	−1.84	0.066
Post period	0.0444	0.0106	4.18	0.000
Interaction of post period x demonstration group	0.0674	0.0256	2.64	0.008
Age (continuous)	0.0171	0.0005	32.33	0.000
Asian	−0.5079	0.0779	-6.52	0.000
Black	−0.0012	0.0285	−0.04	0.968

(continued)

Table F-13
Generalized linear model results on monthly Medicare expenditures in Rhode Island
(n = 5,480,304 person months)

Independent variables	Coefficient	Standard error	z-value	*p*-value
Female	−0.0006	0.0108	−0.05	0.960
Hispanic	−0.2054	0.0336	−6.11	0.000
Other race/ethnicity	−0.2680	0.0270	−9.93	0.000
Disability as reason for Medicare entitlement	0.1840	0.0266	6.92	0.000
End-stage renal disease	2.0969	0.0308	68.08	0.000
Participation in other Shared Savings Program	0.0548	0.0329	1.67	0.096
Medicare Advantage status	0.3256	0.0336	9.70	0.000
Medicare Secondary Payer	−0.2469	0.1239	−1.99	0.046
Medicare Advantage penetration rate	0.9743	0.2261	4.31	0.000
Medicaid spending per dual	0.0000	0.0000	−7.45	0.000
Medicare spending per dual	0.0001	0.0000	9.78	0.000
Percent of adults with college education	0.0000	0.0006	−0.03	0.978
Percent of adults with self-care limitation	−0.0057	0.0052	−1.10	0.270
Percent of households with individuals older than 60	0.0014	0.0013	1.07	0.284
Percent of households with individuals younger than 18	−0.0024	0.0007	−3.26	0.001
Percent of population married	−0.0026	0.0009	−2.82	0.005
Percent of adults who are unemployed	−0.0035	0.0035	−1.00	0.316
Distance to nearest hospital	0.0028	0.0041	0.68	0.499
Distance to nearest nursing facility	0.0021	0.0066	0.32	0.746
Pandemic Vulnerability Index	0.1188	0.0343	3.47	0.001
Intercept	4.7016	0.2198	21.39	0.000

FFS = fee-for-service; HCBS = home and community-based services.
SOURCE: RTI analysis of Medicare claims.

Table F-14 presents the results from the DinD analysis for the enrollee-subgroup. The enrollee-subgroup analysis focused on beneficiaries identified as enrolled for at least 3 months in the demonstration period and with at least 3 months of baseline eligibility. Note that a subset of the comparison group developed for the ITT analysis was used in the enrollee subgroup analyses. Comparison group beneficiaries used in the enrollee subgroup analyses were required to have at least 3 months of eligibility in the demonstration period (July 1, 2016–December 31, 2020) and at least 3 months of eligibility in the predemonstration period (July 1, 2014–June 30, 2016), analogous to the criteria for identifying enrollees. The results indicate statistically significant additional costs associated with enrollees. This enrollee subgroup analysis is limited by the absence of person-level data on characteristics that potentially would lead an individual in a comparison area to enroll in a similar demonstration, and thus the results should only be considered in the context of this limitation.

Table F-14
Cumulative and annual demonstration effects on Medicare Parts A and B costs among enrolled beneficiaries in Rhode Island, demonstration years 1–4, July 1, 2016– December 31, 2020

Period	Adjusted coefficient DinD ($)	*p*-value	95% confidence interval ($)	90% confidence interval ($)
Demonstration Year 1 (July 2016–December 2017)	65.74	0.0326	(5.45, 126.03)	(15.14, 116.33)
Demonstration Year 2 (January 2018–December 2018)	78.28	0.0274	(8.73, 147.82)	(19.91, 136.64)
Demonstration Year 3 (January 2019–December 2019)	237.19	0.0000	(136.34, 338.04)	(152.56, 321.83)
Demonstration Year 4 (January 2020–December 2020)	305.60	0.0000	(206.49, 404.71)	(222.42, 388.78)
Cumulative (Demonstration Years 1–4, July 2016–December 2020)	147.41	0.0000	(80.65, 214.16)	(91.38, 203.43)

DinD = difference-in-differences.
SOURCE: RTI analysis of Medicare claims.

F.4   Medicaid Data Quality

Significant data quality issues for the Medicaid data in Rhode Island and the comparison group states prevented us from providing a DinD analysis or a descriptive analysis of the Medicaid total cost of care for those eligible for the demonstration in Rhode Island. In the DQAtlas, the inpatient FFS expenditures in the T-MSIS Analytic Files (TAF) for Rhode Island is classified as being of high concern (2014–2017, 2020) or unusable (2018–2019); high concern means that there is greater than 20 percent discrepancy between the expenditures in the TAF and the expenditures in the CMS-64, and unusable means there is greater than 50 percent discrepancy between the two data source. The FFS long-term care expenditures for the TAF in Rhode Island is classified as being unusable in 2017 and of high concern in 2018; total monthly beneficiary payments in the Other Services file are classified as unusable in 3 years (2014–2016) and of high concern in 4 years (2017–2020). Further, our analysis of the total cost of care for those eligible for the Rhode Island demonstration confirmed that there are significant irregularities in the cost data in 2016 and 2020. For these reasons, we were not able to provide a DinD or a descriptive analysis of the Medicaid total cost of care in Rhode Island.

Appendix G
Supplemental Analyses

G.1   Service Utilization Supplemental Analyses

Improved care management, a cornerstone of the State's MMP demonstration efforts, is expected to impact service utilization patterns by increasing access to primary care and reducing hospitalizations and emergency care. To better understand the demonstration impact results described in *Section 5*, *Demonstration Impact on Service Utilization and Quality of Care*, RTI conducted the following descriptive analyses:

- A cohort analysis comparing the predemonstration trends of select service utilization outcomes among beneficiaries who were enrolled at any point during demonstration year 1 with beneficiaries who were eligible but never enrolled (ENE) in demonstration year 1.

- A cross-sectional analysis of mortality rates among enrolled beneficiaries and eligible but not enrolled beneficiaries during the entire study period.

These analyses provide more context for the DinD results reported in *Section 5, Demonstration Impact on Service Utilization and Quality of Care*, by illustrating the predemonstration service utilization and risk profile of the beneficiaries who enrolled in the demonstration, relative to the demonstration eligible population who did not enroll. If the demonstration enrolls beneficiaries who have lower service utilization rates in the predemonstration period than the ENE, then this favorable selection into the MMP may decrease the likelihood of observing any desired demonstration impact on high-cost measures such as inpatient admissions, ED use, and SNF admissions. This analysis does not, however, explain statistically significant unfavorable increases in these measures.

G.1.1   Pre-enrollment Cohort Analysis

The purpose of this analysis was to compare the predemonstration utilization experience of Medicare FFS beneficiaries who enrolled in an MMP during demonstration year 1 with the utilization experience of those who were ENE in demonstration year 1. The measures we analyzed include any inpatient admission, any ED use, and any SNF admission as described in *Appendix D.* The analysis included individuals who were eligible during demonstration year 1. Enrolled and ENE cohorts were defined by determining whether a beneficiary was enrolled at any point during demonstration year 1. *Figure G-1* shows the trends for the enrolled and ENE groups in 2 predemonstration years and the first 2 demonstration years. The number of beneficiary months and utilization rates are presented in *Table G-1*.

- The pre-enrollment differences in inpatient use and SNF use, between the demonstration year 1 enrolled and ENE cohorts generally provide evidence of favorable selection into the MMP. *Figure G-1* illustrates that the enrolled group had lower utilization of inpatient and SNF services compared to the ENE cohort during the predemonstration and demonstration periods.

- The monthly probability of any treat-and-release ED use did not follow this pattern, as it was higher in the enrolled cohort than the ENE cohort in the predemonstration period and similar to the ENE cohort in the demonstration period. The decline in ED

use among the enrolled from predemonstration to demonstration periods may reflect the impact of the demonstration.

- These differences provide evidence of favorable selection, as beneficiaries who enrolled in MMPs used fewer high-intensity and high-cost services, with the exception of ED visits, than those who were ENE.

- Favorable selection into the MMPs may impact the likelihood or extent of observing a favorable demonstration impact on these measures. The enrolled population in demonstration year 1 already had a relatively low monthly inpatient and SNF admission rate during the predemonstration period; further reductions relative to the comparison group may be more difficult to achieve through the demonstration.

Figure G-1
Monthly percent and count of service utilization among eligible months by demonstration year 1 enrollment in Rhode Island, July 1, 2016–December 31, 2020
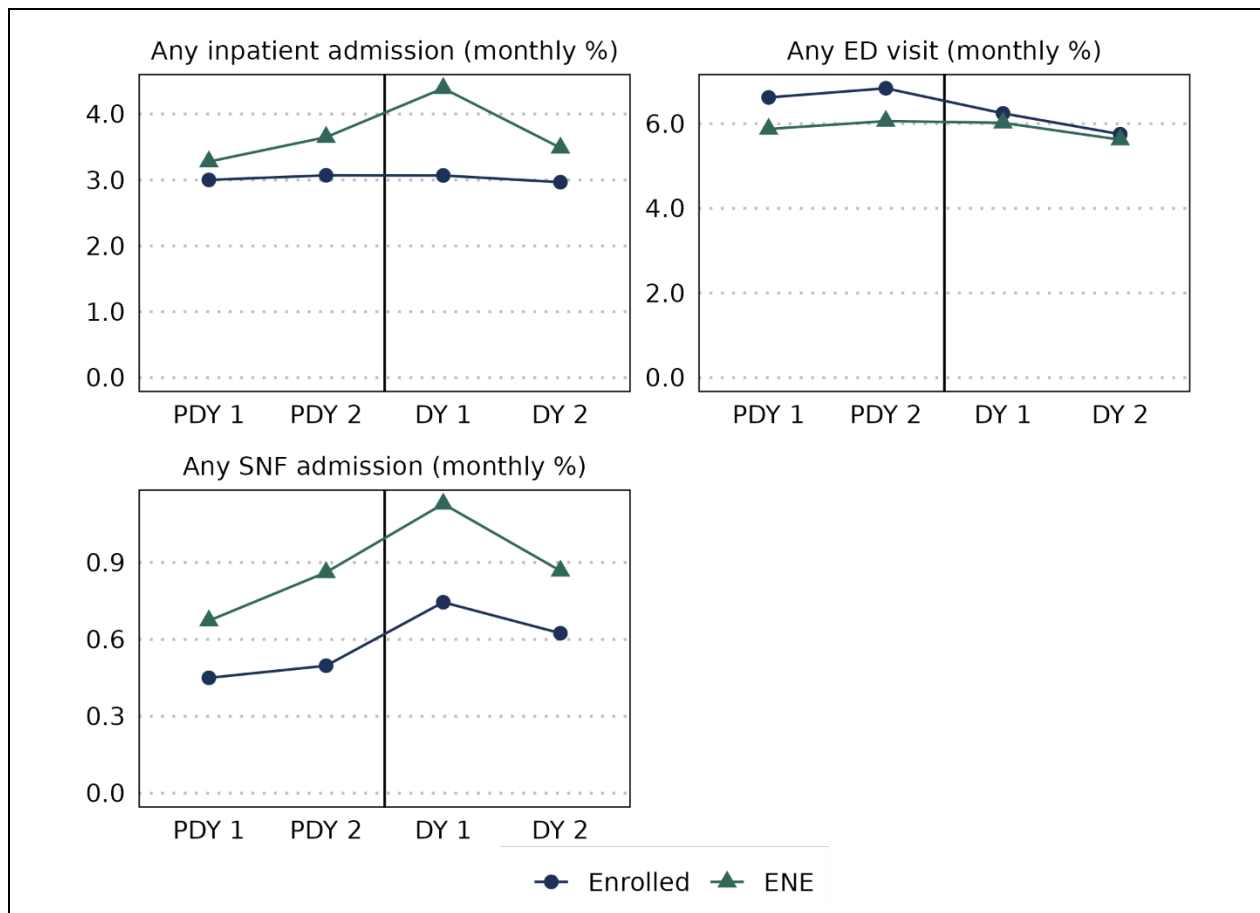
DY = demonstration year; ED = emergency department; ENE = eligible but never enrolled; PDY = predemonstration year; SNF = skilled nursing facility.

Table G-1
Service utilization by demonstration year 1 enrollment in Rhode Island,
July 1, 2016–December 31, 2020

Period	N (beneficiary months)		Any inpatient admission (monthly %)		Any ED visit (monthly %)		Any SNF admission (monthly %)	
	Enrolled	ENE	Enrolled	ENE	Enrolled	ENE	Enrolled	ENE
PDY 1	114,209	49,776	3.0006	3.2787	6.6194	5.8743	0.4501	0.6730
PDY 2	126,478	53,051	3.0701	3.6493	6.8352	6.0602	0.4973	0.8614
DY 1	122,426[1]	83,467	3.0680	4.3910	6.2430	6.0191	0.7449	1.1286
DY 2	117,461[2]	58,920	2.9661	3.4878	5.7508	5.6212	0.6240	0.8673

DY = demonstration year; ED = emergency department; ENE = eligible but never enrolled; PDY = predemonstration year; SNF = skilled nursing facility.
[1] N includes enrolled months among beneficiaries who enrolled in a Medicare-Medicaid Plan during DY 1.
[2] This number is a subset of DY 1 enrollees.
SOURCE: RTI analysis of Rhode Island demonstration eligible Medicare administrative claims and encounter data.

G.1.2 Mortality Analysis

This descriptive analysis examines mortality rates to provide additional insight into differences in health characteristics between enrolled and non-enrolled beneficiaries in the demonstration group. These differences can help understand the DinD results described in ***Section 5, Demonstration Impact on Service Utilization and Quality of Care***. A lower mortality rate observed among the enrolled population, relative to the demonstration eligible but not enrolled population, would suggest favorable selection into demonstration enrollment and lower the likelihood of observing favorable demonstration effects. Demonstration group eligible beneficiaries are categorized into three groups: predemonstration, enrolled during a demonstration period, and never enrolled during a demonstration period. Enrollment categories are based on period-level indicators, so the same beneficiary's observations may be categorized differently over time based on enrollment during a given period. ***Figure G-2*** and ***Table G-2*** show the annualized mortality rate for each group, defined as the number of beneficiaries who died during a given period divided by the number of person-years (months alive divided by 12) during the period.

- Beneficiaries who enrolled in MMPs during the demonstration period have a lower mortality rate than the demonstration eligible non-enrolled during the demonstration period.

- These findings are consistent with the pre-enrollment service utilization analysis (see ***Figure G-1***) findings that there was favorable selection in the MMPs. Favorable selection may make it less likely to observe favorable demonstration effects because a healthier enrolled population may be less likely to meaningfully benefit from greater care management and access to care. Lower mortality during the demonstration period among the enrolled population, compared to the eligible non-enrolled, may

reflect the impact of the demonstration. However, the size of the difference suggests this is an unlikely explanation.

Figure G-2
Mortality rate among enrolled and not enrolled in Rhode Island, July 1, 2016– December 31, 2020
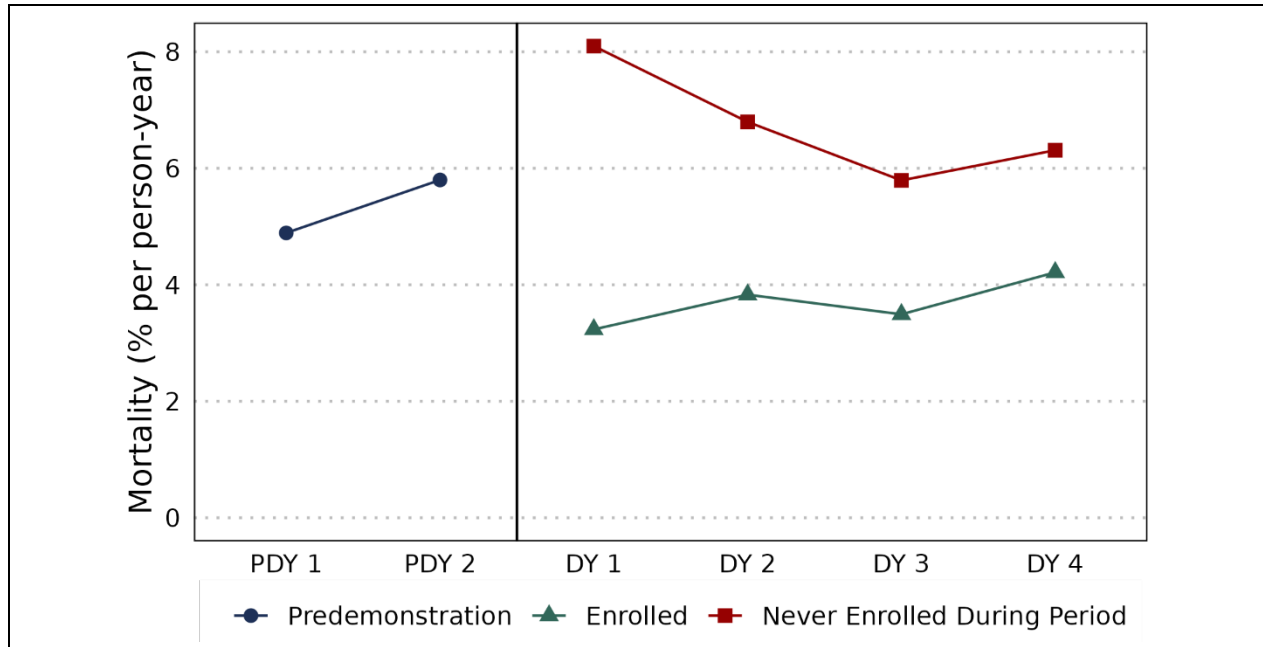
PDY = predemonstration year; DY = demonstration year.
NOTES: Mortality rates are not easily interpretable during the first demonstration year due to increased demonstration enrollment through the first demonstration year. Beneficiaries who enroll late in DY 1 are included in the mortality rate's denominator for the entire period, whereas the non-enrolled group does not select for beneficiaries who survive longer. By DY 2, the mortality rate is more comparable between the enrolled and non-enrolled beneficiaries.

Table G-2
Rhode Island Monthly percent of beneficiaries who died during the predemonstration and demonstration periods, July 1, 2016–December 31, 2020

Period	Predemonstration		Demonstration: Enrolled		Demonstration: Eligible not enrolled	
	N	Died (%)	N	Died (%)	N	Died (%)
PDY 1	218,392	4.8903	—	—	—	—
PDY 2	218,919	5.7994	—	—	—	—
DY 1	—	—	207,787	3.2341	109,361	8.0980
DY 2	—	—	146,319	3.8300	78,396	6.7963
DY 3	—	—	136,388	3.4930	85,354	5.7923
DY 4	—	—	126,740	4.2134	107,829	6.3100

— = not available; DY = demonstration year; PDY = predemonstration year.
NOTE: The N includes the number of alive months during the year among demonstration eligible beneficiaries. Mortality rates are reported as percentages per beneficiary-year.
SOURCE: RTI analysis of Medicare fee-for-service claims and encounter data.

G.2   Cost Savings

The FAI mandated that certain savings percentages be applied to the MMP capitated rate to ensure that the demonstration would result in a decrease in Medicare spending. Our findings in ***Section 6, Demonstration Impact on Cost Savings*** indicate that the demonstration resulted in a cumulative increase in Medicare costs among *all* eligible beneficiaries in the demonstration group, relative to the comparison group, from demonstration year 1 to demonstration year 4, despite the application of savings percentages in the capitation rate for MMP enrollees. To better understand these results, we conducted three analyses:

1. We calculated and compared a normalized county-based FFS standardized rate with the actual MMP rate to determine whether the MMP capitated rate was set higher than what would otherwise have been spent in Medicare FFS.[46] Specifically, using observed FFS expenditure data available from CMS, we calculated FFS county rates by taking county-level per capita costs and dividing it by the average risk score for each county.[47] In this way, we obtained a county-level rate for a person whose risk is 1.0 that can be used for comparison with the MMP rate. If the MMP rates were set higher than what would have been observed under FFS, then this would help explain in part why the Rhode Island demonstration resulted in increased Medicare costs.

2. We compared the predemonstration spending history among those who enrolled in demonstration year 1 and those who were ENE. If enrolled beneficiaries are less

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[46] The analysis is focused on FFS as over 95 percent of the beneficiaries who enrolled were previously in FFS.
[47] FFS Data (2015–2020). Available at: https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/FFS-Data.

expensive than those who never enrolled during the predemonstration period, then this would provide additional evidence of favorable selection into the enrolled group.

3. We compared the predemonstration risk score profiles among those who enrolled in demonstration year 1 and those who were ENE. If enrolled beneficiaries have lower average risk scores than those who never enrolled during the predemonstration period, then this would provide additional evidence of favorable selection into the enrolled group.

G.2.1   Rate-setting comparison

Table G-3 provides an example of how RTI calculated the normalized county rate using observed FFS Parts A and B expenditures for Bristol County, Rhode Island. First, using observed FFS expenditure data available from CMS, we summed Part A and Part B per capita costs and then we divided the amount by the county-level risk score. [48]

Table G-3
Example of RTI normalized county rate calculations for 2017 (demonstration year 1), Bristol County, Rhode Island

County	Part A total per capita[1]	Part B total per capita[1]	Part A + Part B	Risk score[2]	RTI normalized FFS rate
Bristol, RI	360.34	402.84	763.18	0.955159	799.00

FFS = fee-for-service.
[1] FFS17.xlsx file found in the download titled *FFS DATA 2017 (ZIP)* from FFS Data (2015-2021) | CMS.
[2] Medicare FFS County 2023 Web.xlsx files found in the download titled *FFS DATA 2020 (ZIP)* from FFS Data (2015-2021) | CMS.

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[48] Note that because the Part A total per capita costs in the actuary file includes both Part A only beneficiaries and those with both Part A and Part B, we raised the RTI rate by 3 percent to reflect the exclusion of Part A only beneficiaries in managed care (see column C, *Tables G-4*, and *G-5*).

Table G-4
Rhode Island Comparison of MMP rates to observed FFS spending, 2017 (demonstration year 1)

County	Enrollment (bene-months)[1]	Percent enrollment (of total eligible bene-months)[1]	RTI normalized FFS rate	Final MMP rate after application of 1% savings	MMP rate as % of RTI Normalized FFS rate
	A	B	C	D	E
Bristol	4,163	2.8%	799.00	778.27	97.4%
Kent	18,978	12.8%	802.81	813.10	101.3%
Newport	7,411	5.0%	819.74	817.82	99.8%
Providence	109,317	73.5%	755.85	787.17	104.1%
Washington	8,949	6.0%	756.61	781.37	103.3%
Weighted Average [2]	—	—	766.28	791.40	103.3%
Total	148,818	—	—	—	—

— = not available; FFS = fee-for-service; MMP = Medicare-Medicaid Plan.
[1] As reflected in RTI's DinD impact analysis sample.
[2] Numbers in column A are used as the weights.

Table G-5
Rhode Island Comparison of MMP rates to observed FFS spending, 2020 (demonstration year 4)

County	Enrollment (bene-months)[1]	Percent enrollment (of total eligible bene-months)[1]	RTI normalized FFS rate	Final MMP rate after application of 3% savings	MMP rate as % of RTI Normalized FFS rate
	A	B	C	D	E
Bristol	3,683	2.4%	740.83	819.64	110.6%
Kent	18,589	12.3%	743.87	845.56	113.7%
Newport	6,732	4.5%	724.66	884.60	122.1%
Providence	113,386	75.1%	729.34	793.51	108.8%
Washington	8,639	5.7%	762.21	825.23	108.3%
Weighted Average[2]	—	—	733.08	806.43	110.0%
Total	151,029	—	—	—	—

— = not available; FFS = fee-for-service; MMP = Medicare-Medicaid Plan.
[1] As reflected in RTI's DinD impact analysis sample.
[2] Numbers in column A are used as the weights.

On a composite basis, the MMP capitation rates are higher than the RTI normalized FFS rate (overall, the weighted average MMP rate is 103.3 percent of the RTI FFS rate in demonstration year 1, and 110.0 percent in demonstration year 4). Additionally, most of the MMP rates are higher than the RTI normalized FFS rate, with two counties having rates lower than the RTI normalized FFS rate in demonstration year 1 (see *Table G-4*, column E). In demonstration year 4, the MMP rates are higher than the RTI normalized FFS rate in every county (see *Table G-5*, column E). These findings indicate MMP rate-setting could contribute to

the increased costs as indicated by the DinD estimates, although it is important to note that the PHE in 2020 might add to this difference between the RTI normalized FFS rate (which reflects actual 2020 utilization and expenditures) and the MMP rates, which are based on historical data and set prospectively.

G.2.2   Pre-enrollment Cohort Analysis

Our analysis of predemonstration trends found that FFS beneficiaries with lower predemonstration FFS expenditures were more likely to enroll in an MMP plan. ***Figure G-4*** illustrates that the demonstration year 1 enrolled population was less costly during the predemonstration period than its ENE counterpart. Together with the results of the predemonstration utilization analysis shown in section ***G.1***, ***Service Utilization Supplemental Analyses***, these findings provide additional evidence of favorable selection into the MMPs at the start of the demonstration; however, favorable selection into the MMPs does not explain the increase in Medicare spending among all demonstration eligible beneficiaries described in ***Section 6, Demonstration Impact on Cost Savings***.

Figure G-4
Rhode Island Average Medicare Parts A and B costs PMPM among demonstration year 1 enrolled and ENE cohorts
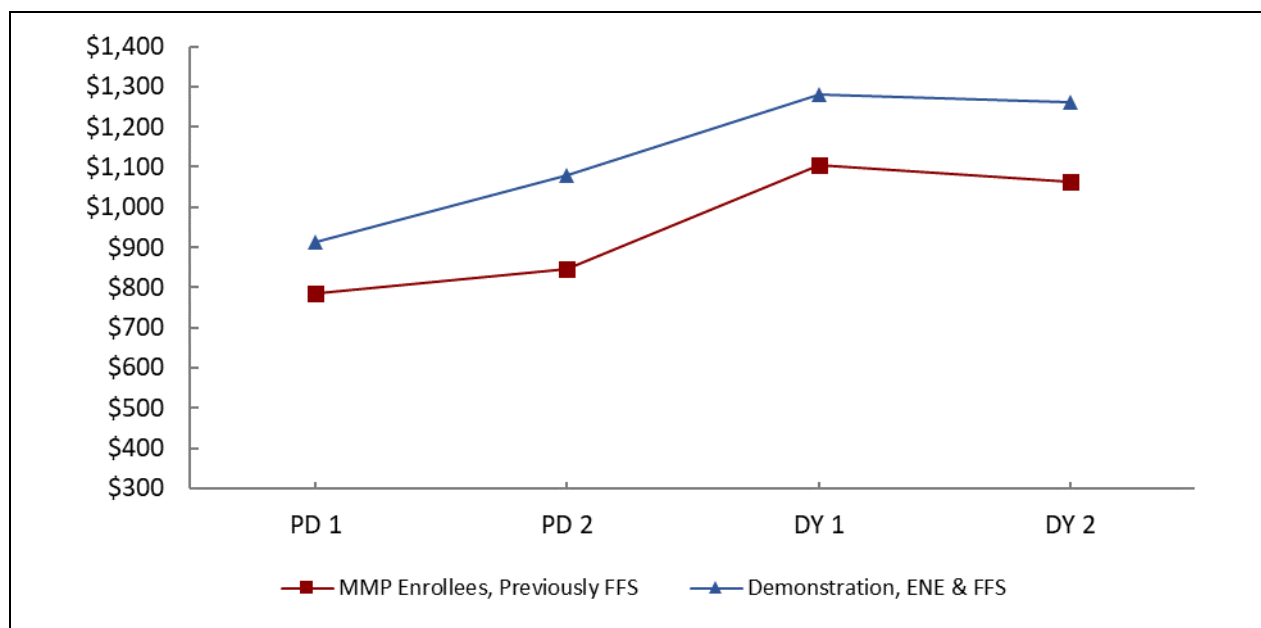
DY = demonstration year; ENE= eligible not enrolled; FFS = fee-for-service; MMP = Medicare-Medicaid Plan; PDY = predemonstration year; PMPM = per member per month.
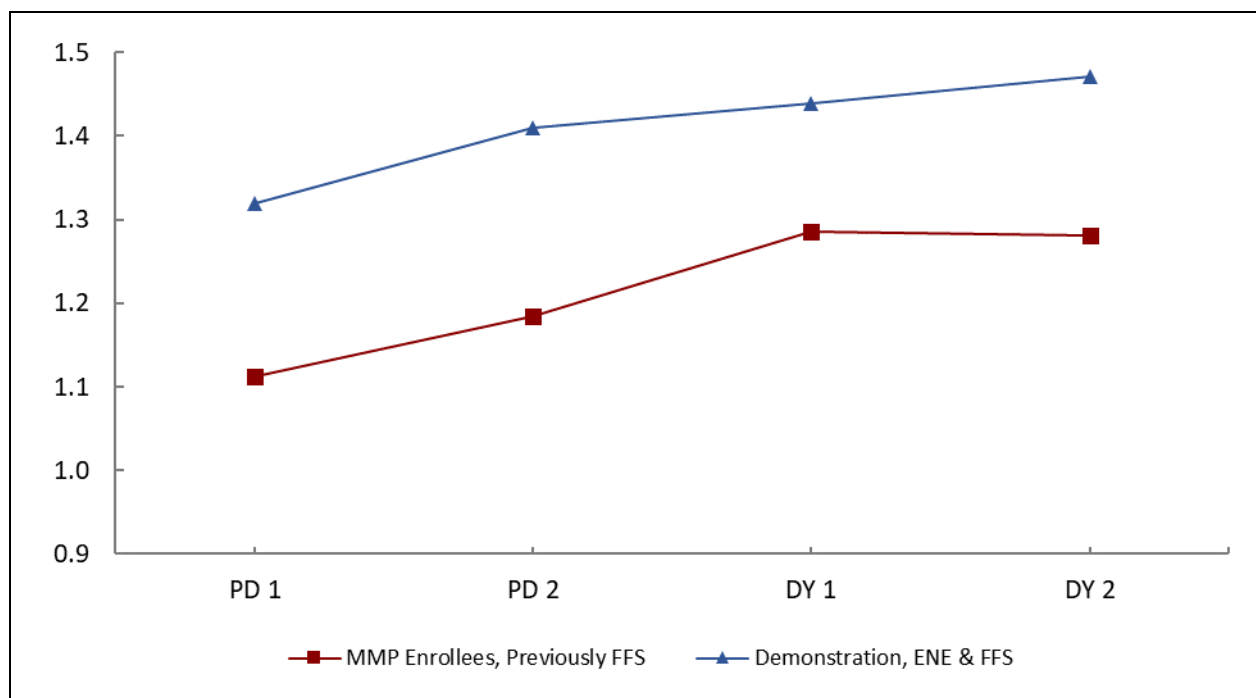NOTES: The number of observations for DY 2 represents a subset of DY 1 enrollees. PDY 1 is from July 2014 through June 2015; PDY 2 is from July 2015 through June 2016; DY 1 is from July 2016 through December 2017; DY 2 is from January 2018 through December 2018.
SOURCE: RTI analysis of Rhode Island pre-enrollment trends.

There are additional factors that may explain our DinD cost savings analysis findings. For instance, more thorough diagnostic coding could raise MMP payments, which could increase average payments faster in the demonstration group relative to the comparison group, although

we do not have the data to support this hypothesis. ***Figure G-5*** illustrates that risk scores for the enrollees are lower than the average risk scores of the ENEs, further reinforcing the favorable selection finding from the analyses presented above. Favorable selection can occur for multiple reasons. Plans may purposefully target healthier beneficiaries, and sicker beneficiaries may decide not to enroll in the demonstration. However, passive enrollment, in combination with lower than expected opt-out rates, may have helped alleviate the extent of favorable selection (Combined First and Second Evaluation Report).

Figure G-5
Average risk score among demonstration year 1 enrolled and ENE cohorts

DY = demonstration year; ENE= eligible not enrolled; FFS = fee-for-service; MMP = Medicare-Medicaid Plan; PDY = predemonstration year; PMPM = per member per month.
NOTE: PDY 1 is from July 2014 through June 2015; PDY 2 is from July 2015 through June 2016; DY 1 is from July 2016 through December 2017; DY 2 is from January 2018 through December 2018.
SOURCE: RTI analysis of Rhode Island pre-enrollment trends.

Finally, although the factors described here are at play for the enrollee population, the FFS eligible but not enrolled beneficiaries are not affected by the savings percentages built into the MMP capitated rates. The analysis of the demonstration's impact on Medicare costs used an ITT approach that included all eligible beneficiaries, not only those enrolled in an MMP, to alleviate concerns about selection bias in enrollment that could not be replicated in the comparison group. The eligible but not enrolled population was substantially larger than the enrolled population (which was about 39 percent[49]). As such, the spending among the eligible but

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[49] The enrollment percentages reported in the section may be different than what was reported in ***Section 3.2, Eligibility and Enrollment,*** because of the timing for completion and submitting the finder file versus the SDRS, as well as ***Section 6, Demonstration Impact on Cost Savings,*** because of the exclusion of beneficiaries enrolled in Medicare Advantage.

not enrolled could obscure any savings achieved among the enrolled population. That said, cross-sectional trends in the PMPM show greater increases in PMPM among the enrolled group in demonstration years 3 and 4 than in the comparison group (see *Appendix F, Figure F-2*). Moreover, Medicare spending in the comparison group increased at a slower rate than in the demonstration group. There may be unobservable characteristics influencing a different rate of change in Medicare spending in the comparison group relative to the demonstration group. Although the supplemental analyses presented here shed light on the favorable selection of relatively healthier and lower-cost beneficiaries in MMP enrollment and help understand why favorable demonstration impacts may be difficult to observe, they do not pinpoint the drivers of Medicare cost increases.