FINANCIAL ALIGNMENT INITIATIVE

Washington Health Home MFFS Demonstration: Fifth Evaluation Report

January 2022

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WASHINGTON HEALTH HOME MFFS DEMONSTRATION:
FIFTH EVALUATION REPORT

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Glossary of Acronyms

AAA	Area Agencies on Aging
ACSC	Ambulatory care sensitive condition
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CCO	Care coordination organization
CMS	Centers for Medicare & Medicaid Services
DinD	Difference-in-differences
D-SNP	Dual Eligible Special Needs Plan
E&M	Evaluation and management
ED	Emergency department
FAI	Financial Alignment Initiative
FFS	Fee-for-service
HAP	Health Action Plan
HCBS	Home and community-based services
HCC	Hierarchical Condition Category
ITT	Intent-to-treat
LTSS	Long-term services and supports
MA	Medicare Advantage
MDM	Master Data Management file
MDS	Nursing Home Minimum Data Set
MFFS	Managed fee-for-service
MSA	Metropolitan statistical area
NF	Nursing facility
PHE	Public Health Emergency
PMPM	Per member per month

PQI	Prevention Quality Indicator
PRISM	Predictive Risk Intelligence System
SDRS	State Data Reporting System
SET	Service Experience Team
SNF	Skilled nursing facility
SPMI	Serious and persistent mental illness

Executive Summary

The Medicare-Medicaid Coordination Office and the Innovation Center at the Centers for Medicare & Medicaid Services (CMS) have created the Medicare-Medicaid Financial Alignment Initiative (FAI) to test, in partnerships with States, integrated care models for Medicare-Medicaid enrollees. Washington and CMS launched the Health Home Managed Fee-for-Service (MFFS) Demonstration in July 2013 to integrate care for Medicare-Medicaid beneficiaries. Within the State, health homes provide care coordination services to Medicare-Medicaid enrollees.

Initially, health homes were competitively selected to serve beneficiaries in 37 counties. In 2017, Washington extended the demonstration service area to two additional counties—King and Snohomish—making the demonstration statewide.

Washington has targeted the demonstration to high-cost, high-risk Medicare-Medicaid beneficiaries based on the principle that focusing intensive care coordination on those with the greatest needs provides more potential for improved health outcomes and cost savings. In the course of integrating care for enrollees across primary care, long-term services and supports (LTSS), and behavioral health delivery systems, care coordinators engage enrollees to set goals and increase self-management skills to achieve optimal physical and cognitive health.

CMS contracted with RTI International to monitor the implementation of the demonstrations under the FAI and to evaluate their impact on beneficiary experience, quality, utilization, and cost. This Fifth Evaluation Report for the Washington MFFS demonstration describes implementation of the Washington MFFS demonstration and analysis of the demonstration's impacts. The report includes findings based on qualitative data covering calendar years 2019 and 2020, and quantitative data through calendar year 2019.

This Fifth Evaluation Report describes quantitative findings for demonstration years 4, 5, and 6 (2017 through 2019) using a new comparison group developed in 2017 (demonstration year 4). Results for the previous demonstration years (2013–2016) were from an earlier analysis that involved a different comparison group and demonstration group, which cannot be combined with results from 2017 and later. For more information on the comparison group methodology, see ***Appendix B***.

Highlights

The demonstration extended its reach across the state in 2019 by adding four additional health homes to its network. As of May 2019, the State had 11 health homes serving all of its 39 counties. Despite this increase in capacity, health homes continued to express concern surrounding the high cost of administering the program.

In early 2020, State officials and health homes in Washington took immediate action in response to the COVID-19 public health emergency (PHE), which curtailed health homes' ability to effectively serve current and new beneficiaries. Using flexibilities under its Medicaid waiver authority, the State negotiated an exception to its face-to-face policy for providing care coordination services and began telephonic engagement with beneficiaries in March. State officials also initiated bi-weekly meetings with health homes, launched a virtual training for new care coordinators, and secured donations of cell phones to distribute to beneficiaries lacking telephone access.

In the summer of 2020, State legislators approved another payment increase for health homes despite experiencing pandemic-related shortfalls in revenue. According to State officials, this payment increase prevented one health home from exiting the health home program and allowed others to extend their reach into new service areas.

In 2020 and 2021, State officials and health homes expressed increasing concerns about the growing impact of Medicare Advantage (MA) plans on health home enrollment under this demonstration. MA plans have used persuasive marketing tactics and offers of supplemental benefits to attract health home enrollees. As of February 2021, Washington and CMS were discussing options to ensure that beneficiaries in MA Dual Eligible Special Needs Plans can access health home services under the demonstration.

Integration of Medicare and Medicaid	State officials hoped to increase health home capacity in tribal areas across the State. As of early 2021, the State had contracted with one tribal care coordination organization (CCO) in Northwestern Washington.
Eligibility and Enrollment	Over the course of 2019 and 2020, enrollment in MA has contributed to a reduction in the number of beneficiaries eligible for enrollment in the demonstration; the number enrolled in health homes dropped by 15 percent.
Care Coordination	Several key informants praised State officials and health homes for their ability to quickly pivot to delivering virtual care coordination services at the start of the PHE.
	Although health home capacity has improved with recent payment increases, serving high-cost and underserved areas continues to be a challenge for the demonstration.
Stakeholder Engagement	During the PHE, the State enhanced collaboration and engagement with health homes by increasing its regular meetings from monthly to bi-weekly.

Financing and Payment	Washington increased health home payment rates for a second time in 2020, further stabilizing the health home demonstration.
	Although health home representatives expressed gratitude for the rate increase, they reported that the 8.5 percent administrative rate paid to the health home lead entity was not enough to cover their costs.
Quality of Care	The State will begin reporting performance on a new quality measure related to homelessness and housing insecurity in 2021.
Beneficiary Experience	Respondents to the 2019 CAHPS survey and 2020 individual beneficiary interview participants reported high levels of satisfaction with care coordination services.
	Only a few individual beneficiary interview participants reported relying solely on their health home care coordinator to facilitate the provision of services; many cited in-home caregivers or case managers (for LTSS or mental health) as important players in their care coordination.
Demonstration Impact on Service Utilization and Quality of Care	In demonstration years 4–6, the impact of the demonstration on service utilization was mixed. Favorable results include a decrease in skilled nursing facility (SNF) and long-stay nursing facility stays, relative to the comparison group. Potentially unfavorable results include a decrease in the number of physician evaluation and management (E&M) visits and the probability of 30-day follow-up after a mental health discharge, relative to the comparison group.
	The demonstration impacted those with LTSS use and those with a serious and persistent mental illness (SPMI) differently on some measures, relative to those without LTSS use or SPMI (see ***Table ES-1*** for details).

Demonstration Impact on Cost Savings

Cost savings analyses found substantial and statistically significant gross Medicare Parts A & B savings relative to the comparison group as a result of the demonstration. Savings were estimated during the first 3 demonstration years and demonstration years 4–6 (see ***Table ES-2*** for details).[1]

Table ES-1 summarizes the cumulative impact estimates for the Washington demonstration during demonstration years 4–6 (2017 through 2019), 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.

[1] Please note ***Table ES-2*** only presents the difference-in-differences per member per month results. Total gross Medicare Parts A and B actuarial savings can be found in ***Figure 1***. Aggregate gross and net Medicare Part A and Part B savings can be found in ***Table E-3*** in ***Appendix E***.

Table ES-1
Summary of cumulative Washington demonstration effects on service utilization and quality of care outcomes for demonstration years 4–6 (January 1, 2017–December 31, 2019)

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

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 visual impairments, 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 LTSS or SPMI special population of interest can be different from each other.

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

Table ES-2
Summary of Washington demonstration effects on total Medicare expenditures for demonstration years 1–6 (July 1, 2013–December 31, 2019)

Measure	Measurement period	Effect
Medicare Part A & B cost	Cumulative (demonstration years 1–3)	Decrease[G]
	Cumulative (demonstration years 4–6)	Decrease[G]
	Demonstration year 4	Decrease[G]
	Demonstration year 5	Decrease[G]
	Demonstration year 6	Decrease[G]

NOTES: Statistical significance is defined at the α = 0.05 level. Green color-coded shading indicates where the direction of the difference-in-differences (DinD) estimate was favorable. To ensure accessibility for text readers and individuals with visual impairments, cells shaded green receive a superscript "G." In the column for "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 demonstration period.
SOURCE: RTI analysis of Medicare fee-for-service claims (program: warar387 & warar411).

SECTION 1

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) have created the Medicare-Medicaid Financial Alignment Initiative (FAI) to test, in partnerships with States, integrated care models for Medicare-Medicaid enrollees. Under Section 2703 of the Patient Protection and Affordable Care Act, Washington established health home services as an optional Medicaid State Plan service. Health homes coordinate care for Medicaid enrollees with chronic conditions.

The goals for the Washington Health Home MFFS Demonstration are to integrate care for Medicare-Medicaid enrollees, alleviate fragmentation, and improve coordination of services for high-cost, high-risk Medicare-Medicaid enrollees served primarily in fee-for-service (FFS) systems of care. The demonstration uses health homes to accomplish these goals. The Washington Health Home MFFS Demonstration began July 1, 2013 and is currently scheduled to continue through December 31, 2022.

In the Washington demonstration, health homes serve as the vehicle for coordinating primary care, acute care, long-term supports and services (LTSS), and behavioral health services for Medicare-Medicaid beneficiaries. Participating enrollees continue to receive regular FFS Medicare and Medicaid-funded LTSS and behavioral health services and can elect to receive additional Medicaid health home services. The demonstration did not create any new or expanded benefits beyond those provided under the State's original health home program (i.e., comprehensive care management, care coordination, health promotion, comprehensive transitional care and follow-up, individual and family support, and referrals for community and social services support).

The First Annual Report includes extensive background information about the demonstration. The Second Evaluation Report, Third Evaluation Report, and the Fourth Evaluation Report include prior implementation updates and results of impact analyses prior to 2019.

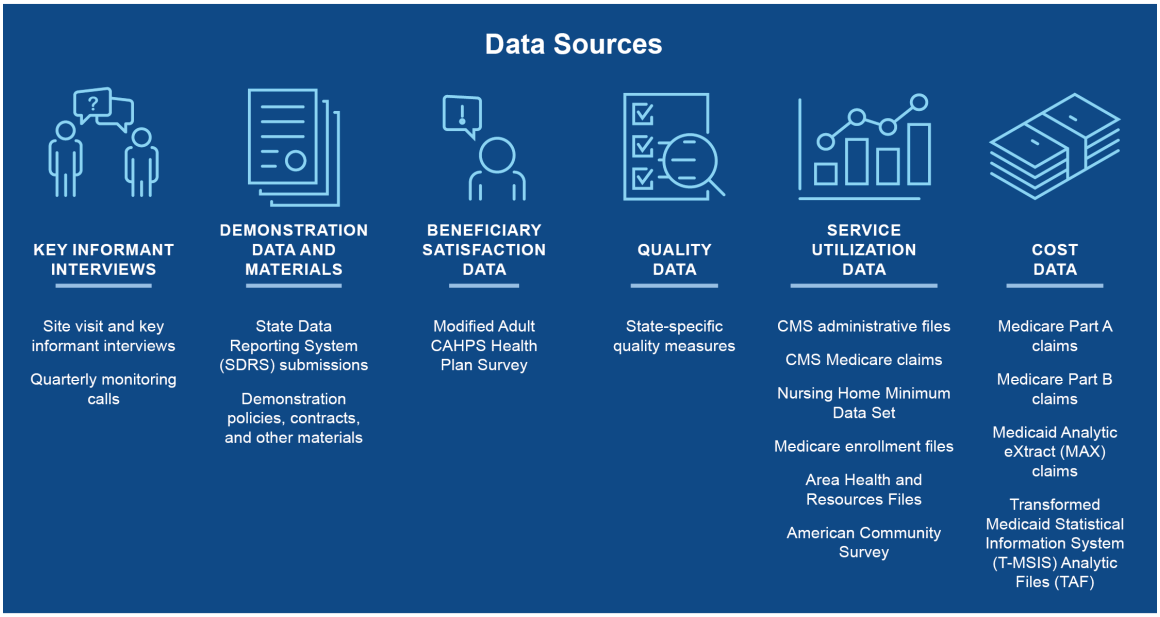
1.2 Purpose of this Report

CMS contracted with RTI International to monitor the implementation of the demonstrations under the FAI and to evaluate their impact on beneficiary experience, quality, utilization, and cost. In this report we include qualitative evaluation information covering calendar years 2019 and 2020 (demonstration years 6 and 7, respectively); we collected these data in 2020 and early 2021. We provide updates to previous evaluation reports in key areas, including eligibility, enrollment, care coordination, beneficiary experience, and stakeholder engagement activities, and discuss the challenges, successes, and emerging themes identified during the reporting period.

We present quantitative results on quality of care, service utilization, and costs for the period spanning January 1, 2017 to December 31, 2019.

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.



SECTION 2

Demonstration Design and State Context

2.1 Changes in Demonstration Design

After some unexpected clearance-related delays, in January 2021, CMS and the State signed an amendment to extend the Washington demonstration for two years through December 2022. In 2020 and 2021, State officials reiterated their support for certification and permanency for the health home demonstration. According to State officials, long-term sustainability would help facilitate the recruitment and retention of additional health homes and allow the State to increase its capacity across the State. State officials also pointed to the demonstration's continued success in producing Medicare Parts A & B savings and shared savings for the State (see ***Section 6, Demonstration Impact on Cost Savings***).

The new demonstration agreement was also updated to reflect changes in quality reporting requirements and benchmarking during the COVID-19 PHE. Under the revised agreement, the State is required to report all quality measures for the year 2020, but performance will not be benchmarked for purposes of determining payment until the emergency has concluded. In 2021, the State will also begin reporting performance on a new quality measure related to homelessness and housing insecurity (see ***Section 3.6, Quality of Care***).

2.2 Overview of State Context

Washington has targeted the demonstration to high-cost, high-risk Medicare-Medicaid enrollees based on the principle that focusing intensive care coordination on those with the greatest need provides more potential for improved health outcomes and cost savings. Its positive experience with the State's previous Chronic Care Management program led Washington to adopt a comparable model for the demonstration, organized around the principles of patient activation and engagement which encourages enrollees to take steps to improve their own health.[2]

As discussed more fully in ***Section 3.2, Eligibility and Enrollment,*** competition from Medicare Advantage (MA) plans has contributed to a reduction in the number of Medicare-Medicaid enrollees both eligible for the Washington demonstration and enrolled in health homes.[3] Washington has seen enrollment in MA plans rise steadily over the last several years, increasing from 31 percent of Medicare eligible beneficiaries in January 2017 to 38 percent in January 2021.[4]

In Spring 2021, the State and CMS were discussing Washington's interest in allowing Medicare-Medicaid enrollees to continue to benefit from health home services, even after they have enrolled in an MA plan. The State noted that care coordination services provided through an MA plan are often provided by people without the local knowledge or high touch approach available through a health home. In response to Washington's proposal, CMS was exploring

[2] See the First Annual Report for more detail on the State context in which the demonstration is operating or was implemented.
[3] Only those receiving their Medicare benefits on a fee-for-service basis are eligible for the demonstration.
[4] RTI analysis of MA Monthly Enrollment by State files for January 2017 and January 2021. Accessed at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MCRAdvPartDEnrolData/Monthly-Enrollment-by-State. Obtained on March 9, 2021.

strategies for requiring Washington's Dual Eligible Special Needs Plans (D-SNPs), a type of Medicare Advantage plan, to offer health home services.

SECTION 3

Update on Demonstration Implementation

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

3.1 Integration of Medicare and Medicaid

Although concerns about long-term financial viability continued during the timeframe covered by this report, the State has been able to increase capacity with the help of another payment increase for health homes.

Washington intends to increase health home capacity in tribal regions of the State and, as of February 2021, was in negotiations with CCOs operating in these areas.

Washington has designated Medicaid health homes to serve as the lead entities responsible for organizing primary and acute care, LTSS, and behavioral health services for Medicare-Medicaid enrollees participating in the demonstration. Health homes include Area Agencies on Aging (AAAs), community-based organizations, and managed care organizations. The State currently has 12 health homes serving all of its 39 counties.

Health homes are required to establish a network of care coordination organizations (CCOs) representing primary care, mental health, LTSS, chemical dependency, and specialty providers. Each health home or CCO hires care coordinators to conduct outreach to eligible beneficiaries, develop individualized health action plans (HAPs) with enrollees, and connect beneficiaries to clinical and community-based services.

As reported in the Fourth Evaluation Report, increasing health home capacity to serve more beneficiaries remains a fundamental challenge for the demonstration. In July 2018, the State legislature approved a 20 percent increase in health home payment rates which helped maintain stability in the program and resulted in the addition of four new health homes in 2019. However, in 2020, health homes and State officials continued to voice concerns about the high cost of delivering services—particularly in King County, an urban area that includes Seattle. In response to these concerns, the State legislature approved an additional 26 percent payment increase for health homes effective July 2020, despite experiencing a budget shortfall due to the PHE-induced downturn. (See ***Section 3.5, Financing and Payment*** for details about the 2020 payment increase.) As noted by State officials in 2021, this second boost in payment prevented the exit of one health home from the program and helped other health homes and CCOs expand their geographic reach. State officials also noted that a few health homes were in negotiations with new CCOs that had previously been unwilling to participate in the program because payment rates were considered insufficient.

In 2020 and 2021, State officials also indicated plans to increase health home capacity in tribal regions of the State. As of February 2021, there was one tribal CCO participating in the program and health homes were beginning negotiations with several others. In early 2021, State officials described hesitancy on the part of health homes to contract with additional CCOs

serving tribal regions due to the expense and cost associated with educating, training, and onboarding new CCOs. In response, State officials submitted a "decision package" to the legislature requesting additional funding to cover the administrative expenses associated with onboarding tribal CCOs. As of February 2021, this package had not yet been discussed by the legislature, but State officials were optimistic about its passage in the coming year.

3.2 Eligibility and Enrollment

Over the course of 2019 and 2020, enrollment in Medicare Advantage has contributed to a reduction in the number of beneficiaries eligible for enrollment in the demonstration; the number enrolled in health homes dropped by 15 percent.

State officials and health homes cited growing concern about competition from MA plans, which have used very persuasive marketing and supplemental benefits to attract health home enrollees.

In this section we provide updates on State eligibility and enrollment policies. We also discuss significant events affecting enrollment patterns during the timeframe covered by this report, including the PHE.

As shown in ***Table 1***, over the course of 2019 and 2020, the Washington demonstration experienced an 11 percent decline in the number of eligible beneficiaries and a 15 percent drop in the number enrolled in health homes. The State attributed the decrease in eligible beneficiaries to three factors: (1) an overall decline in the number of individuals eligible for both Medicare and Medicaid; (2) an increase in the number of people enrolled in a MA plan; and (3) an improvement in health status making beneficiaries ineligible for health home services (Washington State HCA, 2021). State officials also reported that the number enrolled has also dropped because health homes have improved their documentation of those choosing not to participate.

In 2020 and 2021, State and Federal officials and health homes cited growing competition from MA plans[5] as an important factor suppressing the number of beneficiaries eligible for health home enrollment in the demonstration.[6] The impact of competition varies regionally, as MA plans expand their reach into new parts of Washington. Health homes reported that they are not able to compete with the marketing for MA plans, or with the supplemental benefits that the plans offer (e.g., gym membership). Increased enrollment in MA plans has reduced the pool of Medicare-Medicaid beneficiaries eligible for enrollment in the demonstration. In addition, Medicare-Medicaid beneficiaries already enrolled and engaged in the

[5] Competing MA plans may include D-SNPs and other MA plans that are competing for Medicare-Medicaid enrollees. CMS reported that Washington does not currently have MA plans meeting CMS' definition for a D-SNP "look-alike." A D-SNP "look alike" is a MA plan, other than a Special Needs Plan (SNP), having 80 percent or more enrollees who are entitled to Medicaid.

[6] Other reasons cited by the State for the decline in eligibility include a slight reduction in the total number of people who are dually eligible and the fact that some beneficiaries are no longer eligible based on sustained improvement in their clinical status.

demonstration lose their eligibility and are disenrolled when they choose to enroll in an MA plan. In 2020, one health home reported losing 200 engaged enrollees to MA plans. Although disenrollment was suspended during the PHE, health homes anticipate losing a number of enrollees to MA plans once the PHE ends.

Table 1
Eligibility and enrollment data for Washington Health Home MFFS Demonstration 2013–2020

Year	Eligibility	Percent change in eligibility	Enrollment	Percent change in enrollment	Percent of eligible beneficiaries enrolled in demonstration
2013	16,176	N/A	2,045	N/A	13%
2014	19,670	22%	10,632	420%	54%
2015	21,861	11%	18,822	77%	86%
2016	24,543	12%	21,050	12%	86%
2017	33,558	37%	19,170	−9%	57%
2018	33,500	0%	12,848	−33%	38%
2019	30,445	−9%	12,114	−6%	40%
2020	29,812	−2%	11,083	−9%	37%

MFFS = managed fee-for-services; N/A = not applicable.
NOTE: Data are for December of each year.
SOURCE: RTI International: State Data Reporting System (SDRS), 2013–2021.

According to the State and health homes, health home enrollees often enroll in an MA plan without realizing that they will lose access to their health home care coordinator. For those wishing to reenroll, the outreach and engagement process is time consuming and health homes are not reimbursed for that extra work. To help address these concerns, the State is working with Washington's Statewide Health Insurance Benefit Advisors to advise beneficiaries about the implications of enrolling into a MA plan.

To help stabilize enrollment, State officials also reported conducting a survey of beneficiaries who had previously turned down health home enrollment, to better understand beneficiaries' reasons for declining participation and determine whether or not it would be worthwhile to approach these beneficiaries again to assess their interest in the health home program.

As described in the Fourth Evaluation Report, once enrolled in the health home, the health home and CCO work to "engage" the enrollee. An "engaged" enrollee is one who has received one or more health home services.[7] ***Table 2*** shows the number of enrollees engaged in the demonstration as of September 2020. Of enrollees at that time, 45 percent (5,033) had at least one engagement over the course of their enrollment. Of those, 71 percent had received health home services 13 or more times (Washington State HCA, 2021).

[7] See ***Section 1.1, Demonstration Description and Goals*** for a description of the services that health homes provide.

Table 2
Enrollees ever engaged by number of engagements, as of September 2020

Number of engagements	Number	Percent
1	139	3%
2–6	678	13%
7–12	659	13%
13+	3,557	71%
TOTAL	5,033	100%

SOURCE: Washington State HCA, 2021

In 2021, State officials reported that the PHE had not had a significant impact on eligibility, enrollment, or engagement (Washington State HCA, 2021). In fact, State officials and health home representatives reported that beneficiary engagement remained steady and even slightly increased during the initial months of the PHE. However, by the late summer and into the fall, engagement rates began to decline slightly due to beneficiaries' increasing reluctance to continue meeting virtually. (See ***Section 3.3, Care Coordination*** for details.)

As discussed in ***Section 3.1, Integration of Medicare and Medicaid*****,** a rate increase of 26 percent effective July 2020 allowed the State to increase health home capacity. However, in early 2021, the State indicated it was too early to know how the increased rates and expanded capacity have impacted overall engagement and enrollment numbers.

3.3 Care Coordination

Several key informants praised State officials and health homes for their ability to quickly pivot to delivering virtual care coordination services.

In addition to performing the usual care coordination functions, care coordinators went above and beyond to secure cell phones, food, clothing, and other essential items for vulnerable beneficiaries during the PHE.

Virtual delivery of health home services offered some benefits, including increased engagement among rural beneficiaries, and more time and money for training due to reduced travel expenses.

Although engagement rates initially rose during the first months of the PHE, virtual meeting fatigue began to set in for care coordinators and beneficiaries by the Fall of 2020 leading to a slight drop in engagement.

In this section we highlight successes and challenges associated with the State's care coordination model and activities. To illustrate key points, we include selected quotes that reflect key informants' perspectives on these activities.

Washington's health home care coordinators complement the roles of existing LTSS and behavioral health case managers and serve as a bridge connecting beneficiaries to a range of clinical and non-clinical services. Coordinators' responsibilities are broad and include performing outreach to enrollees, assessing beneficiary needs, and helping enrollees develop person-centered care plans. Health home care coordinators also work with beneficiaries to coordinate care across health care settings and assist with transitions and referrals.

Many of these duties are similar to those performed by care coordinators in other States that are trying to integrate care across delivery systems. However, Washington's care coordination model is unique with its focus on engaging enrollees to create a HAP and increase self-management skills to achieve optimal physical and cognitive functioning.

According to multiple stakeholders, State officials responded rapidly and creatively in the early months of the PHE. Using flexibilities under its Medicaid waiver authority, the State negotiated an exception to its policy for providing care coordination services face-to-face and began telephonic engagement with beneficiaries as early as March 2020. During this time, State officials also initiated bi-weekly meetings with health home leads, launched a virtual training for new care coordinators, and managed to secure donations of approximately 400 cell phones for health home leads to distribute to beneficiaries without access to a telephone.

One of the things that we experienced as [the PHE] became clear…was how quickly the [State] jumped in and started to provide some messaging, some protocols, some procedures, and start that dialogue, and it was robust and it was regular.

– Health Home Representative (2021)

State officials noted that in the early months of the pandemic there was an unexpected surge in engagement which they attributed to generalized anxiety about COVID-19 among beneficiaries and a proactive response from care coordinators. One health home reported hearing that enrollees were fearful and did not want to lose their care coordinator. State officials and health home representatives praised care coordinators for their ingenuity in adopting creative approaches to engage new beneficiaries and bolster relationships with longstanding beneficiaries. One such approach was securing food, clothing, and in some cases durable medical equipment for clients in need of essential supports. Additionally, during the warmer months some care coordinators visited beneficiaries at nursing facilities and talked with them over the phone while standing outside their window. These approaches were perceived as not only instrumental to sustaining engagement, but also critical to helping beneficiaries struggling with accessing services in the early months of the PHE.

It was really heartwarming because these clients were scared, you know being able to provide support and navigation during these initial times was just incredibly helpful.

– Health Home Representative (2021)

According to health home representatives, after 6 months of virtual care coordination visits, it became harder to build and sustain relationships over the phone, and engagement began to decline. Furthermore, clients who were communicating on donated cell phones were now having to pay for service which caused some clients to lose contact with their care coordinators. This prompted a discussion among State officials about possibly securing Medicaid financing for cell phone services in the future.

State officials and health home representatives also expressed concern about the PHE's toll on care coordinators, many of whom were experiencing feelings of social isolation and anxiety about the well-being of their clients. To support care coordinators and their supervisors, State officials provided extra trainings on building resiliency, coping with anxiety and depression, and the importance of self-care during times of stress.[8] In early 2021, State officials began offering a monthly Building Resiliency Huddle to discuss current stressors and strategies for managing anxiety during challenging times.

[8] See https://www.dshs.wa.gov/altsa/washington-health-home-program for further information.

Although providing services remotely presented numerous challenges for health home and State staff, key informants did report some advantages to "going virtual." One health home noted that telephonic visits helped them engage with more clients in rural areas. Another health home indicated that care coordinators appreciated not having to spend the time and money travelling to State workshops and trainings. Despite the fact that face-to-face contact is the preferred method for engaging beneficiaries, site visit informants indicated that it would be nice to retain some of these "virtual" flexibilities once the PHE subsides.

Aside from the hardships imposed by the PHE, the State faces ongoing challenges with both maintaining and expanding its care coordination capacity in certain areas of the State. As stated in prior evaluation reports, State officials have long experienced difficulties in identifying entities willing to serve as health homes and CCOs in some urban and rural areas. In some of the more urban areas, labor costs are high making it difficult to recruit and retain care coordinators and in rural localities long distances and travel time make delivering face-to-face service coordination challenging. According to one health home interviewed in 2020, the upfront cost for any new CCO wishing to join the program is significant, as participating entities do not get paid until new enrollees complete a HAP and are engaged in the health home model. As described above in ***Section 3.1, Integration of Medicare and Medicaid***, high start-up costs have also been an issue for health homes wishing to onboard new CCOs to serve tribal regions of the state.

It is very difficult having to put staff out there before you have a caseload. …. The funding for our area was successful and helped but you still have to put money out prior to having revenue coming in and that revenue is dependent on enrollment.

– Health Home Representative (2020)

3.4 Stakeholder Engagement

During the PHE, the State increased its collaboration and engagement with health homes by increasing its regular meetings from monthly to bi-weekly.

In this section we describe stakeholder engagement activities during the period of this report, and the impact of those efforts on the demonstration.

Stakeholder engagement in the Washington demonstration is conducted largely through monthly meetings with health home leads and CCOs. Meetings were increased to twice per month to provide added support during the PHE and focused on sharing information and best practices for engaging and supporting beneficiaries during the public health crisis. Health home and CCO representatives in 2020 and 2021 revealed that generally the State was responsive and receptive to the concerns and feedback received from health home providers. In fact, health homes attributed the legislature's approval of the 2018 and 2020 payment increases to State support.

To gather feedback on beneficiary experience, the State participates in monthly meetings of a statewide advisory board called the Service Experience Team (SET), which was created in 2017. Membership on the SET includes individuals who receive LTSS through Medicaid and other State programs as well as representatives of consumer advocacy organizations.

Although not an advisory group dedicated solely to health homes, the SET does discuss topics relevant to health home beneficiaries. For example, during the PHE the SET discussed experiences with remote service delivery and strategies for communicating changes or updates in Medicaid services. In response to feedback from SET participants, the State developed a consumer-facing website to help publicize programs and issues. The website also includes a page where recipients can file a complaint about any of the services they have received. As of early 2021, the State had identified one health home participant to serve on the SET.

3.5 Financing and Payment

Payment rates for health home services were increased by 26 percent, stabilizing the health home program.

Although grateful for the rate increase, health homes reported that the 8.5 percent administrative rate paid to health home lead entities was not enough to cover their costs.

The State pays health homes for delivery of health home services on a per member per month basis, using three payment tiers. The first payment is a one-time fee for outreach, engagement, and development of the enrollee's HAP. After the health home has submitted an enrollee's HAP, the health home is paid for intensive care coordination for months in which face-to-face care coordination is provided to an enrollee. For any month when low-level care coordination is provided to an enrollee, the health home is paid at a lower rate.[9] Most health home payments are for intensive care coordination.

As reported in the Fourth Evaluation Report, effective July 1, 2018, Washington increased the payment rates for health home services by 20 percent. In addition, health homes became eligible for an additional 5 percent incentive payment if they achieved an engagement rate of 20 percent. This rate increase helped to stabilize the health home program, which was perceived to be significantly underfunded by the health homes and the State.

In 2020, payment rates were increased again, by 26 percent, following an actuarial analysis of CCO expenditures and revenue, which showed that CCO expenditures exceeded revenue, even after the 2018 rate increase.

We show these changes in ***Table 3, Payment rates for health home services***.

[9] Intensive care coordination involves ongoing face-to-face and telephonic visits with the enrollee to provide one or more health home service. Low-level care coordination may include a phone call or home visit.

Table 3
Payment rates for health home services

Home health service	Prior to July 1, 2018	July 1, 2018–June 30, 2020		Starting July 1, 2020	
	Rate	Rate	Percent change from prior period	Rate	Percent change from prior period
Outreach, engagement, and Health Action Plan	$252.93	$281.28	11%	$870.38	209%
Intensive health home care coordination	$172.61	$208.36	21%	$244.60	17%
Low-level health home care coordination	$67.50	$83.34	23%	$200.94	141%
Composite rate	**$171.61**	**$205.93**	**20%**	**$256.18**	**26%**

SOURCES: Birrell & Gerstorff, 2018; Birrell et al., 2020.

Health home representatives expressed their gratitude for the 2020 rate increase and credited the State with prioritizing the rate increase during the PHE. One health home reported that the rates were finally at a level that allowed the CCOs to operate without taking losses. At the same time, health homes continued to express some concerns about payment rates. One health home representatives noted that the impact of "pandemic fatigue" on engagement rates and revenue had prevented health homes from fully benefitting from the rate increase. Another health home representative noted, because labor costs are expected to increase by three to four percent each year, the rates will need to increase annually as well.

Health home representatives also indicated that the 8.5 percent included in the rates for administrative expenses were not sufficient to cover their overhead costs. One health home reported that it is unable to administer the program for that amount and is considering changing the way they structure their program. One State official in 2021 indicated that the 8.5 administrative rate was consistent with the administrative rate the Health Care Authority (HCA) paid to similar organizations and reflected HCA's preference for allocating resources to services for beneficiaries over the administrative costs of organizations.

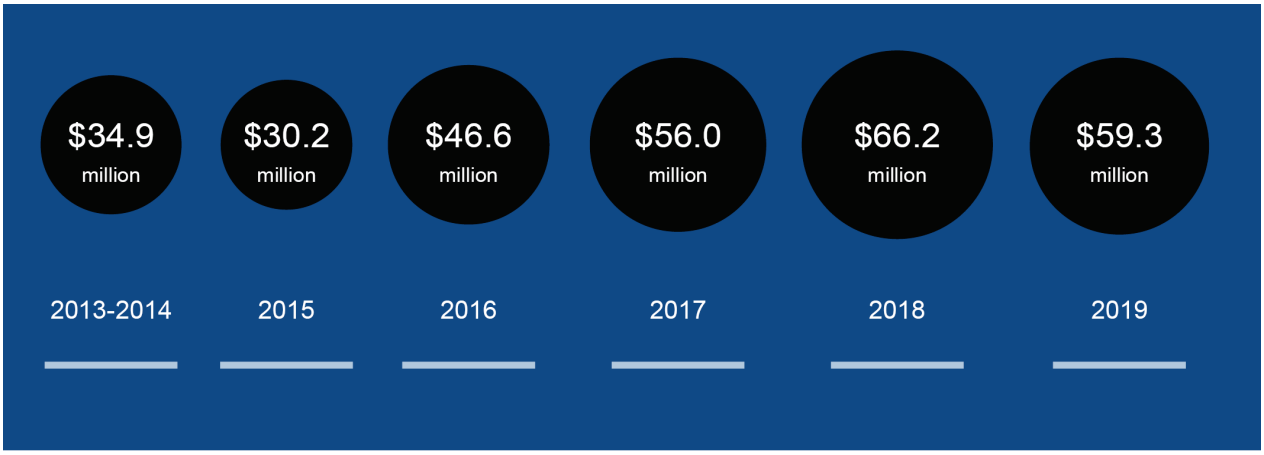
> *...I think the rates are much better, at least from our financial perspective as a CCO. They're not sustainable for us as a lead yet at all….*
>
> – Health Home Representative (2021)

The rate increase does not address the structural challenge for new health homes. Because health homes are not paid until they successfully engage enrollees, it can take a long time for health homes to recover their start-up and early operating costs. The State used the 5 percent

incentive payment as a mechanism to help a new health home generate revenue during the start-up period. The 5 percent payment incentive expired at the end of 2020.

The State has financed the payment increase for health homes with the shared savings it has received from the demonstration. According to separate actuarial analyses conducted for performance payment purposes, the demonstration achieved a total gross Medicare Parts A and B savings of $293 million in the first 6 demonstration years (see ***Figure 1***).

Figure 1
Total gross Medicare Parts A and B savings, by demonstration year



NOTES: Actuarial savings reports are available at https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/Washington. The 2019 figure is preliminary. The savings amounts, as shown, are rounded.

3.6 Quality of Care

To maintain compliance with new performance metrics health home representatives reported creating databases to track and count outreach attempts, and employing additional staff to contact beneficiaries not yet engaged in the program.

The State will begin reporting performance on a new quality measure related to homelessness and housing insecurity in 2021.

In this section we include updates on the quality measures for the demonstration, and quality management and oversight activities. Results of the demonstration's impact on quality measures, separately defined using Medicare claims, are discussed in ***Section 5, Demonstration Impact on Service Utilization and Quality of Care***.

Beginning in 2018, health homes were required to report two new performance metrics to CMS: (1) percentage of enrollees with an assessment completed within 90 days, and (2) percentage of enrollees with a care plan completed in 90 days. These metrics were added in

response to a 2015 report from the Government Accountability Office recommending that CMS strengthen oversight of the health home demonstration (GAO, 2015)

As described in the Fourth Evaluation Report, State officials and health homes in 2019 and 2020 revealed numerous frustrations with reporting these metrics which require that care coordinators document all outreach attempts. Key informants described the documentation and monitoring processes necessary to report these metrics as burdensome and time consuming. See the Fourth Evaluation Report for additional details.

In 2020 and 2021 health homes reported creating databases to track and count outreach attempts, and when feasible, using interns and administrative staff to both conduct and document the required outreach. Despite making these adjustments, State officials and health homes continued to described compliance with the new metrics as labor intensive and costly. Spending large amounts of time performing outreach to hard-to-reach beneficiaries, many of whom are unresponsive, takes time away from serving patients who are already committed and engaged in the program. One health home in 2021 also noted that performing intensive outreach had become even more unproductive, given growing competition from MA plans.

It takes a lot of effort to get someone on the phone, create enough interest in the program, create an appointment for the care coordinator to go out and talk about the program, engage on a health action plan … then we're losing people by the hundreds when they [later] sign up for a MA plan.

– Health Home Representative (2020)

See ***Section 3.2, Eligibility and Enrollment*** for additional details on competition from MA plans.

State officials also relayed concerns about recent changes made to the calculation of the HEDIS readmissions measure. The National Committee for Quality Assurance updated the weights used to create the 2020 readmissions measure and began including inpatient observation services in the calculation. Under the prior metric, Washington showed a positive impact on readmissions for the demonstration eligible population. State officials are concerned that they will not be able to show the same level of performance under the new measure.

The State will also begin reporting performance on a new quality measure related to homelessness and housing insecurity in 2021, the percent of high-risk Medicare-Medicaid demonstration eligible beneficiaries who were homeless in a least one month in the measurement year.

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SECTION 4

Beneficiary Experience

Consistent with prior years, a majority of Consumer Assessment of Healthcare Providers and Systems (CAHPS) respondents reported being satisfied with the care coordination services they received, and being able to access needed services in a timely manner.

Most individual beneficiary interview participants reported positive experiences with their care coordinator, yet few relied solely on their health home care coordinator to facilitate provision of services.

One of the main goals of the demonstration under the FAI is to improve the beneficiary experience accessing Medicare and Medicaid. In this section we highlight beneficiary experience with the Washington Health Home MFFS Demonstration and provide information on beneficiary satisfaction with care coordination and access to care.

We draw on findings from the 2019 CAHPS survey[10] and from individual beneficiary interviews conducted in fall 2019 through January 2020 by Alan Newman Research on behalf of CMS. See ***Appendix A*** for a full description of these data sources.

4.1 Overall Satisfaction with the Demonstration

Consistent with results from prior years, most respondents to the 2019 CAHPS survey reported being satisfied with the care coordination services they received, and being able to access needed services in a timely manner. However, only 58 percent of beneficiaries rated their health homes as a 9 or 10 on a 10-point scale. As in prior years, this may be because they did not recognize the term "health home." Over the past 5 years, beneficiaries have consistently rated their health home markedly lower than they have rated other care coordination measures (see ***Figure 2***).

Most individual beneficiary participants also reported relatively high satisfaction with the Washington Health Home program, with most participants rating their satisfaction as either a 4 or 5, with 5 being the highest rating. Participants expressed appreciation for the services they received as well as their care coordinators.

> *They make my life easier … It's easier to get my health care needs met when they're here to help me.*
>
> – Individual Beneficiary Interview Participant (2020)

[10] In 2020, CMS suspended the annual CAHPS survey requirement for Medicare Advantage plans, MMPs, and the Washington Health Home MFFS demonstration due to the PHE. We provide national benchmarks from MA plans, where available, understanding that there are differences in the populations served by the Washington Health Home MFFS demonstration and the MA population, including health and socioeconomic characteristics that must be considered in the comparison of the demonstration to the national MA contracts.

Individual beneficiary interview participants also reported factors that diminished their satisfaction with the health home demonstration. These included delays in access to services not provided by health homes such as durable medical equipment (DME), specialized medications, and home modifications; care coordinators who were unresponsive or inconsiderate; and turnover among care coordinators.

If I need to reach [my care coordinator], I find it quite the struggle. And I don't know why I do, because other than she might sit there and listen for a while, I don't feel she gets involved or helps me to get connected to my case manager … Other than she'll just listen to me a little bit, I don't think it goes any further than that.

– Individual Beneficiary Interview Participant (2020)

4.2 Care Coordination Services

As in prior years, respondents to the 2019 CAHPS survey reported high levels of satisfaction with their care coordination services. Eighty-five percent reported that they were satisfied with the help they received to coordinate their care, and 86 percent said that their doctor was informed and updated about their care (see ***Figure 2***). Across all three measures presented in ***Figure 2***, the percentages have been similar over the past 5 years (2015–2019).

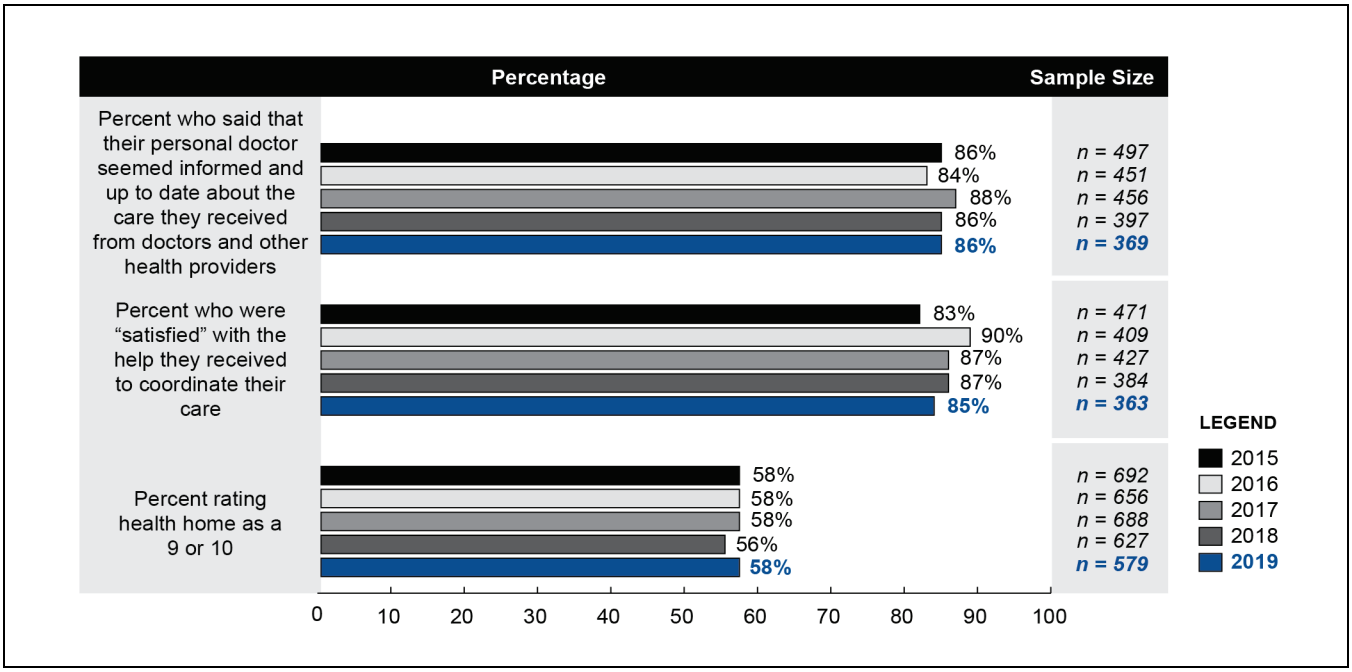
Most individual beneficiary interview participants reported positive relationships with their care coordinators. They were pleased with the amount of contact they had with their care coordinator and noted that care coordinators were helpful in bringing awareness to services available through the Washington demonstration. Participants reported that their care coordinators helped them identify service providers in their area and provided them with some education about their health conditions.

She does a lot of things. She wants to know about my health. She also wants to know if I need anything. She'll help me out with all of that. She's just been working with me pretty awesome.

– Individual Beneficiary Interview Participant (2020)

Almost all individual beneficiary interview participants reported working with more than just their Washington Health Home care coordinator to obtain the health services they needed. Many cited that in-home caregivers played important roles in their lives as well as other case managers such as those that assist with LTSS or mental health. In some instances, it was difficult for beneficiaries to distinguish the services provided by their health home care coordinator from those provided by other case managers.

Figure 2
Beneficiary experience with care coordination, 2015–2019



CAHPS = Consumer Assessment of Healthcare Providers and Systems; FAI = Financial Alignment Initiative.
NOTE: Data for 2020 are not available for any of the questions as CAHPS data were not reported due to the COVID-19 Pandemic.
SOURCE: NORC at the University of Chicago. Financial Alignment Initiative CAHPS Quality of Care Survey Aggregate Report. July 2020.

4.3 Access to Care

Also consistent with prior years, 83 percent of 2019 CAHPS respondents said that they were satisfied with their ability to obtain needed care, and 85 percent said that they were satisfied with how quickly they were able to receive care. Seventy-three percent of 2019 CAHPS respondents were satisfied with their access to specialized services (see ***Figure 3***).

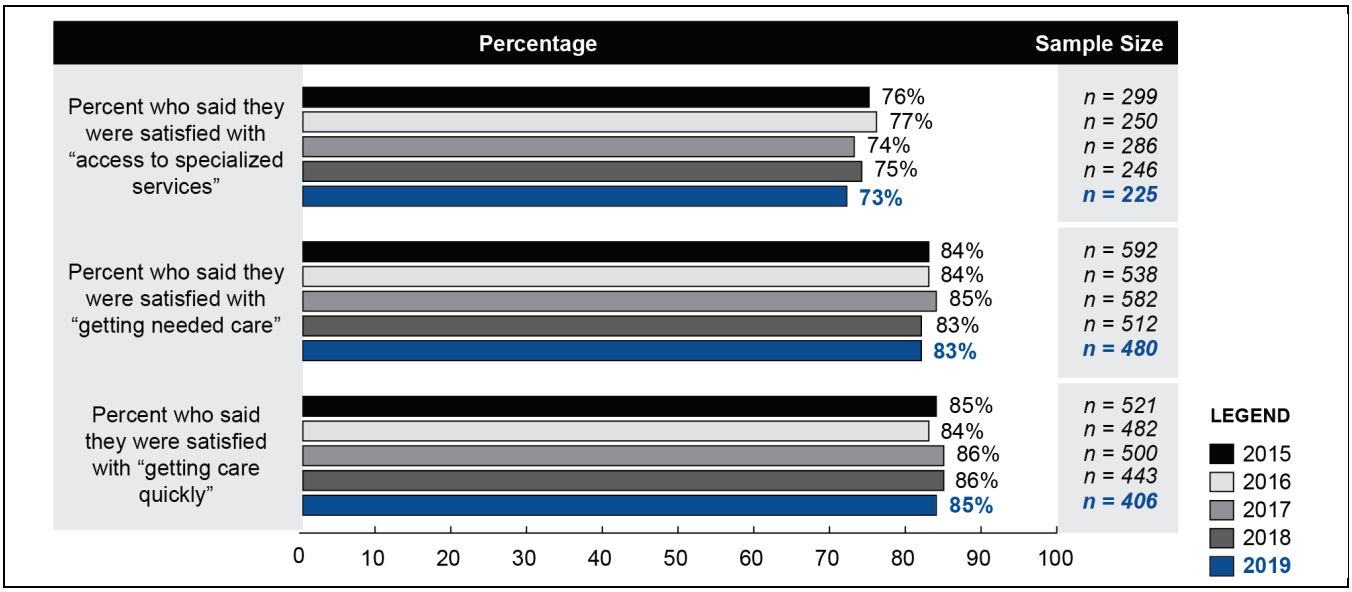
Most individual beneficiary interview participants reported improved access to medical, mental health, and in-home support service categories, after working with their health home care coordinator. Some participants reported that their care coordinators provided them with a list of participating service providers, or in some cases, made appointments for some services such as in-home or personal care services.

I was surprised. There is a whole plethora of programs and things that are meant to make our lives better and programs to use and that kind of thing.

– Individual Beneficiary Interview Participant (2020)

Individual beneficiary interview participants said that health home care coordinators did not typically make appointments for other types of services such as medical appointments with primary care physicians or mental health providers. These appointments were typically made by the beneficiary themselves or by other care managers. However, care coordinators were often aware of these visits and would discuss them with the beneficiary as needed. Many participants cited their care coordinator as the primary factor in getting many of their needs met.

Figure 3
Beneficiary experience with access to services, 2015–2019



CAHPS = Consumer Assessment of Healthcare Providers and Systems; FAI = Financial Alignment Initiative.

[1] "Access to Specialized Services" is a composite of three items: (1) "In the last 6 months, how often was it easy to get the medical equipment you needed?"; (2) "In the last 6 months, how often was it easy to get the special therapy you needed?"; and (3) "In the last 6 months, how often was it easy to get the treatment or counseling you needed?" The composite response of "satisfied" comprises "Usually/Always" responses.

[2] "Getting Needed Care" is a composite of two items: (1) "In the last 6 months, how often was it easy to get the care, tests, or treatment you needed?"; and (2) "In the last 6 months, how often did you get an appointment to see a specialist as soon as you needed?" The composite response of "satisfied" comprises "Usually/Always" responses.

[3] "Getting Care Quickly" is a composite of two items: (1) "In the last 6 months, when you needed care right away, how often did you get care as soon as you needed?"; and (2) "In the last 6 months, how often did you get an appointment for a check-up or routine care at a doctor's office or clinic as soon as you needed?" The composite response of "satisfied" comprises "Usually/Always" responses.

NOTE: Data for 2020 are not available for any of the questions as CAHPS data were not reported due to the COVID-19 Pandemic.

SOURCE: NORC at the University of Chicago. Financial Alignment Initiative CAHPS Quality of Care Survey Aggregate Report. July 2020.

SECTION 5

Demonstration Impact on Service Utilization and Quality of Care

5.1 Methods Overview

The FAI demonstrations 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 coordination activities and financial incentives. The analyses in this section evaluate the effects of the Washington demonstration in demonstration years 4–6 (January 1, 2017–December 31, 2019) on service utilization and quality of care outcomes among Washington demonstration eligible beneficiaries. Although the demonstration and comparison group areas changed beginning in demonstration year 4 due to the expansion of the demonstration, annual impact results for demonstration years 1–3 are provided in the figures below for reference.

Because of the extension of the Washington demonstration to include the urban counties of King and Snohomish in April 2017, RTI developed a new comparison group for demonstration years 4–6 and the 2-year predemonstration period to match the current statewide demonstration group. For additional details, see ***Appendix B***.

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 a health home, to alleviate concerns of selection bias and to support generalizability of the results among the demonstration eligible population. During demonstration year 6, approximately 14.8 percent of the demonstration eligible population were health home users (calculated from ***Table C-1***). Comparison group beneficiaries are from areas with characteristics similar to those of the demonstration area (see ***Appendix B*** for more detail).

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. Logistic regression models were used to analyze probability outcomes, and negative binomial regression models were used to analyze count outcomes. We used Medicare enrollment and FFS claims data to conduct this analysis. Additional details in methodology are provided in ***Appendix C***.

We begin by analyzing the cumulative effect of the demonstration over demonstration years 4–6 and then report the annual effects for each outcome and demonstration year using forest plots. To help interpret the DinD estimate, 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 predicted mean outcome in the comparison group during the demonstration period. We chose this predicted mean as the denominator or the reference point to gauge the relative magnitude of the DinD estimate because it is among beneficiaries with the most comparable characteristics to the demonstration 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 had a slower decline in the outcome, relative to the comparison group. Similarly, a negative value on

the DinD estimate may correspond to 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 present a point estimate of the demonstration effect by demonstration year for each outcome, along with 95 percent confidence intervals of each point estimate. A point estimate indicates a statistically significant demonstration effect if neither the upper nor lower bound of its confidence interval crosses zero. The annual estimates for demonstration years 4 and 5 may vary slightly from those shown in the Fourth Evaluation Report due to an additional year of data included in the analysis presented in the current report.

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 interest is in understanding whether the demonstration might have impacted LTSS users differently than non-LTSS users or people with SPMI relative to those without SPMI. We present the demonstration effects separately for LTSS users and for non-LTSS users, and the difference between the two effects; this difference, if statistically significant, would suggest an uneven impact of the demonstration for LTSS users and non-LTSS users. After that, we present the same type of results for beneficiaries with and without SPMI. 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. For a complete list of DinD estimates with 95 and 90 percent confidence intervals, please see ***Appendix D***.

5.2 Demonstration Impact on Service Utilization Among Eligible Beneficiaries

Over demonstration years 4–6, the demonstration decreased the monthly probability of any SNF admissions by 24.2 percent, and the annual probability of any long-stay NF use by 14.8 percent, relative to the comparison group. However, the monthly number of physician evaluation and management (E&M) visits also decreased by 15.2 percent, relative to the comparison group. There were no statistically significant demonstration impacts on inpatient admissions or ED visits.

5.2.1 Cumulative Impact Over Demonstration Years 4–6

The demonstration is intended to increase use of outpatient care and HCBS, while decreasing inpatient care, ED visits, and long-stay NF use through improvements in access to the full range of medical, behavioral health and LTSS, and improvements in quality of care and care coordination.

Table 4 shows the cumulative impacts of the demonstration on service utilization over demonstration years 4–6. Similar to the results reported in the Fourth Evaluation Report, the monthly probability of any SNF admission, and annual probability of any long-stay NF stay, decreased in the demonstration group relative to the comparison group. However, the number of physician E&M visits also decreased in the demonstration group relative to the comparison group.

- The cumulative demonstration effect on the probability of a SNF admission was a 0.39 percentage point decrease per month per beneficiary, relative to the comparison group. This monthly decrease represents a relative difference of 24.2 percent of the average predicted probability of SNF admissions in the comparison group during the demonstration period. The annualized decrease in the probability of SNF admissions was 4.68 percentage points (derived by 0.0039*12) relative to the comparison group.
- The Washington demonstration resulted in a 3.5 percentage point greater decrease in the annual probability of any long-stay NF use, relative to the comparison group. This change represents a relative difference of 14.8 percent of the predicted probability of annual long-stay NF use among the comparison group during the demonstration period.
  - The decrease in SNF and NF utilization is consistent with the goals of the Washington demonstration and a continuation of findings from the Fourth Evaluation Report—specifically, a focus on care transitions and improved communication between care coordinators and hospitals. Indeed, State officials indicated that keeping track of hospital discharges and other care transitions in part contributed to overall savings for the Washington demonstration.
- The Washington demonstration decreased the monthly number of physician E&M visits by 0.2289 visits per month, relative to the comparison group. This change represents a 15.2 percent difference relative to the predicted number of physician E&M visits in the comparison group during the demonstration period. The annual decrease in the demonstration group relative to the comparison group is 2.75 visits (derived by 0.2289*12).
  - These findings are a continuation of trends identified and discussed in the Fourth Evaluation Report. In that report, we discussed possible explanations for the decline in physician E&M visits. For example, a low percentage of beneficiaries with health home use among the eligible population (around 15 percent in demonstration year 6) could contribute to a potential problem with access to care.
  - Although these findings are considered potentially unfavorable, an alternative explanation may be that for those engaged in the demonstration, frequent care coordinator contacts (e.g., monthly in-home meetings, additional involvement as needed, and additional services provided) may address a range of needs, reducing the need for physician visits. Although we do not have quantitative data to support this explanation, beneficiary interviews are suggestive of this. For example, 2020 individual beneficiary interview participants spoke about the extensive support and education they receive from care coordinators in helping to manage their condition. One enrollee stated, “Mainly how to handle my life and how to handle my stress and my depression when I don’t see my psychiatrist. She gives me ideas on how to relieve that or different things that I can do about it.”
- There was no demonstration impact on inpatient admissions or ED visits, relative to the comparison group. In Washington, despite a decline in average monthly inpatient use from 5.7 to 4.5 percent from the baseline through the demonstration period, there

was similar decline in the comparison group resulting in a statistically nonsignificant change. A similar trend was observed for average monthly ED visits.

– As previously described in the Fourth Evaluation Report, the Washington demonstration faced challenges related to building care coordination capacity in demonstration counties. For example, workforce shortages combined with demand for care coordinators in State and Federal initiatives have limited health homes' ability to add care coordination staff (see the Fourth Evaluation Report, ***Section 3.1.2.)***. Additionally, enrollment in health homes continued to be a major challenge (see ***Section 3.2, Eligibility and Enrollment***).

Table 4
Cumulative demonstration impact on service utilization measures for eligible beneficiaries in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Measure	Group	Adjusted mean for predemonstration period	Adjusted mean for demonstration period	Relative difference (%)	Regression-adjusted DinD estimate (95% confidence interval)	*p*-value
Probability of inpatient admission	Demonstration	0.0572	0.0447	NS	−0.0015 (−0.0042, 0.0012)	0.2709
	Comparison	0.0635	0.0514			
Probability of ED visit	Demonstration	0.0930	0.0925	NS	0.0008 (−0.0028, 0.0044)	0.6612
	Comparison	0.0914	0.0902			
Count of physician E&M visits	Demonstration	1.3196	1.2364	−15.2	−0.2289*** (−0.2926, −0.1651)	<0.0001
	Comparison	1.3380	1.5078			
Probability of SNF admission	Demonstration	0.0235	0.0136	−24.2	−0.0039*** (−0.0051, −0.0027)	<0.0001
	Comparison	0.0202	0.0159			
Probability of any long-stay NF use	Demonstration	0.2091	0.1537	−14.8	−0.0350*** (–0.0441, –0.0259)	<0.0001
	Comparison	0.2459	0.2361			

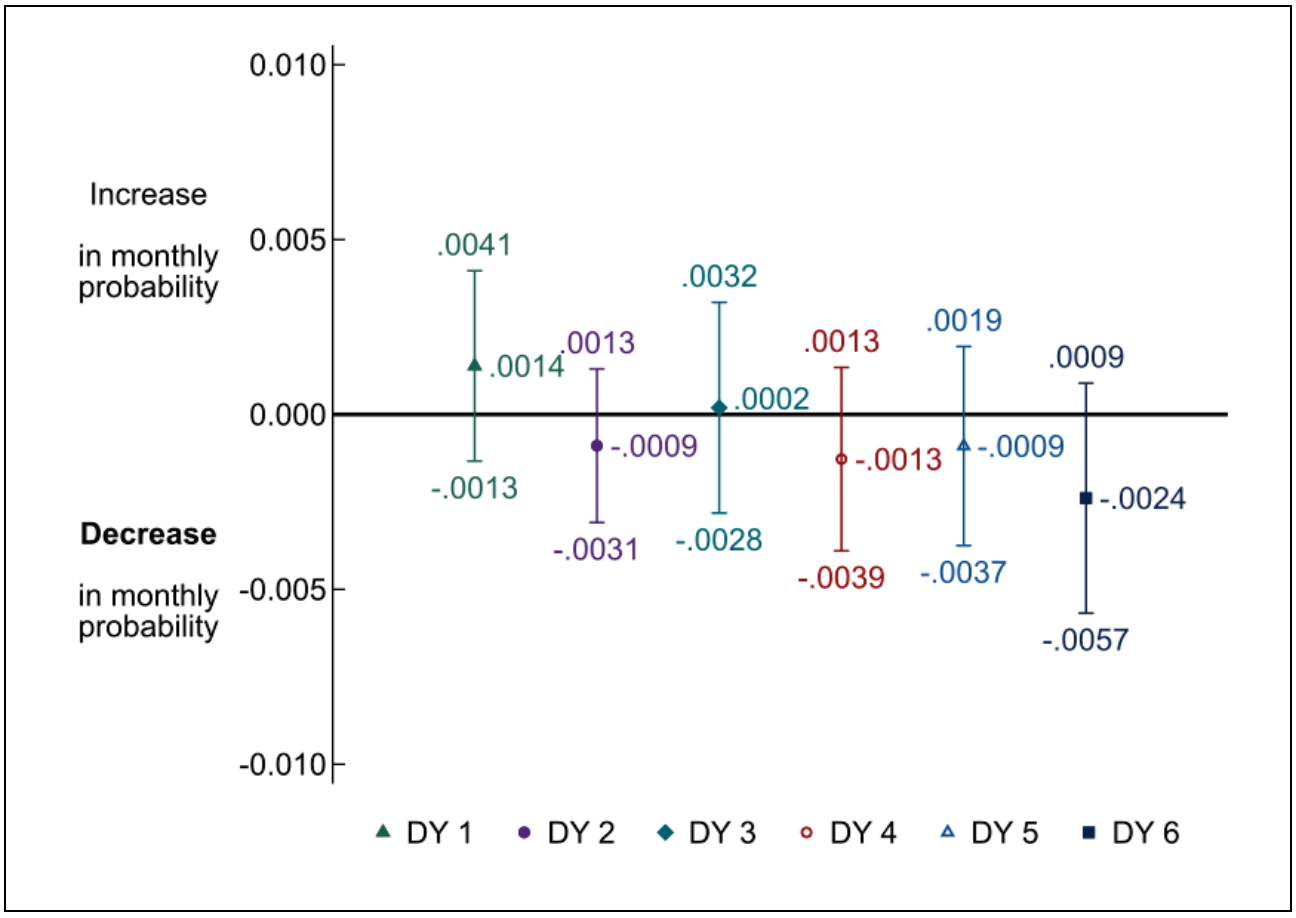
*p < 0.05, **p < 0.01, ***p < 0.001
DinD = difference-in-differences; ED = emergency department; E&M = evaluation and management; NF = nursing facility; NS = not statistically significant; SNF = skilled nursing facility.
NOTES: The adjusted mean is the regression-adjusted predicted probability or number 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*).
SOURCE: RTI International analysis of Medicare fee-for-service claims and Minimum Data Set data.

5.2.2 Demonstration Impact in Each Demonstration Year

Figures 4–8 show annual effects of the demonstration on all-cause inpatient admissions, ED visits, physician visits, SNF admissions, and long-stay NF use, respectively, including annual effects for demonstration years 1–3 for reference. These annual impact estimates indicate that the Washington demonstration decreased the probability of long-stay NF use, SNF admissions, and the number of physician E&M visits each year during demonstration years 4–6 (2017 through 2019).

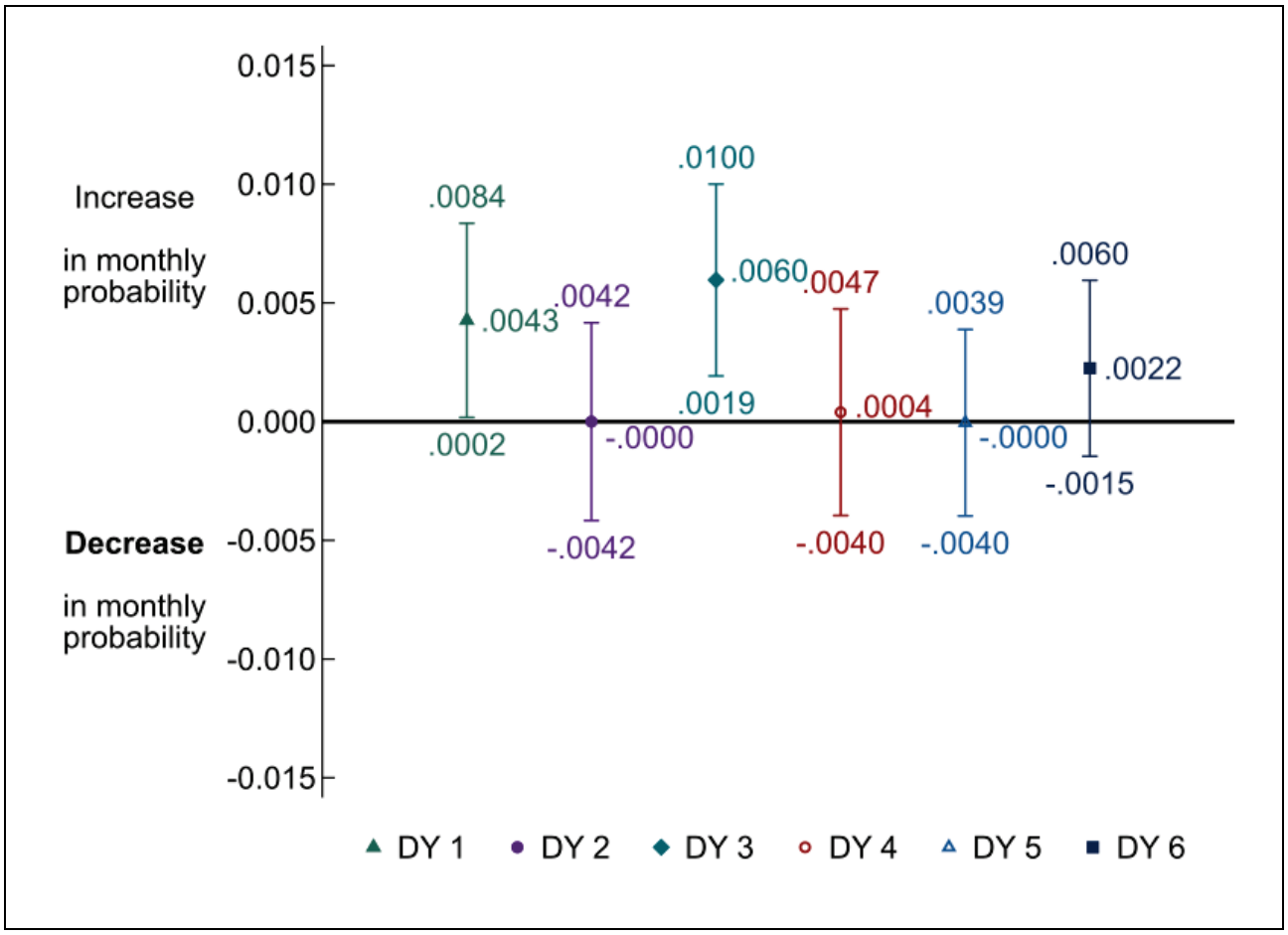
- The Washington demonstration did not have a significant effect on the probability of inpatient admissions (***Figure 4***) or ED visits (***Figure 5***) during demonstration years 4, 5, or 6.
- The Washington demonstration decreased the number of physician E&M visits in demonstration years 4 through 6 by 0.1729, 0.2239, and 0.2928 visits per month, respectively, relative to the comparison group (***Figure 6***). These potentially unfavorable annual findings are consistent with the cumulative finding.
  - Similar to what was described in the Fourth Evaluation Report, reduced enrollment in health homes and challenges with care coordination capacity may help explain these findings.
  - Despite decreases in the average number of physician visits each demonstration year, and challenges with care coordination capacity, the 2019 CAHPS results indicate that 85 percent of health home enrollees were satisfied with "getting care quickly" (see ***Section 4, Beneficiary Experience***).
- Despite a decline in physician E&M visits, the Washington demonstration reduced the monthly and annual probabilities of SNF admissions (***Figure 7***) and long-stay NF use (***Figure 8***), respectively, during each demonstration year, relative to the comparison group.
  - As described above, the Washington demonstration's focus on care transitions and improved communication between care coordinators and hospitals may help explain these findings (see ***Section 3.3, Care Coordination***).
  - CAHPS survey results from the demonstration group also indicated high satisfaction with care coordination services among enrollees during each demonstration year. From 2017 to 2019, 85 to 87 percent of health home enrollees reported that they were satisfied with the help they received to coordinate their care, and 86 percent said that their doctor was informed and updated about their care. Individual beneficiary interview participants expressed similar high satisfaction (see ***Section 4, Beneficiary Experience***).

Figure 4
Annual demonstration effects on inpatient admissions, demonstration years 1–6
(July 1, 2013–December 31, 2019)



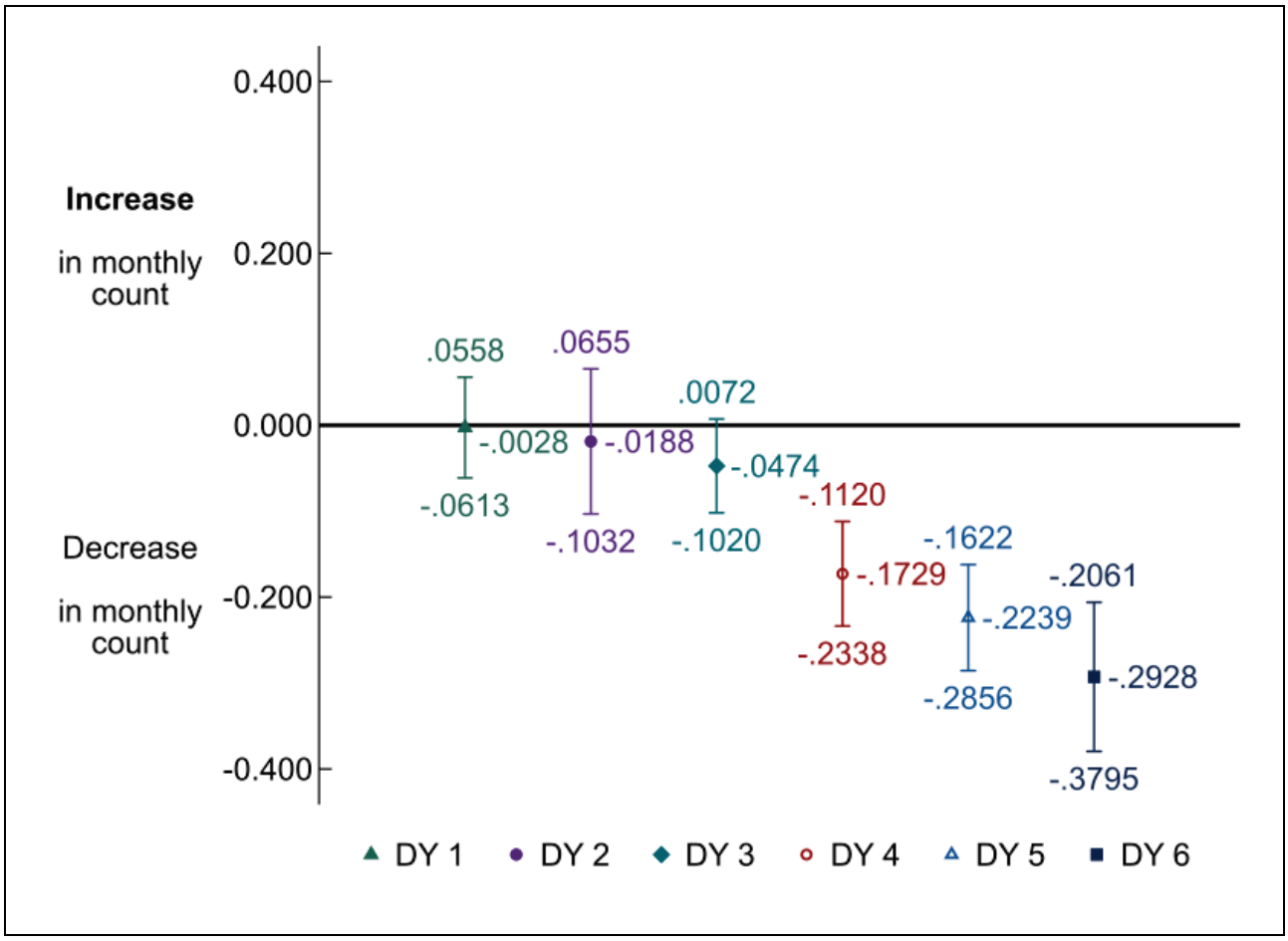
DY = demonstration year.
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare fee-for-service claims

Figure 5
Annual demonstration effects on ED visits, demonstration years 1–6
(July 1, 2013–December 31, 2019)



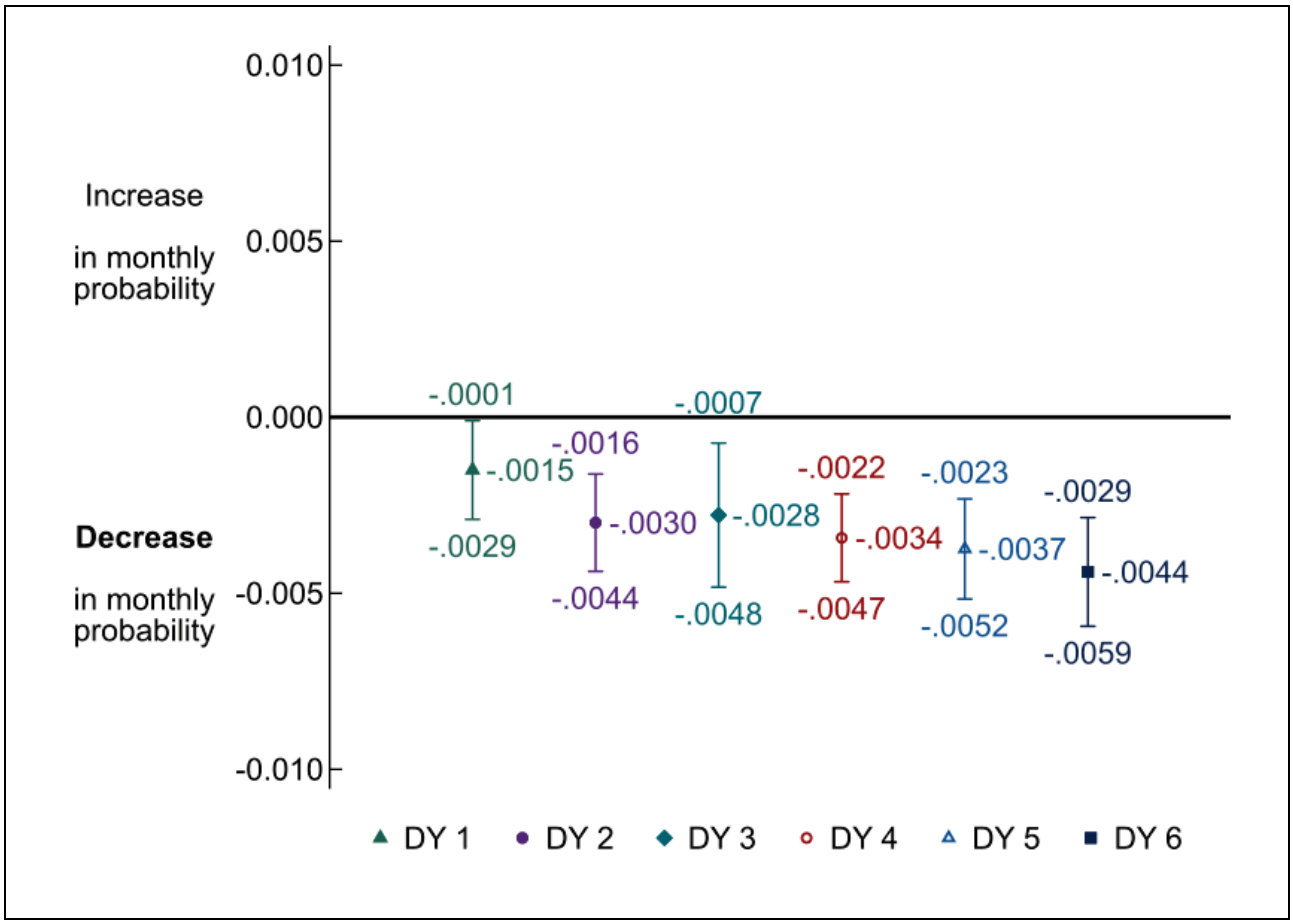
DY = demonstration year; ED = emergency department.
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare fee-for-service claims.

Figure 6
Annual demonstration effects on physician E&M visits, demonstration years 1–6
(July 1, 2013–December 31, 2019)



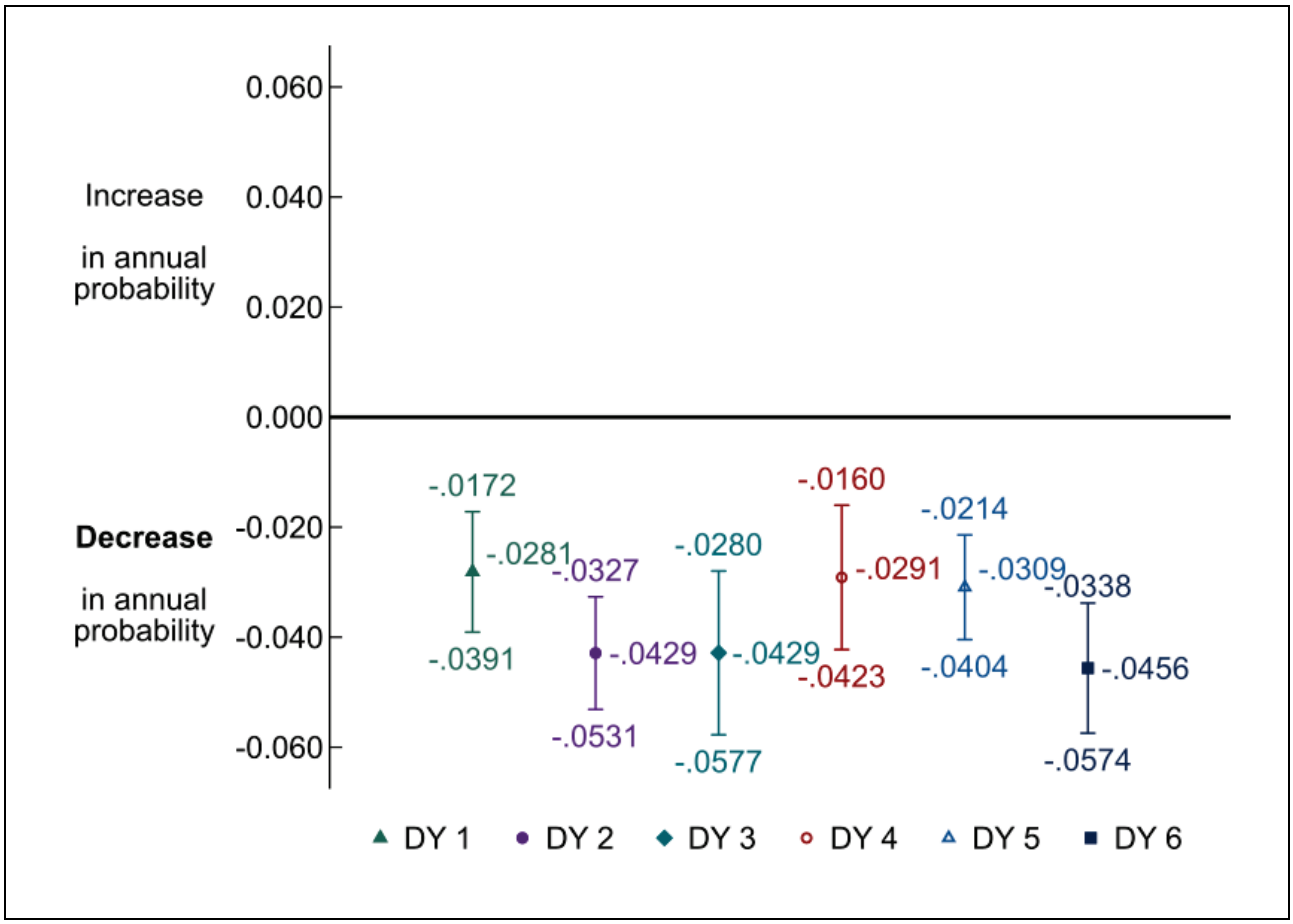
DY = demonstration year; E&M = evaluation and management.
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare fee-for-service claims.

Figure 7
Annual demonstration effects on SNF admissions, demonstration years 1–6
(July 1, 2013–December 31, 2019)



DY = demonstration year; SNF = skilled nursing facility.
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare fee-for-service claims.

Figure 8
Annual demonstration effects on long-stay NF use, demonstration years 1–6
(July 1, 2013–December 31, 2019)



DY = demonstration year; NF = nursing facility.
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of the Nursing Home Minimum Data Set data.

5.3 Demonstration Impact on Quality of Care Measures Among Eligible Beneficiaries

Over demonstration years 4–6, the demonstration resulted in a 10.2 percent decline in 30-day follow-up after a mental health discharge. There were no demonstration impacts on other quality of care measures relative to the comparison group. These findings may reflect continued challenges with health home enrollment and care coordination capacity.

5.3.1 Cumulative Impact Over Demonstration Years 4–6

We analyzed the impact of the demonstration on a set of quality of care measures using Medicare claims data. The Washington demonstration decreased the probability of having a 30-day follow-up visit after a mental health discharge, relative to the comparison group. Although there was movement in the desired direction on all other measures, the trends in the demonstration group were similar to, or less salient than, the trends in the comparison group. Thus, there was no cumulative effect of the demonstration on preventable ED visits, ambulatory care sensitive condition (ASCS) admissions (overall or chronic), or 30-day readmission over demonstration years 4–6. ***Table 5*** shows the 3-year cumulative impact estimates and adjusted means for these measures.

- The Washington demonstration resulted in a 3.64 percentage point decrease in the probability of a mental health follow-up visit, relative to the comparison group. This represents a 10.2 percent decrease, relative to the predicted mean in the comparison group during the demonstration period.
  - As noted in the Fourth Evaluation Report, these findings should be interpreted with caution. Behavioral health services for beneficiaries enrolled in Medicaid in Washington are provided by managed care organizations. Starting in 2016, Washington transitioned to an integrated managed care system for delivering behavioral health services for Medicaid enrollees with co-occurring medical and behavioral health conditions (Center for Health Care Strategies, 2020). Therefore, starting in 2016 behavioral health services provided to the Washington demonstration eligible population could be delivered and financed by Medicaid behavioral health organizations, not Medicaid FFS, and those services are not observable in claims.
  - There was an observed decline in the average percent of mental health discharges with a 30-day follow-up, from 39 percent in predemonstration year 2 (not shown) to approximately 26 percent in demonstration years 4–6 (see ***Appendix Table D-8***). A similar decline in behavioral health visits was observed in Washington from the predemonstration period (not shown) through the demonstration periods (see ***Appendix Table D-7***).
- There was no demonstration impact on any other quality of care measure relative to the comparison group. As described in the Fourth Evaluation Report, there were a combination of factors that may explain why the Washington demonstration did not impact the quality of care among the eligible population. Specifically, there was a

decline in health home enrollment from the exit of the largest health home in demonstration year 5. At the same time, the extension of the demonstration to King and Snohomish counties was associated with difficulty finding enough CCOs with the capacity to serve the eligible population in these counties (see ***Section 3.1, Integration of Medicare and Medicaid***) and a change in the State's eligibility policy that restricted health home enrollment (see Fourth Evaluation Report).

Table 5
Cumulative demonstration impact on quality of care measures for eligible beneficiaries in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Measure	Group	Adjusted mean for predemonstration period	Adjusted mean for demonstration period	Relative difference (%)	Regression-adjusted DinD estimate (95% confidence interval)	*p*-value
Count of preventable ED visits	Demonstration	0.0550	0.0547	NS	0.0025 (−0.0007, 0.0057)	0.1305
	Comparison	0.0555	0.0527			
Probability of ACSC admission, overall	Demonstration	0.0105	0.0079	NS	−0.0008 (−0.0021, 0.0004)	0.1872
	Comparison	0.0138	0.0113			
Probability of ACSC admission, chronic	Demonstration	0.0063	0.0056	NS	−0.0004 (−0.0013, 0.0005)	0.3595
	Comparison	0.0081	0.0076			
Probability of 30-day follow-up after mental health discharge	Demonstration	0.3580	0.2680	−10.2	−0.0364* (−0.0720, −0.0008)	0.0449
	Comparison	0.4150	0.3587			
Count of all-cause 30-day readmissions	Demonstration	0.3266	0.2809	NS	−0.0015 (–0.0219, 0.0188)	0.8827
	Comparison	0.3879	0.3354			

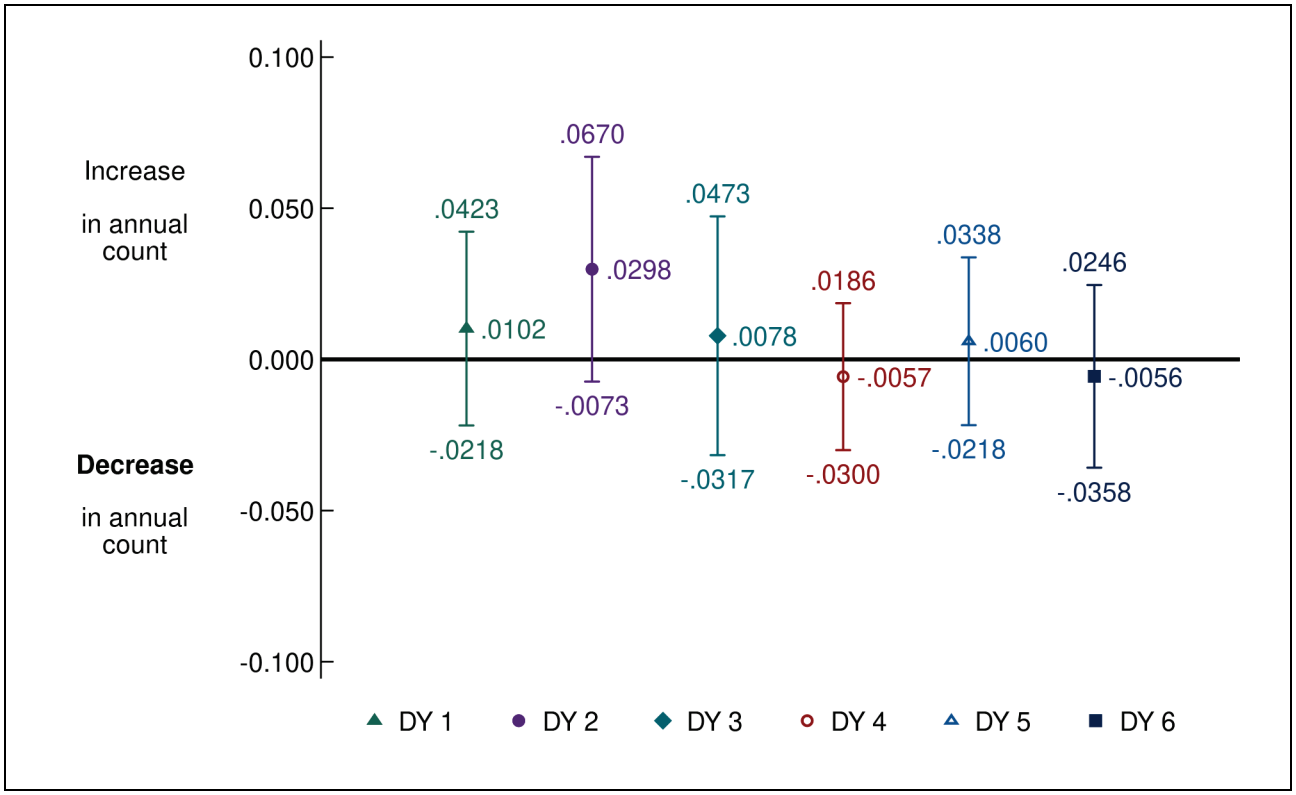
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$
ACSC = ambulatory care sensitive condition; DinD = difference-in-differences; ED = emergency department; NS = not statistically significant.
NOTES: The adjusted mean is the regression-adjusted predicted probability or number of events for the predemonstration 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*).
SOURCE: RTI International analysis of Medicare fee-for-service claims.

5.3.2 Demonstration Impact in Each Demonstration Year

Figures 9–13 show the demonstration's annual effects on 30-day readmission, preventable ED visits, ACSC admissions (overall), ACSC admissions (chronic), and 30-day follow-up post mental health discharge. These annual impact estimates indicate that there were no significant effects of the Washington demonstration on quality of care during demonstration years 4, 5, or 6.

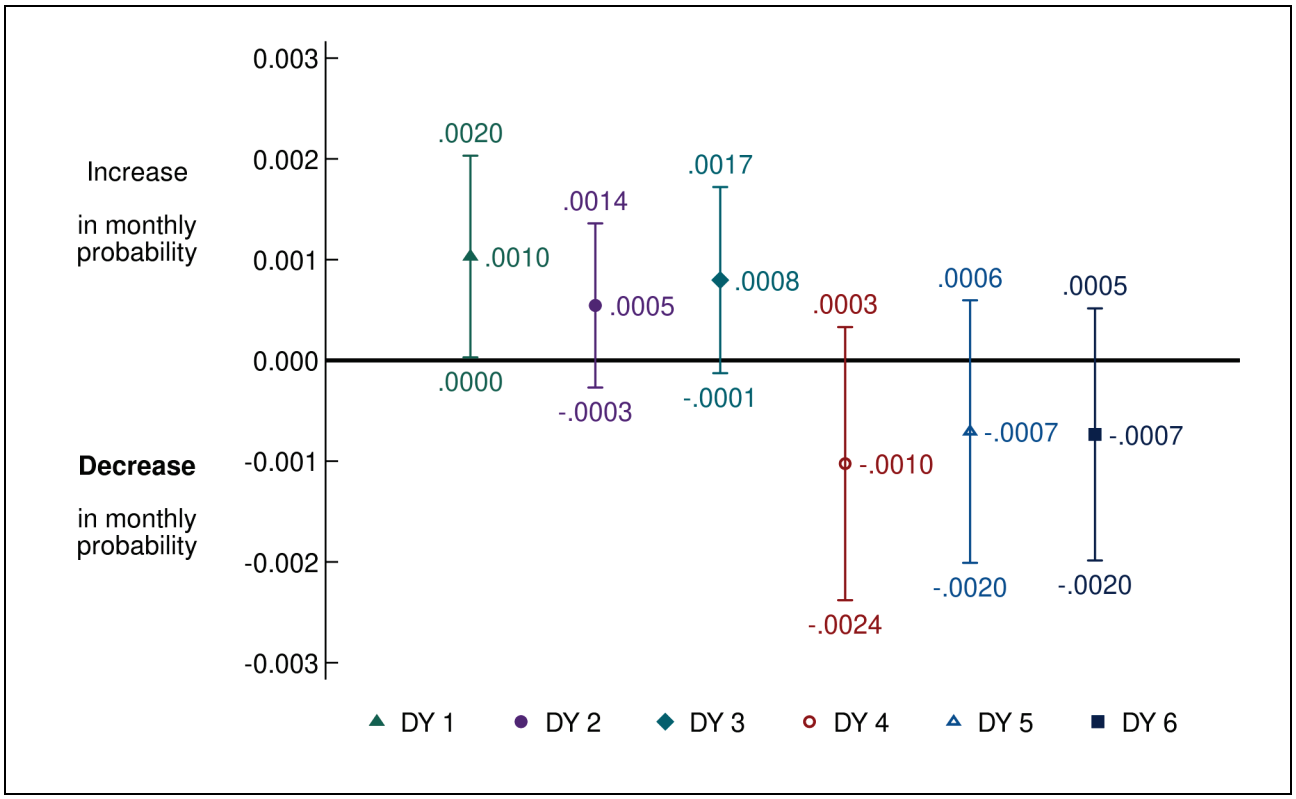
- Consistent with the overall cumulative impact results described above, there were no individual annual impacts of the demonstration on any quality of care measure during demonstration years 4 through 6. These findings contrast with the annual impact estimates for demonstration years 1 through 3, during which some of the estimates were statistically significant and unfavorable (***Figures 9–13***).

Figure 9
Annual demonstration effects on 30-day readmissions, demonstration years 1–6 (July 1, 2013–December 31, 2019)



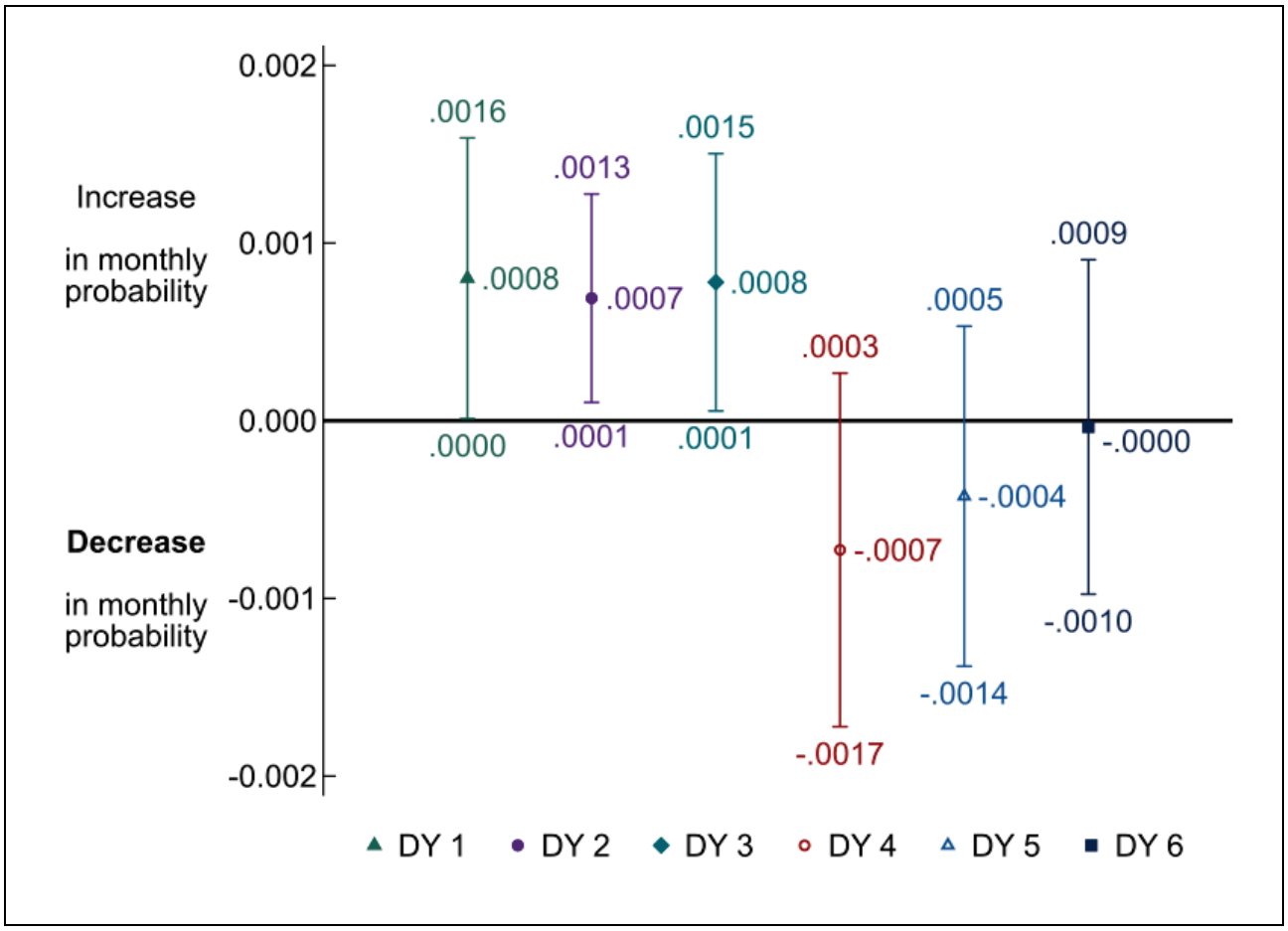
DY = demonstration year.
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare fee-for-service claims.

Figure 10
Annual demonstration effects on ACSC admissions (overall), demonstration years 1–6 (July 1, 2013–December 31, 2019)



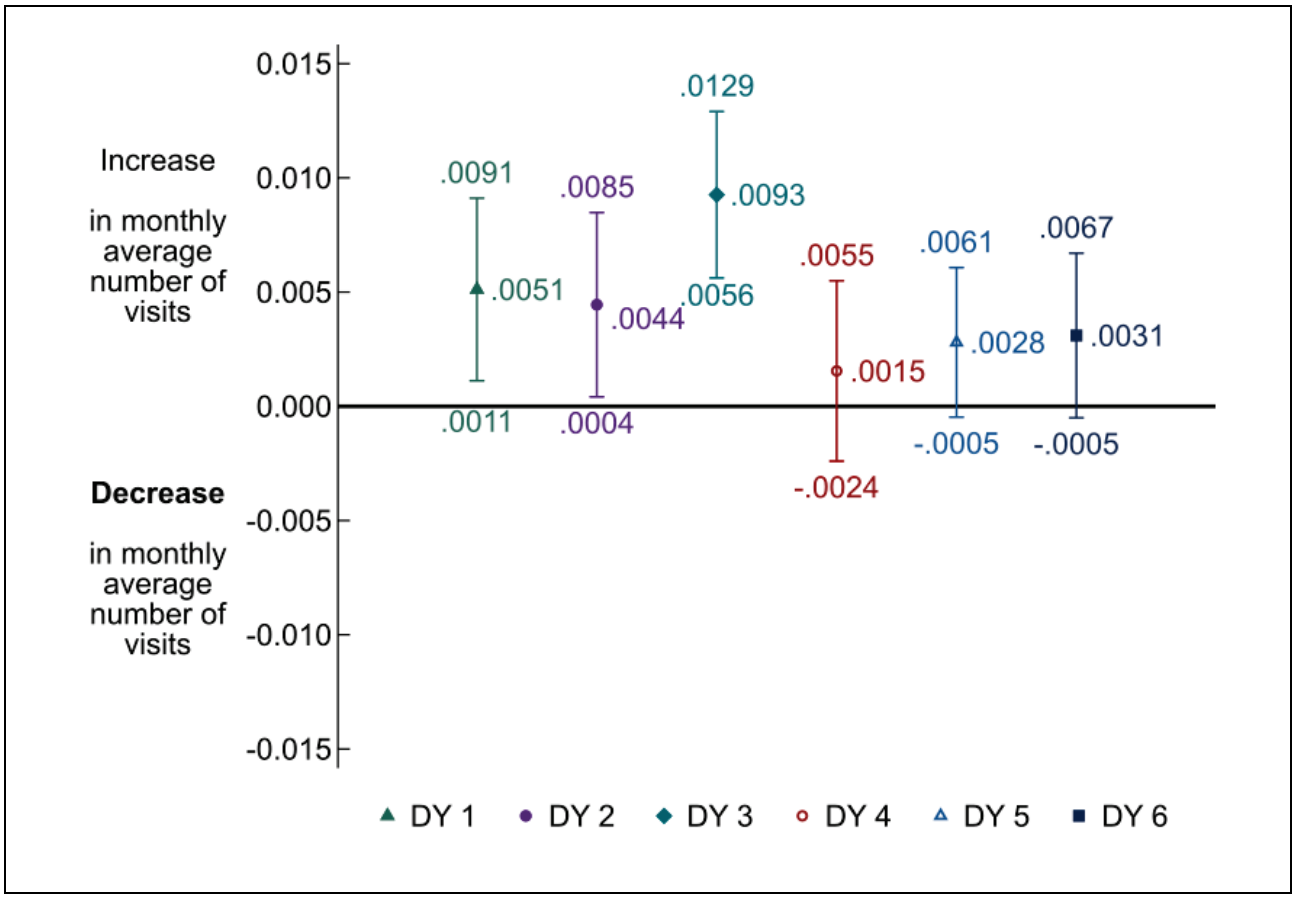
ACSC = ambulatory care sensitive condition; DY = demonstration year.
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare fee-for-service claims.

Figure 11
Annual demonstration effects on ACSC admissions (chronic), demonstration years 1–6 (July 1, 2013–December 31, 2019)



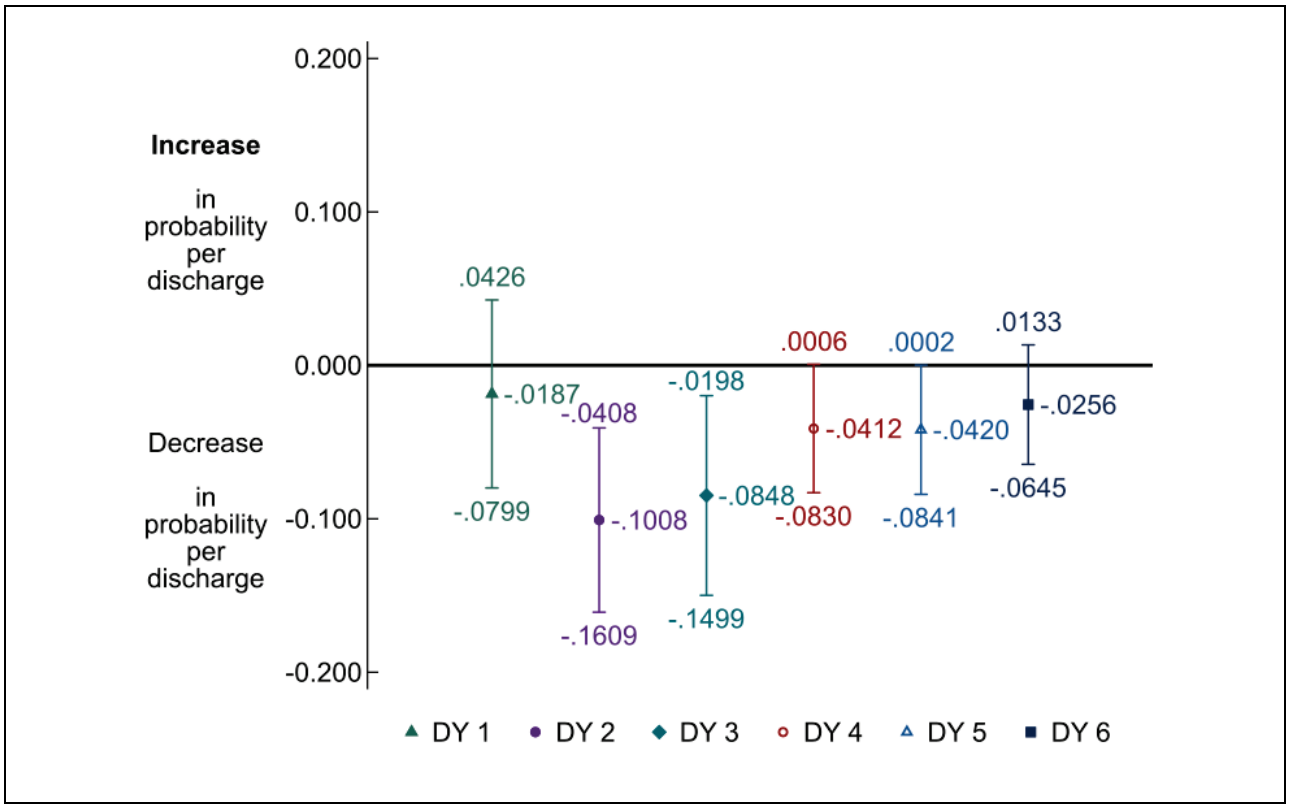
ACSC = ambulatory care sensitive condition; DY = demonstration year.
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare fee-for-service claims.

Figure 12
Annual demonstration effects on preventable ED visits, demonstration years 1–6
(July 1, 2013–December 31, 2019)



DY = demonstration year; ED = emergency department.
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare fee-for-service claims.

Figure 13
Annual demonstration effects on 30-day follow-up post mental health discharge, demonstration years 1–6 (July 1, 2013–December 31, 2019)



DY = demonstration year.
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare fee-for-service claims.

See ***Appendix D, Tables D-4*** through ***D-8***, for unadjusted descriptive statistics for all service use and quality of care measures for the demonstration eligible population and for demonstration health home users and nonusers.

5.4 Demonstration Impact on Select Beneficiaries

The demonstration uniquely impacted the LTSS population, compared to the non-LTSS population. The cumulative demonstration effects for LTSS users over demonstration years 4–6 were an increase in the probability of inpatient admissions, the probability of ED visits, and a smaller relative decrease in the number of physician visits, relative to the demonstration effect for non-LTSS users. The demonstration was not associated with a differential effect on the LTSS and non-LTSS populations for the quality of care measures.

The demonstration uniquely impacted the SPMI population, compared to the non-SPMI population. The cumulative demonstration effect for beneficiaries with SPMI over demonstration years 4–6 was a greater decrease in the number of physician E&M visits and the monthly probability of any SNF admission, relative to the demonstration effect for those without SPMI. The demonstration had no differential effect on the SPMI and non-SPMI populations for the quality of care measures.

Washington has designated Medicaid health homes to be the lead local entities to organize enhanced integration of primary, acute, LTSS, and behavioral health services for Medicare-Medicaid enrollees participating in the demonstration. Each health home is required to establish a network of CCOs representing primary care, mental health, LTSS, chemical dependency providers, and specialty providers; the network must include the local agencies that authorize Medicaid LTSS and behavioral health services. This diversity in type of CCOs is intended to ensure that each health home has experience among its affiliates to engage enrollees with diverse service needs and coordinate their health care and other services. It is expected that the demonstration uniquely impacts service utilization and quality of care among eligible beneficiaries with LTSS needs or who have an SPMI, compared to the non-LTSS and non-SPMI special populations (see group definitions in ***Appendix C***).

See ***Tables D-7*** and ***D-8*** in ***Appendix D*** for unadjusted descriptive statistics for health home users and non-health home users among the demonstration eligible population.

Additionally, further analysis was conducted to examine unadjusted service utilization results by racial and ethnic groups among the eligible population for six settings of interest: inpatient admissions, ED visits that did not result in an admission, primary care E&M visits, behavioral health visits, outpatient therapy (physical therapy, occupational therapy, and speech therapy), and hospice (see ***Appendix Figures D-1, D-2,*** and ***D-3*** in ***Appendix D***).

5.4.1 Beneficiaries Receiving Long-Term Services and Supports

The demonstration impacted service utilization measures for those with LTSS use differently than for those with no LTSS use (see ***Table 6*** below). About 21 percent of the demonstration eligible population in demonstration year 6 had any LTSS use (calculated from ***Table C-1*** in ***Appendix C***).

Over demonstration years 4–6, the cumulative demonstration effect among those with LTSS use was a 0.37 percentage point increase in the probability of any monthly inpatient admission, relative to the demonstration effect among the non-LTSS population. This difference is driven by a statistically significant decrease among the non-LTSS population. The demonstration effect on the monthly probability of any ED visit was a 0.80 percentage point increase in the probability of any monthly ED visit, relative to the demonstration effect among those without LTSS use. There was also a smaller decrease of 0.1208 visit in the monthly number of physician visits among beneficiaries with LTSS use, compared to the demonstration effect among those without LTSS use.

The differences between the demonstration effects on those with LTSS use compared to those without LTSS use was not significant for any of the quality of care measures.

We also present estimates of the demonstration effect for LTSS users and non-LTSS users in each demonstration year, in ***Table D-2*** in ***Appendix D***.

Table 6
Cumulative demonstration effect on service utilization and quality of care measures, beneficiaries with LTSS use versus those without LTSS use in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

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						
Probability of inpatient admission	LTSS	0.0011	NS	0.4738	–0.0019, 0.0041	0.0037*
	Non-LTSS	–0.0026	–6.2	0.0266	–0.0050, –0.0003	
Probability of ED visit	LTSS	0.0047	NS	0.0868	–0.0007, 0.0100	0.0080*
	Non-LTSS	–0.0034	NS	0.2433	–0.0090, 0.0023	
Count of physician E&M visits	LTSS	–0.1030	–6.7	0.0318	–0.1971, –0.0090	0.1208*
	Non-LTSS	–0.2239	–17.9	<0.0001	–0.2786, –0.1692	
Probability of SNF admission	LTSS	–0.0018	–9.8	0.0389	–0.0035, –0.0001	–0.0011
	Non-LTSS	–0.0008	–19.8	0.0014	–0.0012, –0.0003	

(continued)

Table 6 (continued)
Cumulative demonstration effect on service utilization and quality of care measures, beneficiaries with LTSS use versus those without LTSS use in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

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)
Quality of Care Measures						
Count of preventable ED visits	LTSS	0.0037	NS	0.0695	–0.0003, 0.0077	0.0042
	Non-LTSS	–0.0005	NS	0.8438	–0.0057, 0.0047	
Probability of ACSC admission, overall	LTSS	–0.0009	NS	0.1783	–0.0022, 0.0004	–0.0003
	Non-LTSS	–0.0006	NS	0.3566	–0.0018, 0.0006	
Probability of ACSC admission, chronic	LTSS	–0.0003	NS	0.5471	–0.0013, 0.0007	–0.0001
	Non-LTSS	–0.0002	NS	0.7324	–0.0011, 0.0008	
Probability of 30-day follow-up after mental health discharge	LTSS	–0.0246	NS	0.3769	–0.0791, 0.0300	0.0258
	Non-LTSS	–0.0504	–13.0	0.0279	–0.0953, –0.0055	
Count of all-cause 30-day readmissions	LTSS	0.0069	NS	0.6616	–0.0241, 0.0380	0.0136
	Non-LTSS	–0.0066	NS	0.6942	–0.0398, 0.0265	

*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 International analysis of Medicare fee-for-service claims.

5.4.2 Beneficiaries with Serious and Persistent Mental Illness

On some measures, the demonstration impacted those with SPMI differently than those without SPMI (see ***Table 7*** below). About 57 percent of the demonstration eligible population in demonstration year 6 had an SPMI (calculated from ***Table C-1*** in ***Appendix C***).

The demonstration reduced the probability of a SNF admission for both those with SPMI and those without SPMI, relative to the comparison group. The demonstration effect among those with an SPMI was a 0.26 percentage point greater decrease in the probability of any monthly SNF admission, compared to the demonstration effect among those without an SPMI. The demonstration effect among those with an SPMI was a 0.1058 visit greater decrease in the number of physician E&M visits, compared to the demonstration effect among those without an SPMI.

There were no differential demonstration impacts on those with SPMI, compared to those without SPMI, on any quality of care measures.

We also present estimates of the demonstration effect for beneficiaries with SPMI and those without SPMI in each demonstration year, in ***Table D-3*** in ***Appendix D***.

Table 7
Cumulative demonstration effect on service utilization and quality of care measures, beneficiaries with SPMI versus those without SPMI in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Measure	Special population	Demonstration effect relative to the comparison group	Relative difference (%)	*p*-value	95% confidence interval	Difference in demonstration effect (SPMI versus non-SPMI)
Service Utilization Measures						
Probability of inpatient admission	SPMI	–0.0017	NS	0.4497	–0.0060, 0.0026	0.0001
	Non-SPMI	–0.0018	NS	0.2357	–0.0047, 0.0012	
Probability of ED visit	SPMI	–0.0006	NS	0.8627	–0.0075, 0.0063	–0.0013
	Non-SPMI	0.0007	NS	0.7086	–0.0029, 0.0042	
Count of physician E&M visits	SPMI	–0.2286	–13.7	<0.0001	–0.3149, –0.1423	–0.1058**
	Non-SPMI	–0.1228	–10.7	<0.0001	–0.1549, –0.0906	
Probability of SNF admission	SPMI	–0.0047	–25.5	<0.0001	–0.0064, –0.0031	–0.0026**
	Non-SPMI	–0.0022	–21.4	0.0001	–0.0033, –0.0011	
Quality of Care Measures						
Count of preventable ED visits	SPMI	0.0023	NS	0.4383	–0.0036, 0.0082	0.0007
	Non-SPMI	0.0016	NS	0.2284	–0.0010, 0.0042	
Probability of ACSC admission, overall	SPMI	–0.0009	NS	0.2565	–0.0025, 0.0007	0.0002
	Non-SPMI	–0.0011	NS	0.0934	–0.0024, 0.0002	
Probability of ACSC admission, chronic	SPMI	–0.0007	NS	0.2476	–0.0018, 0.0005	–0.0000
	Non-SPMI	–0.0006	NS	0.2034	–0.0016, 0.0003	
Count of all-cause 30-day readmissions	SPMI	0.0004	NS	0.9735	–0.0238, 0.0246	0.0057
	Non-SPMI	–0.0053	NS	0.7388	–0.0362, 0.0256	

*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 International analysis of Medicare fee-for-service claims.

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SECTION 6

Demonstration Impact on Cost Savings

RTI evaluated the Washington demonstration's impact on Medicare Parts A and B costs using a DinD analysis of beneficiaries eligible for the demonstration, relative to the comparison group.

Our analysis found statistically significant Medicare Parts A and B savings as a result of the demonstration. Savings for inpatient services, outpatient services, physician services, and SNF services contributed to overall Medicare Parts A and B savings.

6.1 Methods Overview

As part of the FAI, the Washington Health Home MFFS demonstration leveraged Medicaid health homes to integrate care for full-benefit Medicare-Medicaid beneficiaries by targeting high-cost, high-risk dually eligible enrollees. As described in ***Section 3.1, Integration or Medicare and Medicaid***, the State's existing delivery systems for primary, acute, behavioral, and LTSS remain unchanged, and health homes serve as the bridge for integrating care across these existing delivery systems.

This section presents the Medicare Parts A and B cost savings analysis for demonstration years 4–6 (calendar years 2017–2019). Earlier evaluation reports have presented results for demonstrations years 1–3 and demonstration years 4–5.[11] Note that a separate actuarial analysis has also been conducted to inform shared savings payments between CMS and the State of Washington.[12]

We used an ITT analytic framework that includes all beneficiaries eligible for the demonstration, rather than only those who enrolled in health homes or were health home users. The ITT analytic framework alleviates concerns of selection bias and supports the generalizability of results among the demonstration eligible population.

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 Washington—the demonstration group—to those who meet the same eligibility criteria but live outside those operating areas—the comparison group.

To identify the demonstration group, RTI used quarterly files on demonstration eligible beneficiaries submitted by the State of Washington. Comparison group beneficiaries were identified through a two-step process. First, we identified comparison areas based on market characteristics. Second, we applied the same Washington State FAI eligibility criteria to beneficiaries in the identified comparison areas. This process is further described in ***Appendix C***.

[11] The First, Second, Third, and Fourth Evaluation Reports are available at https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/Washington.

[12] Actuarial reports are available at https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/Washington.

Once the two groups were finalized, we applied propensity score weighting in DinD analysis to balance key characteristics between the two groups.

RTI gathered predemonstration and demonstration monthly Medicare expenditure data for the demonstration and comparison groups from Medicare FFS claims. These FFS claims included all Medicare Parts A and B services.

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 (see ***Appendix E***). ***Table E-1*** in ***Appendix E*** summarizes each adjustment and the application of the adjustments to FFS expenditures.

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 skewed data. The model controlled for individual demographic and area-level characteristics (see ***Appendix E***), employed PS 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 demonstration's effect on Medicare expenditures.

The forest plots present a point estimate of the demonstration effect by demonstration year for each outcome, along with 95 percent confidence intervals of each point estimate. A point estimate indicates a statistically significant demonstration effect if neither the upper nor lower bound of its confidence interval crosses zero. The annual estimates for DY4 and DY5 may vary slightly from those shown in the Fourth Evaluation Report due to an additional year of data included in the analysis presented in the current report.

6.2 Demonstration Impact on Medicare Parts A and B Expenditures

Figure 14 shows the DinD effect for each demonstration year. Our analyses showed a statistically significant DinD effect in a negative direction in each demonstration year, suggesting that the demonstration generated Medicare Part A and B savings. Note the DinD effect for demonstration years 1–3 (prior to the inclusion of King and Snohomish counties) was generated using a different comparison group than the DinD effect for demonstration years 4–6 (statewide demonstration).

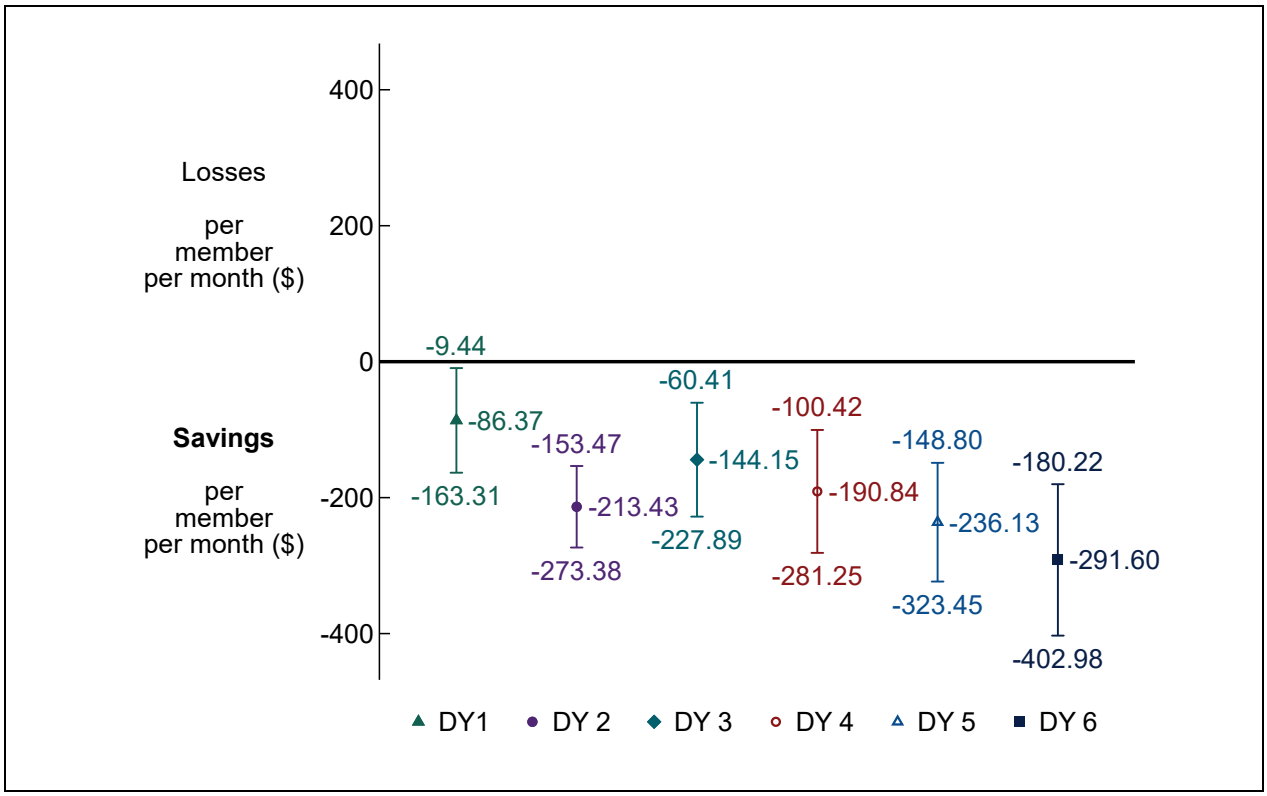
Tables 8 and ***9*** show the magnitude of the DinD estimate of the cumulative demonstration impact on Medicare Parts A and B expenditures, over demonstration years 1–3 and 4–6, respectively, both in absolute dollar amount and relative to the adjusted mean expenditure level in the comparison group during the demonstration period.

Using ***Table 9*** for illustration, the adjusted mean for monthly expenditures decreased from the predemonstration period to the demonstration period in both the demonstration and comparison groups, though it decreased by a smaller amount in the comparison group than in the demonstration group. The cumulative DinD estimate of −$237.90, which amounts to a relative difference of −12.56 percent of the adjusted mean expenditure for the comparison group during the demonstration period, is statistically significant ($p < 0.001$). This suggests that overall, the Washington demonstration was associated with statistically significant decreased costs over

demonstration years 4–6, relative to the comparison group. These results are consistent with those observed for demonstration years 1–3 (***Table 8***).

The estimates for aggregate gross savings and net savings after subtracting the performance payments that CMS made to Washington State, over demonstration years 1–3 combined and demonstration years 4–6 combined, are provided in ***Appendix E, Table E-3***.

Figure 14
Annual demonstration effects on monthly Medicare Parts A and B expenditures, demonstration years 1–6 (July 1, 2013—December 31, 2019)



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 International analysis of Medicare claims (program: warar387, warar411)

Table 8
Cumulative demonstration effect on Medicare Parts A and B expenditures for eligible beneficiaries in Washington, demonstration years 1–3 (July 1, 2013–December 31, 2016)

Group	Adjusted mean for predemonstration period ($)	Adjusted mean for demonstration period ($)	Relative difference (%)	Adjusted coefficient DinD ($)	*p*-value
Demonstration	$1,776.38	$1,649.58	−8.25	−$155.92	<0.0001
Comparison	$1,864.21	$1,889.40			

DinD = difference-in-differences.
SOURCE: RTI analysis of Medicare claims (program: warar419)

Table 9
Cumulative demonstration effect on Medicare Parts A and B expenditures for eligible beneficiaries in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Group	Adjusted mean for predemonstration period ($)	Adjusted mean for demonstration period ($)	Relative difference (%)	Adjusted coefficient DinD ($)	*p*-value
Demonstration	$2,043.72	$1,786.46	−12.56	−$237.90	<0.0001
Comparison	$1,903.92	$1,894.02			

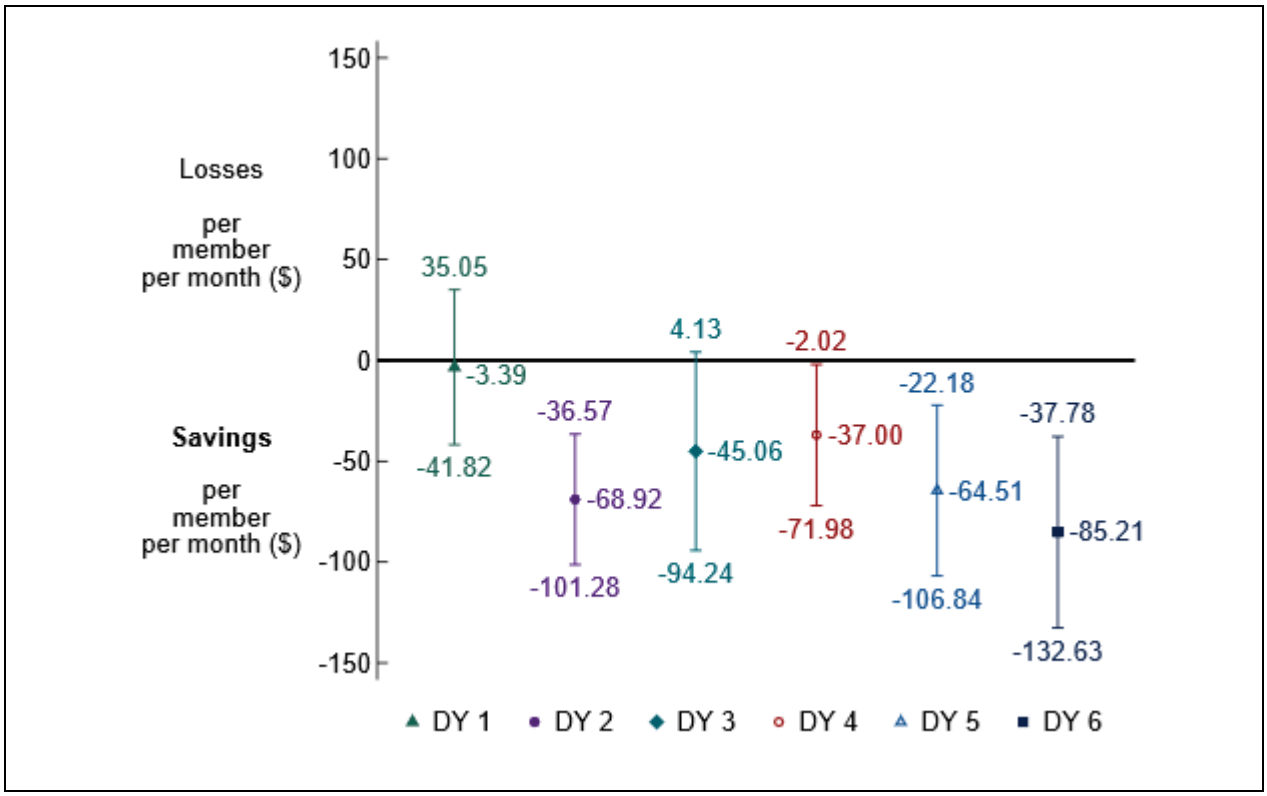
DinD = difference-in-differences.
SOURCE: RTI analysis of Medicare claims (program: warar395)

In addition to the cumulative DinD estimates, we generated DinD estimates by type of Medicare service to learn more about the specific service types driving savings. ***Figures 15–21*** show the DinD estimates for demonstration years 1–6 on savings for inpatient services, outpatient services, physician services, home health services, durable medical equipment, hospice services, and SNF services, respectively. For demonstration years 4–6, the findings show significant savings of similar magnitude across years for inpatient services, outpatient services, physician services, and SNF services. With exception to inpatient expenditures, these results generally correspond to the service utilization results described in ***Chapter 5, Demonstration Impact on Service Utilization and Quality of Care***.[13] Specially, the demonstration resulted in annual decreases in SNF and physician related expenditures, relative to the comparison group.

The findings presented here are consistent with the savings identified in separate actuarial analyses for performance payment purposes using a different methodology. The findings from the actuarial analyses were $188.13, PMPM, in demonstration year 5, and the preliminary findings for demonstration year 6 savings were $175.86, PMPM; these estimates are within the 95 percent confidence intervals of the evaluation findings.

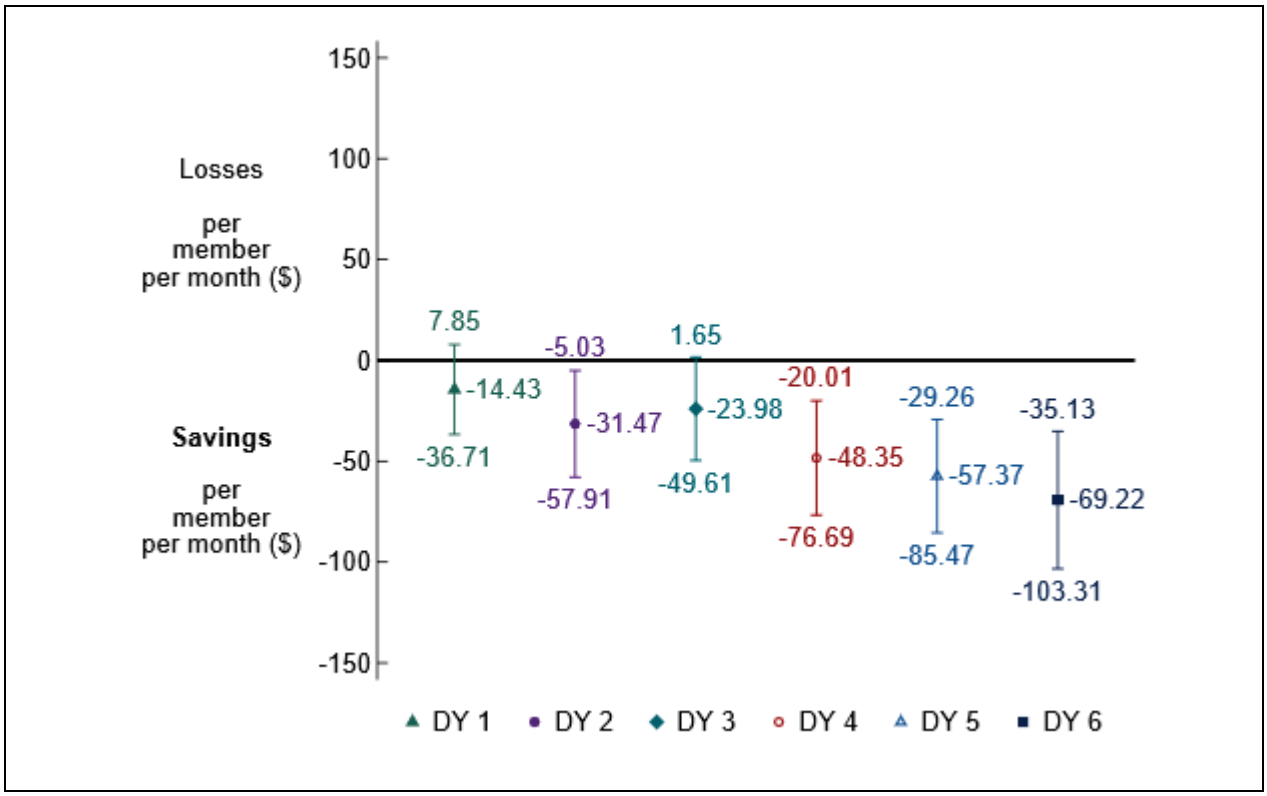
[13] Inpatient expenditures include total Medicare Parts A and B expenditures for all inpatient hospital stays in a given month; although most beneficiaries had just one inpatient stay, some had more than one stay. Total inpatient expenditures were affected by both the number of inpatient stays and the intensity of services used. In service utilization analysis, we modeled the probability of having *any* inpatient admission (a dichotomous outcome) in a given month. Therefore, results from the expenditure analysis may not always align with those from the utilization analysis.

Figure 15
Annual demonstration effects on inpatient services, demonstration years 1–6
(July 1, 2013—December 31, 2019)



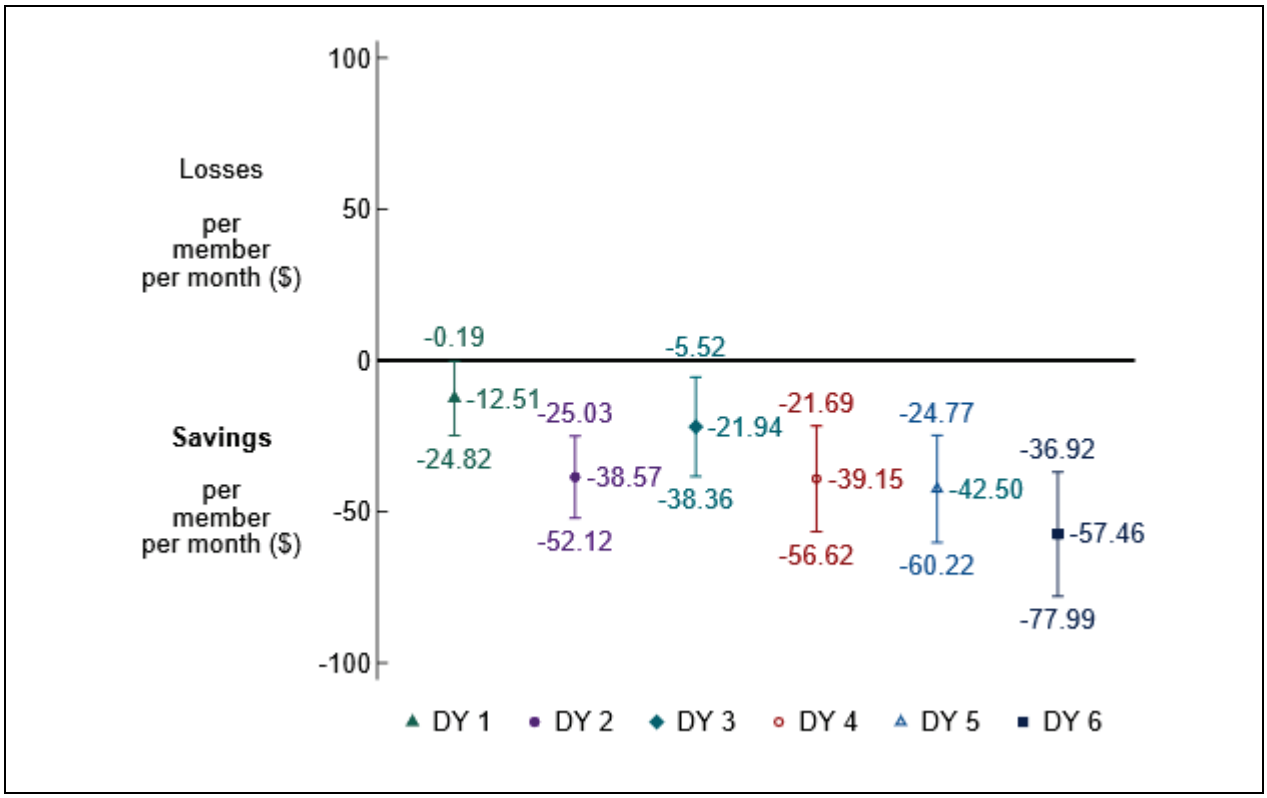
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare claims (programs: warar391, warar415).

Figure 16
Annual demonstration effects on outpatient services, demonstration years 1–6
(July 1, 2013—December 31, 2019)



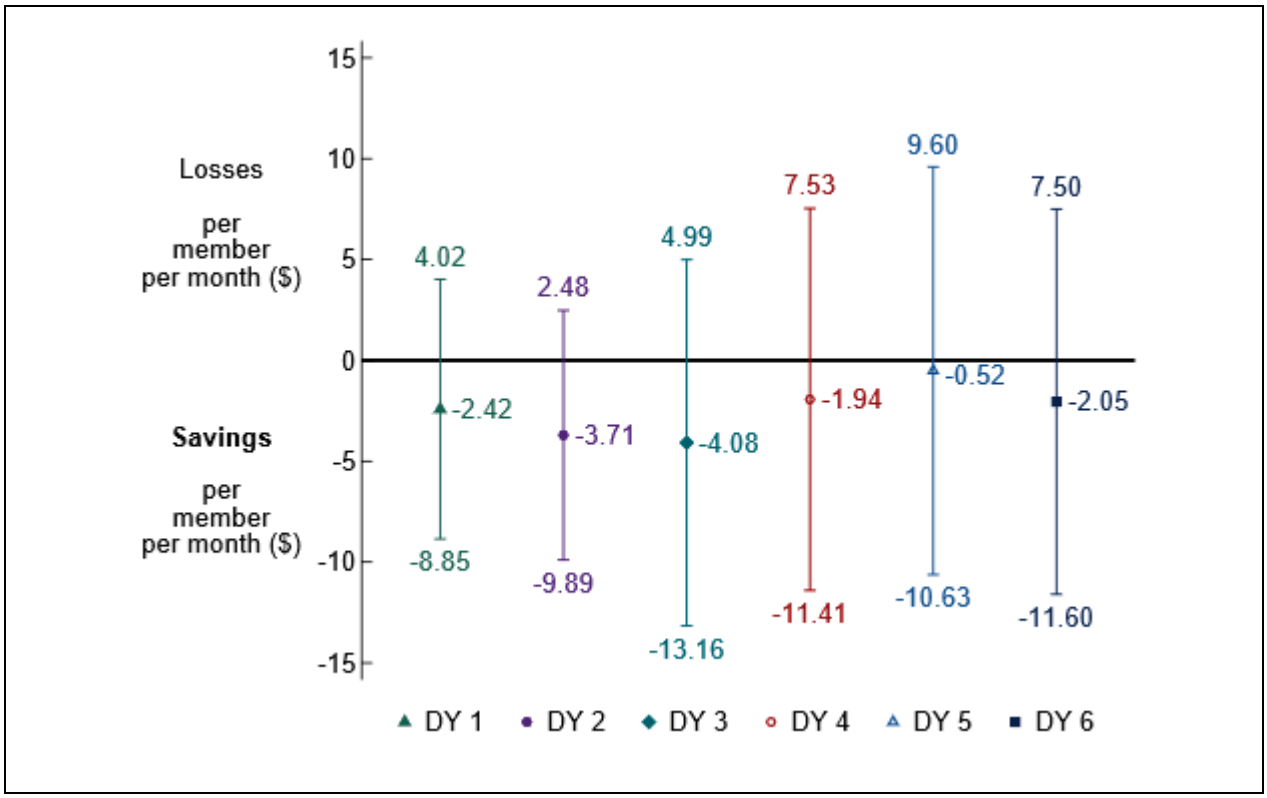
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare claims (programs: warar392, warar416).

Figure 17
Annual demonstration effect on physician services, demonstration years 1–6
(July 1, 2013—December 31, 2019)



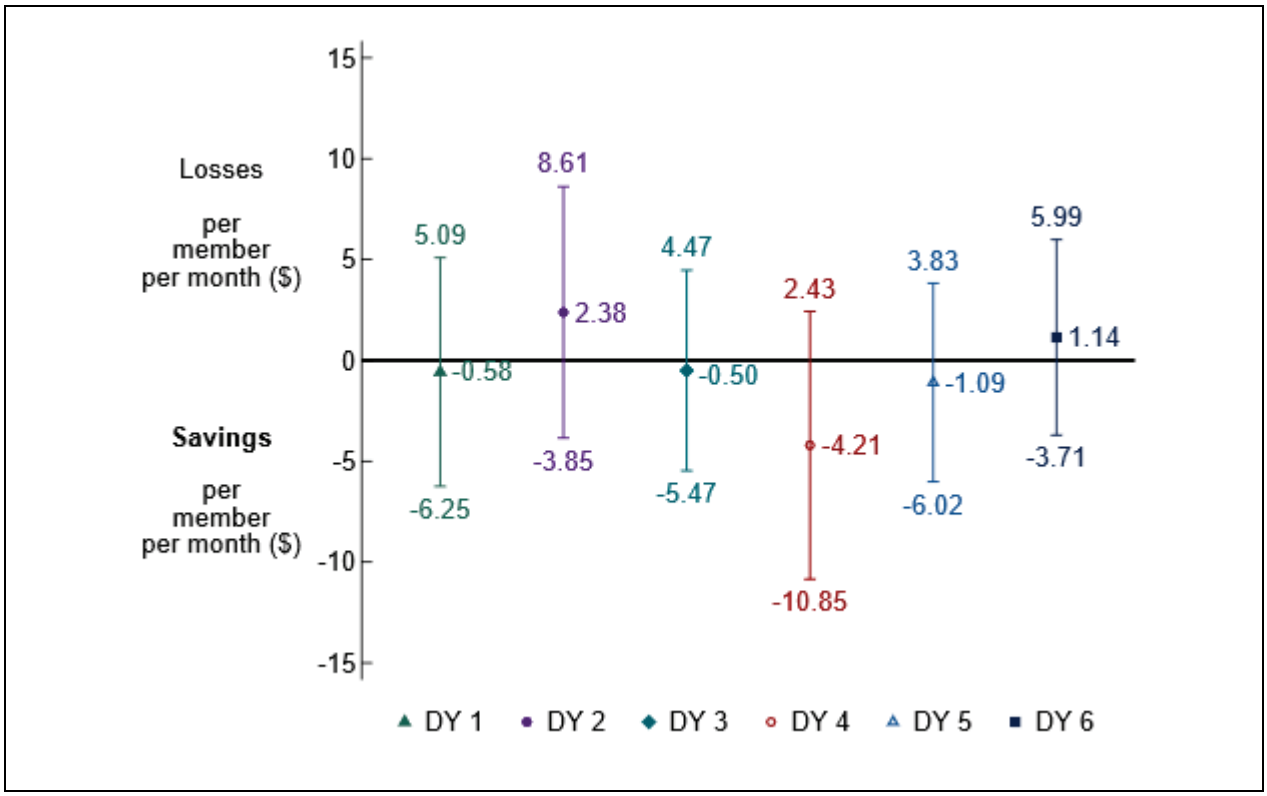
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare claims (programs: warar393, warar417).

Figure 18
Annual demonstration effects on home health agency services, demonstration years 1–6 (July 1, 2013—December 31, 2019)



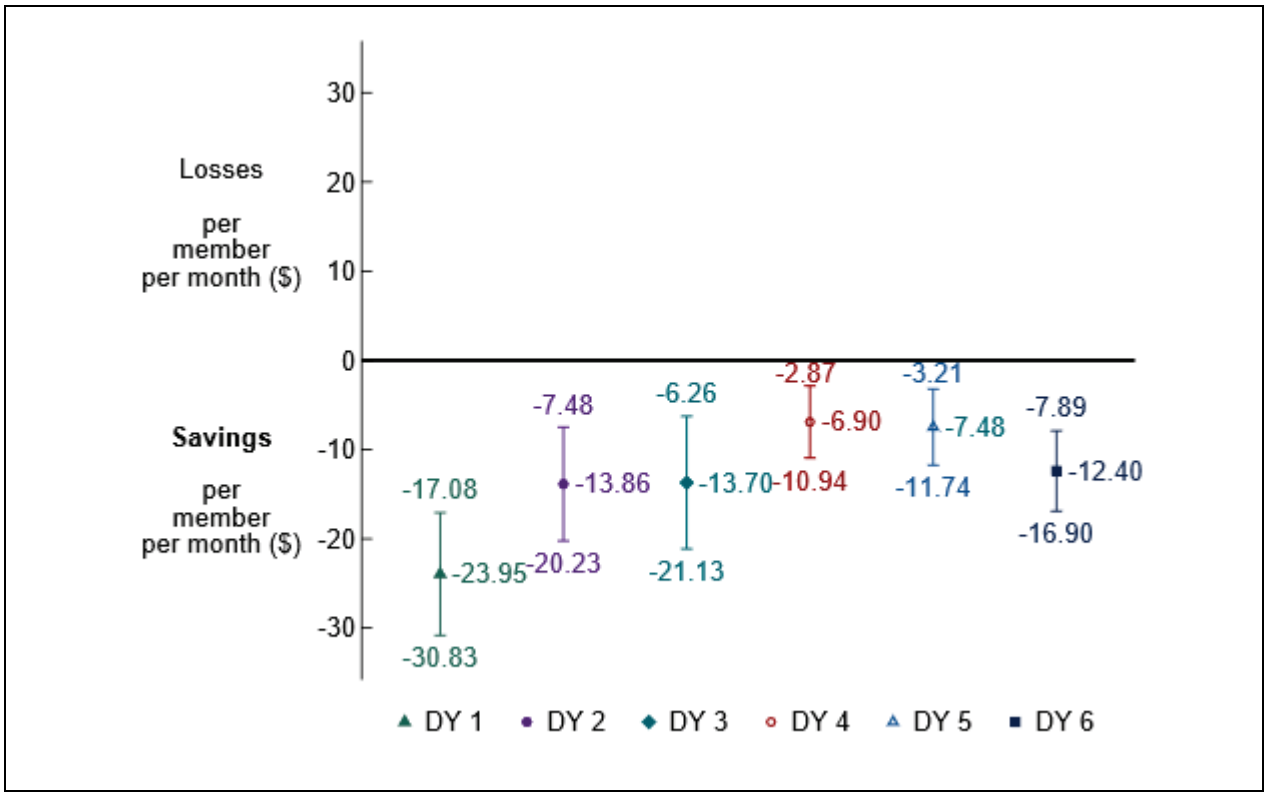
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare claims (programs: warar389, warar413).

Figure 19
Annual demonstration effects on durable medical equipment, demonstration years 1–6 (July 1, 2013—December 31, 2019)



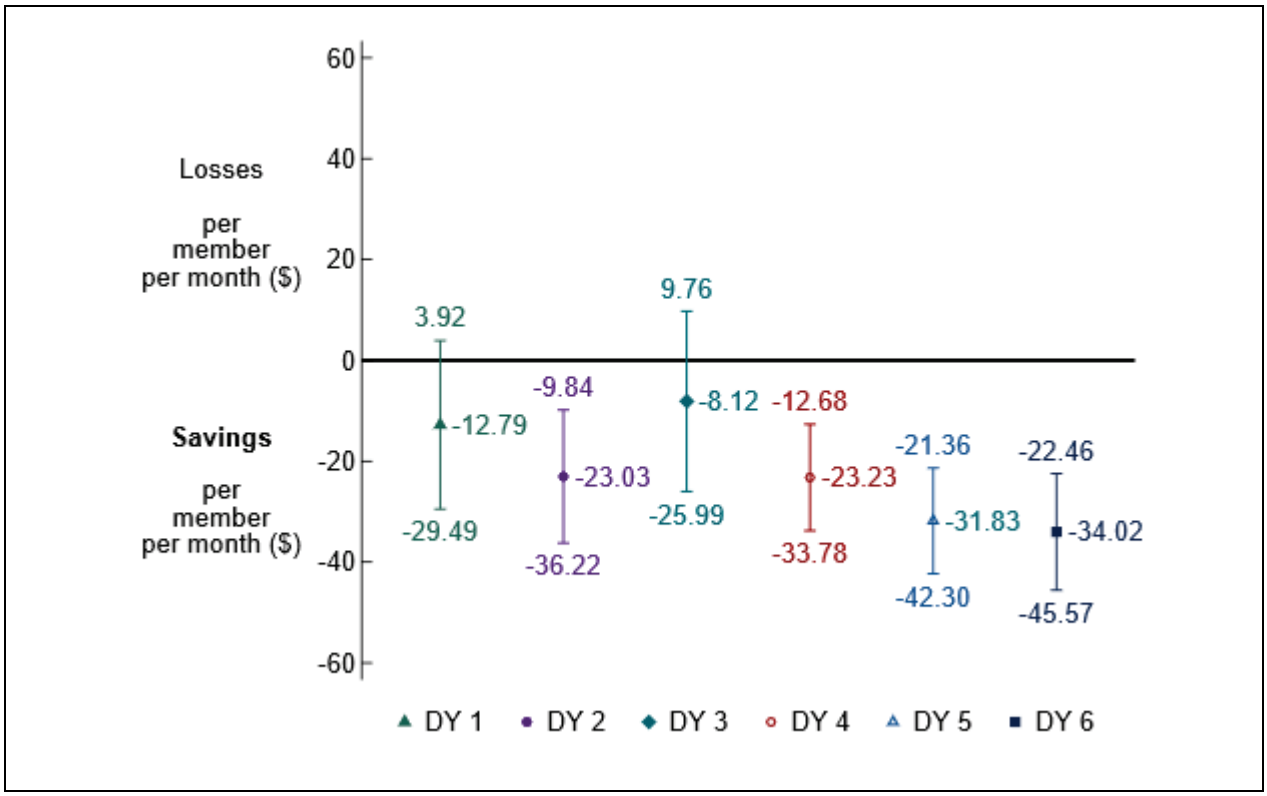
NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare claims (programs: warar388, warar412).

Figure 20
Annual demonstration effects on hospice services, demonstration years 1–6
(July 1, 2013—December 31, 2019)



NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare claims (programs: warar390, warar414).

Figure 21
Annual demonstration effects on skilled nursing facility services, demonstration years 1–6 (July 1, 2013—December 31, 2019)



NOTE: 95 percent confidence intervals are shown.
SOURCE: RTI International analysis of Medicare claims (programs: warar394, warar418).

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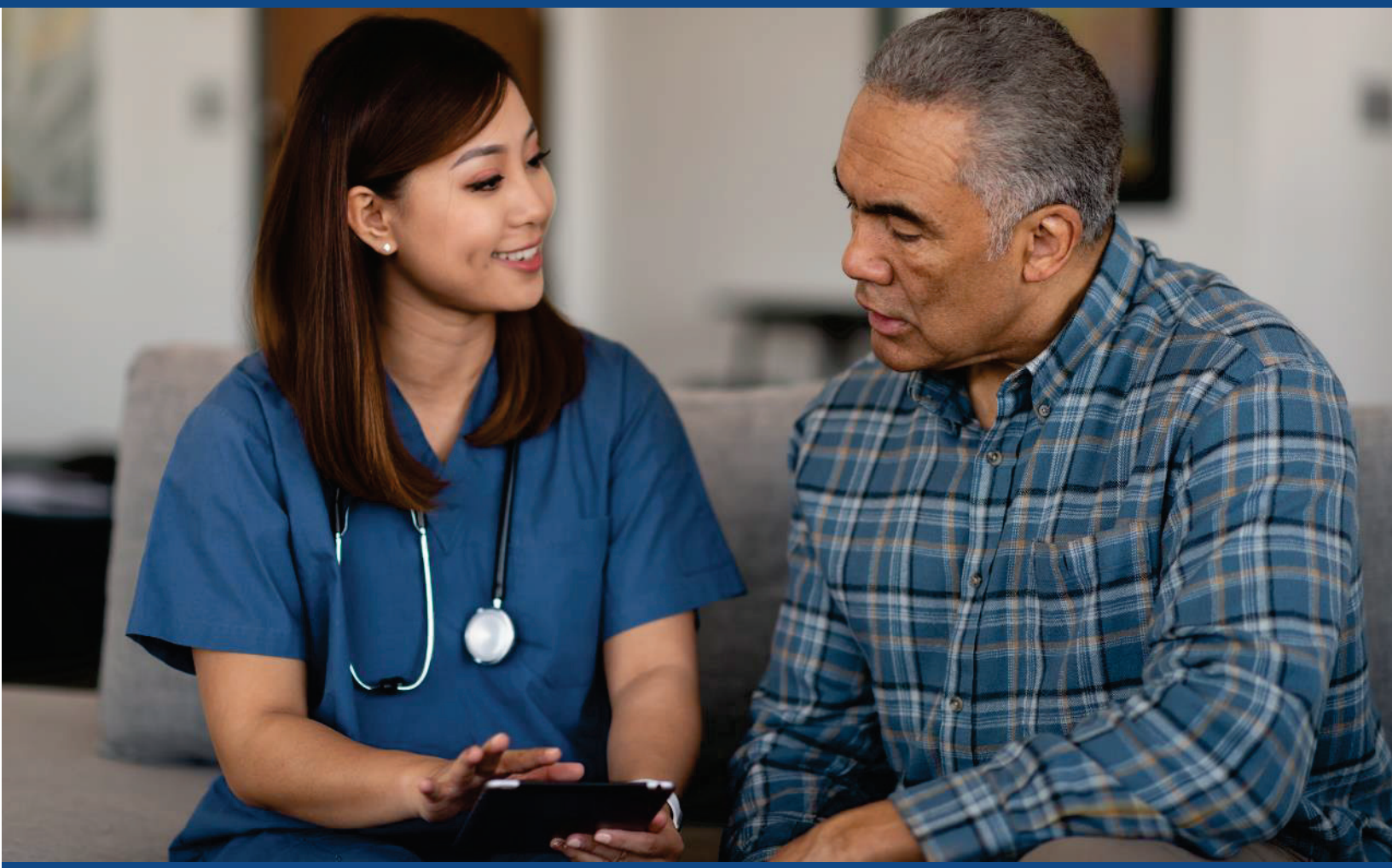
SECTION 7

Conclusions



7.1 Implementation Successes, Challenges, and Lessons Learned

After receiving legislative approval for a payment increase for health homes in the summer of 2018, the State added four additional health homes to its network in 2019, increasing the total number of health homes providing care coordination services to beneficiaries from seven to 11.

During 2020, State legislators approved another payment increase for health homes, despite experiencing significant PHE-related shortfalls in revenue. Stakeholders universally identified this as a significant achievement for the Washington Health Home demonstration and viewed continued legislative support for the program as a testament to its success. State officials credited the rate increase with preventing the departure of at least one health home and with stabilizing the participation of CCOs in the demonstration, several of which were operating in the red. State officials and health homes also expressed optimism that new CCOs will likely join the program in the coming year.

In an unprecedented year, State officials took immediate action in response to the PHE by using their flexibilities under the State's Medicaid waiver to deliver health homes services in a telephonic or virtual manner. By mid-March 2020, care coordinators were already trained and prepared to begin conducting telephonic engagement visits with health home enrollees. State officials and CMS praised health homes and care coordinators for their ability to pivot quickly and maintain interest and engagement in the program under difficult circumstances. To sustain and preserve relationships, care coordinators distributed cell phones to beneficiaries without phone service, and secured donations of food, clothing, and other essential items to make sure enrollees felt well cared for and safe.

Despite these successes, State officials and health homes continued to report difficulties with increasing capacity in certain parts of the State, particularly in high-cost urban areas such as King County and in some more remote, rural areas. Furthermore, the rate increase does not address the high start-up costs faced by organizations considering joining the program. Because health homes are not paid until they successfully engage enrollees, it can take a long time for them to recover their start-up and early operating costs.

In addition to ongoing capacity challenges, State officials and health homes expressed concerns about the growing impact of MA plans on health home enrollment. Health homes described instances of convincing marketing on the part of MA plans, including offers of supplemental benefits and discounts to recruit new enrollees. As a result, at the time of this report, health homes were feeling increasing pressure to enhance their outreach and education activities to ensure that beneficiaries understand how the health home demonstration differs from services offered by MA plans. It is likely that increased competition from MA plans will have a sustained impact on health home enrollment in the demonstration in the years ahead. As of February 2021, Washington and CMS were exploring options for allowing persons enrolled in D-SNPs to continue to access health home services.

7.2 Demonstration Impact on Service Utilization, Quality of Care, and Costs

Impact analyses on service utilization for demonstration years 4 through 6 reveal mixed findings, with some favorable results such as expected declines in post-acute services and long-term nursing facility admissions, but generally no impact on overall inpatient admissions, ED visits, and quality of care measures. Moreover, the demonstration resulted in potentially unfavorable effects such as decreases in physician E&M visits and in 30-day follow-up after a mental health hospitalization, relative to the comparison group.

As described in greater detail in ***Section 5.2.1, Cumulative Impacts over Demonstration Years 4–6,*** the limited impacts may be attributed, in part, to the extension of the demonstration service area to King and Snohomish counties and the difficulty in finding enough CCOs with the capacity to serve the eligible population in these counties, and for participating CCOs' ability to recruit care coordinators. Further, health home enrollment declined in demonstration year 5 and demonstration year 6 due to the exit of the largest health home and change in the State's eligibility policy. These two factors highlight the challenge of increasing capacity to provide care coordination to health home enrollees, as well as to enroll an otherwise eligible population. The favorable decrease in SNF admissions, without similar impacts on inpatient hospitalizations may have resulted from the intensive care transitions efforts and the relative ease of addressing post-acute care needs through care coordination compared to the challenges involved in decreasing hospital admissions.

The demonstration had a differential effect for those with LTSS use and those with an SPMI on some measures, relative to the demonstration effect for the non-LTSS and non-SPMI special populations. The demonstration effect for LTSS users, which were only about 21 percent of all demonstration eligible beneficiaries, included an increase in the probability of inpatient admissions and ED visits and in the number of physician E&M visits, relative to the effect for non-LTSS users. The demonstration effect for beneficiaries with SPMI shows a decrease in the probability of SNF admissions and the number of physician E&M visits relative to the demonstration effect for the non-SPMI beneficiaries.

The Washington demonstration has generated significant gross and net Medicare Part A and Part B savings, indicating success during the first 6 demonstration years (for detailed estimates, see ***Appendix E, Table E-3***). The results of cost savings analyses using a DinD regression approach indicate significant savings of $237.90, PMPM, over demonstration years 4 through 6. These findings are consistent with savings estimated separately from an actuarial analysis for performance payment purposes for the demonstration.

7.3 Next Steps

The RTI evaluation team will continue to collect information such as enrollment statistics and updates on key aspects of implementation on a quarterly basis from Washington State officials through the online State Data Reporting System. We will conduct another round of annual virtual site visit calls with the State and demonstration stakeholders, and quarterly calls with the State and CMS staff. We will also review any written reports or materials from the State summarizing State sponsored evaluations, if applicable.

As noted previously, in January 2021, CMS signed an amendment to extend the Washington demonstration for 2 years through December 2022, which will provide further opportunities to evaluate the demonstration's performance.

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Appendix A

Data Sources

We used the following data sources to prepare this report.

Key informant interviews. During a virtual (telephonic) site visit in February and early March of 2020 and 2021, the RTI evaluation team interviewed State officials and health home representatives. In addition, to monitor demonstration progress, the evaluation team held periodic phone conversations with CMS and State demonstration staff. These discussions covered a range of topics, including new policy clarifications designed to improve health home performance, quality improvement activities, and contract management team actions.

Beneficiary interviews. We include information from in-depth interviews (IDIs) with Washington Health Home beneficiaries from across the State. Alan Newman Research (Alan Newman Research, 2020) conducted IDIs with 30 Washington Health Home beneficiaries who were considered to be "engaged" and "active" (i.e., had received at least three Washington Health Home services in the past 6 months). Participants included those who (1) used LTSS, (2) used mental health services, and (3) those who did not use LTSS or mental health services. Of the 30 participants, 12 received both LTSS and mental health services, 8 received neither mental health nor LTSS, 6 received mental health services only, and 4 received LTSS only.

Surveys. We include information from the 2015–2019 modified Adult CAHPS Health Plan Surveys administered by NORC at the University of Chicago and Health Services Advisory Group, Inc., to beneficiaries enrolled in the Washington demonstration. A random sample of 2,025 beneficiaries was selected for surveying the Washington Home Health Demonstrations' eligible population. The sample size did not vary from year to year. Beneficiaries of the Washington Home Health Demonstration completed 827 surveys with a response rate of 45 percent in 2015; in 2016, 750 surveys were completed with a response rate of 40 percent; in 2017, 793 surveys were completed with a response rate of 42 percent; in 2018, 715 surveys were completed with a response rate of 38 percent; in 2019, 662 surveys were completed, with a response rate of 35 percent. In 2020, CMS suspended the CAHPS survey requirement for Medicare Advantage plans, MMPs and the Washington Health Home MFFS demonstration due to the PHE.

Demonstration data. The RTI evaluation team reviewed data provided quarterly by Washington through the State Data Reporting System (SDRS). These reports include eligibility, enrollment, opt-out, and disenrollment data, and information reported by Washington on its integrated delivery system, care coordination, benefits and services, quality management, stakeholder engagement, financing and payment, and a summary of successes and challenges.

Demonstration policies, contracts, and other materials. The RTI evaluation team reviewed a wide range of demonstration documents, including demonstration and State-specific information on the CMS website[14]; and other publicly available materials on the Washington Health Home MFFS Demonstration website.

The RTI evaluation team also reviewed the Washington Health Home Demonstration Beneficiary Experience Qualitative Research Summary Report conducted by Alan Newman

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

Research on behalf of CMS. The Report includes data on a total of 30 beneficiaries participating in health homes, 12 of which received both LTTS and mental health services, 8 did not receive LTSS or mental health services (i.e., "General" beneficiaries), 6 received mental health services only, and 4 received LTSS services only (Allen Newman Research, 2020).

Conversations with CMS and Washington Health Care Authority officials. To monitor demonstration progress, the RTI evaluation team engages in periodic phone conversations with the Washington Health Care Authority (HCA) and CMS. These might include discussions about new policy clarifications designed to improve plan performance, quality improvement work group activities, and contract management team actions.

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, as well as the Nursing Home Minimum Data Set.

Medicaid service data on use of LTSS, behavioral health, and other Medicaid-reimbursed services were either not available or not useable in their current form for the demonstration period and therefore are not included in this report. At the time of this report, we were able to incorporate Medicaid Research Identifiable Files to conduct a sensitivity analysis of excluding beneficiaries in the Medically Needy Medicaid eligibility category. Details of this analysis are in ***Appendix C*** of this report.

Cost savings data. Fee-for-service (FFS) Medicare claims were used to calculate expenditures for all comparison group beneficiaries, demonstration beneficiaries in the baseline period, and demonstration eligible beneficiaries who were not enrolled during the demonstration period. FFS claims included all Medicare Parts A and B services.

Medicaid Research Identifiable Files were used to calculate total Medicaid FFS and Medicaid Managed Care payments among demonstration- and comparison group–eligible beneficiaries. Early years of the baseline and demonstration used the Medicaid Statistical Information Statistics (MSIS) Medicaid Analytic eXtract (MAX), whereas later years used the Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF). The transition year varied by state, with all Medicaid programs fully transitioning to TAF by January 1, 2016.

Appendix B

Comparison Group Methodology for Washington Demonstration Year 6

This appendix presents the comparison group selection and assessment results for the FAI demonstration in the State of Washington.

Results for comparison group selection and assessment analyses are prepared for each demonstration year. Results for the first three demonstration years and two predemonstration years for the Washington demonstration are shown in the third Evaluation Report. Results for the fourth and fifth demonstration years and two predemonstration years are presented in the Fourth Evaluation Report, which uses a revised comparison group to account for the introduction of King and Snohomish counties into the Washington demonstration in April 2017.

This report provides the comparison group results for the sixth performance year for the Financial Alignment Initiative (FAI) in Washington (WA) (January 1, 2019–December 31, 2019) and notes any major changes in the results since the fifth performance year.

B.1 Demonstration and Comparison Group Characteristics

The WA demonstration area currently consists of all 39 counties and 13 MSAs in the State. The comparison area is drawn from 124 counties and 20 MSAs from eight states. These geographic areas are the same as those presented in the Washington Fourth Annual Report.

Beneficiaries who are ineligible for the demonstration include those who have Medicare as a secondary payor, are not enrolled in Medicare Part A and Part B, or are enrolled in Medicare Advantage, the Program of All-Inclusive Care for the Elderly (PACE), hospice, or beneficiaries who spent down to Medicaid eligibility. 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, and we apply these 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.

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, and (4) removing beneficiaries who died before the beginning of each analytic period. The number of demonstration group beneficiaries has largely remained stable over the two predemonstration years and the three demonstration years included in this analysis, ranging between 39,842 and 45,031 beneficiaries per year. The comparison group contained roughly twice as many beneficiaries as the demonstration group and followed a similar trend, with its count of beneficiaries per year ranging from 73,960 to 88,762.

B.2 Propensity Score Estimates

RTI's methodology uses propensity scores to examine initial differences between the demonstration and comparison groups in each analysis period and then to weight the data to improve the match between them. The comparability of the two groups is examined with respect

to both individual beneficiary characteristics as well as the overall distributions of propensity scores.

A propensity score is the predicted probability that a beneficiary is a member of the demonstration group conditional on a set of observed variables. Our propensity score models include a combination of beneficiary-level and region-level characteristics measured at the ZIP code (ZIP Code Tabulation Area) level. The Technical Appendix in the First Annual Report provides a detailed description of these characteristics and how the propensity scores were calculated.

The logistic regression coefficients and z-values for the covariates included in the propensity model for Washington FAI demonstration year 6 are shown in ***Table B-1***. The largest relative differences were that demonstration participants were less likely to be Black, less likely to be enrolled in another Medicare shared savings program, and more likely to live in an MSA in demonstration year 6 than the beneficiaries in the comparison group. In addition, ZIP code-level group differences associated with rates of marriage, households with members above the age of 60, college education rates, adults with self-care limitation, and distance to the nearest nursing facility were observed between the demonstration and comparison groups. The magnitude of the group differences for all variables prior to propensity score weighting may be seen in ***Table B-2***.

B.3 Propensity Score Overlap

The distributions of propensity scores by group for demonstration year 6 are shown in ***Figure B-1*** before and after propensity score weighting. Estimated scores for both the demonstration group and comparison group topped out at around 0.99. The unweighted comparison group (dashed line) is concentrated in the range of propensity scores from 0.05 to 0.10. Inverse probability of treatment weighting pulls the distribution of weighted comparison group propensity scores (long-dashed line) close to that of the demonstration group (solid line).

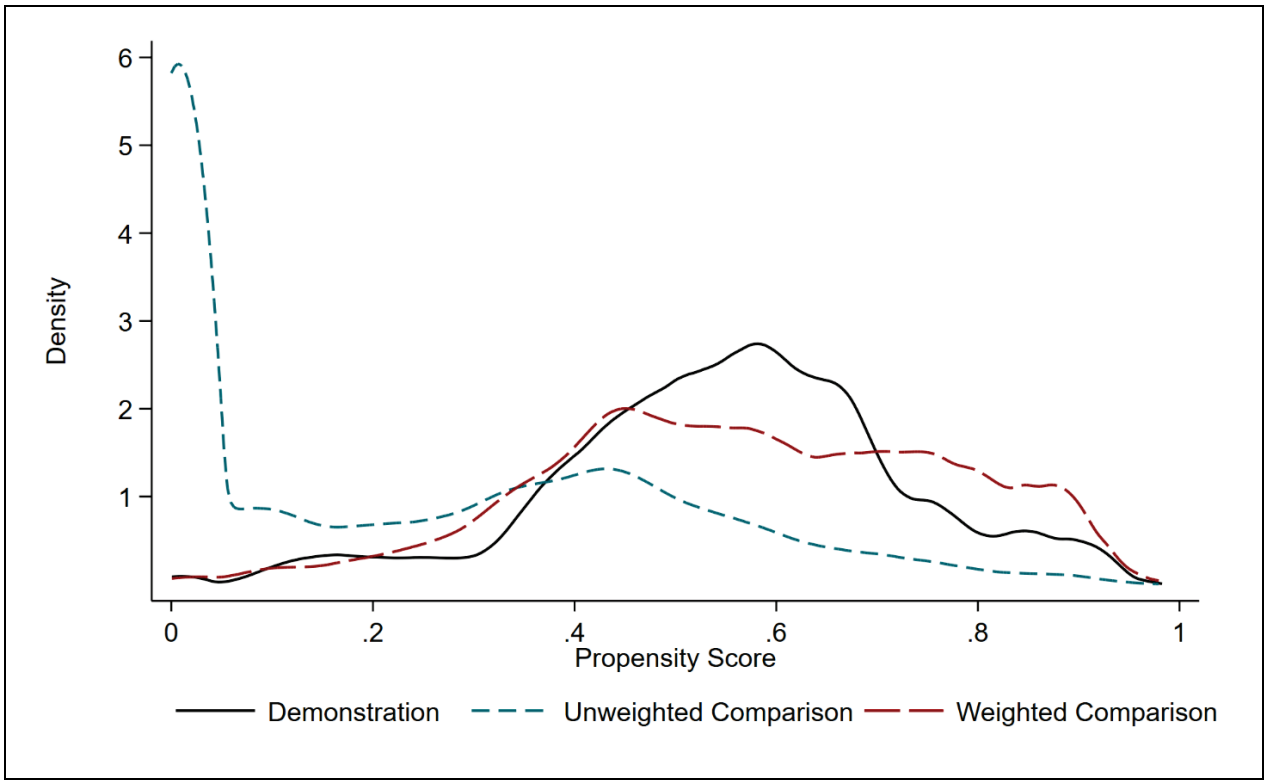
Any beneficiaries who have estimated propensity scores below the smallest estimated value in the demonstration group are removed from the comparison group. Because of the very broad range of propensity scores found in the WA demonstration data, 1,534 beneficiaries were removed from the comparison group in demonstration year 6.

Table B-1
Logistic regression estimates for Washington propensity score models in demonstration year 6, January 1, 2019–December 31, 2019

Characteristic	Demonstration Year 6		
	Coef.	Standard error	z-score
Age (years)	−0.003	0.001	−4.359
Died during year	−0.251	0.028	−8.987
Female (0/1)	−0.097	0.016	−5.985
Black (0/1)	−1.848	0.027	−68.066
Disability as original reason for entitlement (0/1)	−0.136	0.020	−6.863
ESRD (0/1)	0.328	0.037	8.772
Share mos. eligible (prop.)	0.065	0.026	2.513
HCC risk score	−0.035	0.005	−7.020
Other MDM	−5.167	0.075	−68.796
MSA (0/1)	0.434	0.022	19.557
% of pop. living in married household	0.008	0.001	8.551
% of households w/member >= 60 yrs.	−0.026	0.001	−21.458
% of households w/member < 18 yrs.	0.012	0.001	10.216
% of adults under 65 with college education	0.037	0.001	44.012
% of adults under 65 with self-care limitation	−0.086	0.004	−19.960
Distance to nearest hospital (mi.)	0.001	0.002	0.510
Distance to nearest nursing facility (mi.)	0.063	0.002	29.695
Intercept	−0.771	0.103	−7.493

ESRD = end-stage renal disease; HCC = Hierarchical Condition Category; MDM = Master Data Management; MSA = metropolitan statistical area.

Figure B-1
Distribution of beneficiary-level propensity scores in the Washington demonstration and comparison groups, weighted and unweighted, January 1, 2019–December 31, 2019



B.4 Group Comparability

Covariate balance refers to the extent to which the characteristics used in the propensity score are similar (or "balanced") for 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 developed that groups are considered comparable if the standardized covariate difference is less than 0.10 standard deviations.

Table B-2
Washington dually eligible beneficiary covariate means by group before and after weighting by propensity score—demonstration year 6: January 1, 2019–December 31, 2019

Characteristic	Demonstration group mean	Comparison group mean	PS-weighted comparison group mean	Unweighted standardized difference	Weighted standardized difference
Age	66.896	65.972	66.742	0.057	0.009
Died	0.089	0.102	0.091	−0.045	−0.009
Female	0.610	0.632	0.621	−0.045	−0.023
Black	0.057	0.236	0.061	−0.522	−0.018
Disability as original reason for entitlement	0.493	0.539	0.497	−0.093	−0.009
ESRD	0.049	0.062	0.046	−0.060	0.011
Share mos. eligible during year	0.777	0.791	0.773	−0.045	0.013
HCC score	2.028	2.123	2.041	−0.061	−0.009
Other MDM	0.005	0.407	0.005	−1.146	0.001
MSA	0.832	0.756	0.859	0.189	−0.074
% of pop. living in married household	72.993	68.967	73.330	0.379	−0.035
% of households w/member >= 60	38.621	40.588	37.560	−0.219	0.118
% of households w/member < 18	30.664	30.026	31.443	0.081	−0.093
% of adults under 65 with college education	26.843	20.880	28.494	0.456	−0.111
% of adults under 65 with self-care limitation	3.351	4.124	3.150	−0.336	0.113
Distance to nearest hospital	8.984	8.773	8.409	0.031	0.086
Distance to nearest nursing facility	6.943	6.285	6.524	0.116	0.073

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

The group means and standardized differences for all beneficiary characteristics are shown for demonstration year 6 in ***Table B-2***. The column of unweighted standardized differences indicates that several of these variables were not balanced prior to weighting. Eight variables (percent Black, percent participating in other Medicare shared savings programs (other MDM), percent living in an MSA, percent of population living in a married household, percent of households with a member older than 60 years, percent of adults with a college education, percent of adults with self-care limitation, and the distance (in miles) to the nearest nursing facility) all had unweighted standardized differences exceeding 0.10 in absolute value.

The results of propensity score weighting for Washington demonstration year 6 are illustrated in the right-most column (weighted standardized differences) in ***Table B-2***. Propensity weighting reduced the standardized differences below the threshold level of 0.10 in absolute

value for all but three covariates (percent of households with a member above 60, percent of adults with a college degree, and percent of adults with a self-care limitation) in our model.

B.5 Summary

The Washington demonstration and comparison groups were initially distinguished by differences in three individual-level covariates and five area-level variables. However, propensity score weighting successfully reduced all but three of these covariate discrepancies below the generally accepted threshold for standardized differences. As a result, the weighted Washington groups are adequately balanced with respect to 14 of the 17 variables we consider for comparability. The three remaining variables only slightly exceed the 0.1 standard deviation threshold for comparability.

Appendix C

Service Utilization Methodology

C.1 Methodology

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

C.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).

ITT refers to an evaluation design in which all Medicare-Medicaid enrollees eligible for the demonstration constitute the evaluation sample, regardless of whether they actively participated in demonstration models. Thus, under the ITT framework, analyses include all beneficiaries eligible for the demonstration, including those who are eligible but are not contacted by the State or participating providers to enroll in the demonstration or care model; those who enroll but do not engage with the care model; and a group of similar eligible individuals in the comparison group.

C.1.2 Comparison Group Identification

The comparison group serves to provide an estimate of what would have happened to the demonstration group in the absence of the demonstration. Thus, the comparison group members should be similar to the demonstration group members in terms of their characteristics and health care and LTSS needs, and they should reside in areas that are similar to the demonstration State in terms of the health care system and the larger environment. For this evaluation, identifying the comparison group members entailed two steps: (1) selecting the geographic area from which the comparison group would be drawn, and (2) identifying the individuals who would be included in the comparison group.

To construct Washington's comparison group, we used out-of-State areas. We compared demonstration and potential comparison areas on a range of measures, including spending per Medicare-Medicaid enrollee by each program, the shares of LTSS delivered in facility-based and community settings, and the extent of Medicare and Medicaid managed care penetration. Using statistical analysis, we selected the individual comparison MSAs that most closely match the values found in the demonstration area on the selected measures. We also considered other factors when selecting comparison States, such as timeliness of Medicaid data submission to CMS.

We identified a comparison group from MSAs in Georgia, Illinois, Michigan, North Carolina, Pennsylvania, Virginia, West Virginia, and Wisconsin, that is at least as large as the eligible population in Washington. For details of the comparison group identification strategy, see ***Appendix B***.

Beneficiaries who are ineligible for this demonstration include those with comprehensive private or public health insurance, enrolled in PACE, receiving hospice, enrolled in a Medicare Advantage plan, or meeting Medicaid medically needy eligibility criteria (e.g. "spend-down").

Additionally, to identify beneficiaries for the comparison group and the predemonstration period that had characteristics similar to those of the demonstration eligible population, it was important for the RTI evaluation team to develop an algorithm that closely replicated the PRISM algorithm used by the State to identify individuals eligible for the demonstration. After consultation with Washington State staff, we developed an algorithm that required beneficiaries to have scores of 1.5 or greater for at least one quarter to be considered eligible in our analyses. When comparing the results of the RTI scoring algorithm with results generated by Washington, we found that beneficiaries had similar chronic condition prevalence as those persons identified by Washington. Beneficiaries not meeting the Washington PRISM criteria were ineligible for the analysis.

In previous reports, Medicaid eligibility data was not available to apply the Medicaid medically need eligibility criteria to the demonstration group in the baseline period, and the comparison group in both the demonstration and baseline periods, although medically needy individuals were excluded by the State from the demonstration group in the demonstration period. Recently, this data became available through demonstration year 5, allowing us to conduct a sensitivity analysis to determine the impact of keeping versus dropping beneficiary months with "spend-down" eligibility. This analysis showed that by removing "spend-down" months the sample size for the demonstration group in the baseline period decreased by 55,204 (7.0 percent), and the sample size for the comparison group decreased by 166,743 (12.3 percent) person months in the baseline period and 119,176 (7.9 percent) person months in the demonstration period. We ran cost savings and service utilization outcome models using these samples and compared the results to results described in this report. The results of these models were similar to our reported estimates. There was a 3.3 percent reduction in the savings estimates for demonstration years 4 and 5, and no substantive differences in the service utilization estimates. Based on this sensitivity analysis, we concluded that the bias of including "spend-down" beneficiary months in the analysis for our impact estimates is relatively small.

C.1.3 Data

Evaluation report analyses used data from several 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 data on utilization and costs of Medicare services as well as the Nursing Home Minimum Data Set (MDS). Medicaid T-MSIS claims in Washington were used to described spending and utilization among the demonstration eligible population on Medicaid financed services.

C.1.4 Populations and Services Analyzed

The population analyzed for the service utilization outcomes includes only demonstration eligible full-benefit Medicare and Medicaid beneficiaries; the demonstration group in the demonstration period also included health home users.

Among the demonstration eligible population, we focused on the following special populations: those receiving any LTSS; those with any behavioral health service use in the last 2

years for a serious and persistent mental illness (SPMI); health home users; and racial characteristics. For each group and service type analyzed, we provide estimates of three access to care and utilization measures: the percent of demonstration eligible beneficiaries with any use of a service and counts of service use for both all eligible beneficiaries and users of the respective service.

The 16 service settings analyzed include both institutional (inpatient, inpatient psychiatric, inpatient substance use, ED visits not leading to admission, ED psychiatric visits, observation stays, SNF, and hospice) and community settings (primary care, specialist care, behavioral health visits, outpatient as well as independent physical, speech, and occupational therapy, home health, durable medical equipment, and other hospital outpatient services). In addition, seven quality measures representing specific utilization types of interest are presented: 30-day all-cause risk-standardized readmission rate; preventable ED visits; rate of 30-day follow-up after hospitalization for mental illness; ambulatory care sensitive condition (ACSC) overall composite rate (Agency for Healthcare Research and Quality [AHRQ] Prevention Quality Indicator [PQI] #90); ACSC chronic composite rate (AHRQ PQI #92); pneumococcal vaccination rate for those age 65 and older and depression screening rate.

Five measures related to nursing facilities (NFs) are presented from the MDS: two measures of annual NF utilization (admission rate and percentage of long-stay NF users) and three characteristics of new long-stay NF residents at admission (functional status, percent with severe cognitive impairment, percent with a low level of care need).

The analyses were conducted for each year in the 2-year predemonstration period (July 1, 2011 to June 30, 2013) and for demonstration years 4–6 (January 1, 2017 to December 31, 2019) for both the demonstration and comparison group in each of the five analytic periods.

Table C-1 presents descriptive statistics on the independent variables used in multivariate difference-in-differences (DinD) regressions for impact analyses. Independent variables include demographic and health characteristics and market- and area-level characteristics. Results are presented for six groups: all demonstration eligible beneficiaries in the FAI State, its comparison group, all health home users, all non-health home users, demonstration eligible beneficiaries with any LTSS use, and demonstration eligible beneficiaries with an SPMI.

Under 65 was the plurality age group across all groups with the highest rate (45.2 percent) in the group with SPMI, and the lowest rate (39.6 percent) in the demonstration and the non-health home user groups.

Across all groups, most eligible beneficiaries were female (60.4 to 64.7 percent). A majority of health home users had a disability as the primary reason for Medicare entitlement (53.2 percent), with a slightly lower proportion of non-health home users claiming Medicare primarily through a disability (48 percent). Non-health home users were the group least likely to be white (71.9 percent), whereas the comparison group had the largest proportion being white (86.8 percent).

Table C-1
Characteristics of eligible beneficiaries in demonstration year 6 by group

Characteristics	Demonstration group	Comparison group	Demonstration group health home users	Demonstration group eligible, non-health home users	Demonstration group, LTSS users	Demonstration group, SPMI diagnosis
Weighted number of eligible beneficiaries	39,617	74,694	5,856	33,761	8,350	22,562
Demographic characteristics						
Age						
0 to 64	39.6	42.0	39.3	39.6	40.9	45.2
65 to 74	28.6	24.9	31.1	28.2	23.4	28.6
75 and older	31.8	33.1	29.6	32.2	35.7	26.2
Female						
No	39.0	37.9	35.6	39.6	38.3	35.3
Yes	61.0	62.1	64.4	60.4	61.7	64.7
Race/ethnicity						
White	72.6	86.8	76.6	71.9	81.8	79.3
African American	5.7	6.1	5.1	5.8	5.2	5.5
Hispanic	4.2	1.8	5.7	3.9	3.2	3.4
Asian	8.1	2.3	5.6	8.5	4.4	4.6
Other	3.3	1.1	2.7	3.4	2.0	2.4
Disability as reason for original Medicare entitlement						
No	51.4	51.0	46.8	52.2	35.9	42.9
Yes	48.6	49.0	53.2	47.8	64.1	57.1
ESRD status						
No	95.4	95.6	94.7	95.6	97	96.1
Yes	4.6	4.4	5.3	4.4	3.0	3.9
MSA						
No	16.8	14.1	14	17.2	14.5	17.5
Yes	83.2	85.9	86	82.8	85.5	82.5
Participating in Shared Savings Program						
No	99.5	99.5	99.6	99.5	99.7	99.6
Yes	0.5	0.5	0.4	0.5	0.3	0.4

(continued)

Table C-1 (continued)
Characteristics of eligible beneficiaries in demonstration year 6 by group

Characteristics	Demonstration group	Comparison group	Demonstration group health home users	Demonstration group eligible, non-health home users	Demonstration group, LTSS users	Demonstration group, SPMI diagnosis
HCC score	2.0	2.0	2.3	2.0	2.2	2.2
Market characteristics						
Medicare spending per dual, ages 19+ ($)	14,576.0	15,932.8	14,658.7	14,561.6	14,551.2	14,579.0
MA penetration rate	0.3	0.2	0.3	0.3	0.3	0.3
Medicaid-to-Medicare fee index (FFS)	0.7	0.7	0.7	0.7	0.7	0.7
Medicaid spending per dual, ages 19+ ($)	14,036.2	13,456.7	13,856.3	14,067.4	14,112.5	14,032.0
Fraction of dually elig. beneficiaries using NF, ages 65+	0.2	0.3	0.2	0.2	0.2	0.2
Fraction of dually elig. beneficiaries using HCBS, ages 65+	0.4	0.2	0.4	0.3	0.4	0.4
Fraction of duals using personal care, ages 65+	0.1	0.1	0.1	0.2	0.2	0.1
Fraction of duals with Medicaid managed care, ages 19+	0	0	0	0	0	0
Population per square mile, all ages	312	304	218	329	320	302
Patient care physicians per 1,000 population	0.8	0.7	0.8	0.8	0.8	0.8
Area characteristics						
% of pop. living in married households	73.0	73.3	73.0	73.0	73.4	73.0
% of adults with college education	26.8	28.5	24.8	27.2	27.5	26.7
% of adults with self-care limitations	3.4	3.2	3.4	3.3	3.3	3.4
% of adults unemployed	6.0	6.0	6.0	6.0	5.9	6.0
% of household with individuals younger than 18	30.7	31.4	31.1	30.6	31.1	30.4
% of household with individuals older than 60	38.6	37.6	39.2	38.5	38.3	38.9
Distance to nearest hospital	9.0	8.4	10.5	8.7	9.0	9.2
Distance to nearest nursing facility	6.9	6.5	7.9	6.8	6.9	7.1

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.

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. HCC scores did not vary much by group, ranging from 2.0 to 2.3. 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.

The majority of eligible beneficiaries resided in metropolitan areas, compared to nonmetropolitan areas.

There were limited differences in area- and market-level characteristics. Those who were in the comparison group resided in counties with somewhat higher average Medicare spending per dually eligible individual than the demonstration group ($15,932.80 and $14,576, respectively). Additionally, health home users on average lived in somewhat less dense counties than non-health home users (218 people per square mile and 329, respectively).

C.1.5 Detailed Population Definitions

Demonstration eligible beneficiaries. Beneficiaries are identified in a given month if they were a Medicare-Medicaid enrollee and met any other specific demonstration eligibility criteria (e.g., qualifying PRISM score). Beneficiaries in the demonstration period are identified from quarterly State finder files, whereas beneficiaries in the 2-year predemonstration period preceding the demonstration implementation date are identified by applying the eligibility criteria in each separate predemonstration quarter.

Additional special populations were identified for the analyses as follows:

- *Health home service user*. A beneficiary was defined as having used health home services if they were enrolled in the demonstration and had any health home service use during the demonstration period.
- *Age*. Age was defined as a categorical variable where beneficiaries were identified as *under 65*, *65 to 74*, and *75 years and older* during the observation year (e.g., predemonstration year 1, predemonstration year 2, and demonstration years 4–6).
- *Gende*r. Gender was defined as binary variable where beneficiaries were either male or female.
- *Race*. Race was defined as a categorical variable where beneficiaries were categorized as *White*, *African American*, *Hispanic*, or *Asian*.
- *LTSS*. A beneficiary was defined as using LTSS if there was any use of institutional or HCBS during the observation year.
- *SPMI.* A beneficiary was defined as having an SPMI if there were any inpatient or outpatient mental health visits for schizophrenia or episodic mood disorder during the observation year.

C.1.6 Detailed Utilization and Expenditure Measure Definitions

For any health care service type, the methodology for estimating average monthly utilization and the percentage of users, takes into account differences in the number of eligibility months across beneficiaries. Because full-benefit dual eligibility status for the demonstration can vary by month over time for any individual, the methodology used determines dual eligibility status for the demonstration for each person on a monthly basis during a predemonstration or demonstration period. That is, an individual is capable of meeting the demonstration's eligibility criteria for 1, 2, 3, or up to 12 months during the observation year. The methodology adds the total months of full-benefit dual eligibility for the demonstration across the population of interest and uses it in the denominator in the measures in ***Section 1.3***, creating average monthly utilization and expenditure information for each service type. The methodology effectively produces average monthly use and expenditure statistics for each year that account for variation in the number of dually eligible beneficiaries in each month of the observation year.

The utilization measures, below, were calculated as the aggregate sum of the unit of measurement (counts, etc.) divided by the aggregated number of eligible member months (and user months) within each group (*g*) where group is defined as (1) Washington predemonstration year 1; (2) comparison predemonstration year 1; (3) Washington predemonstration year 2; (4) comparison predemonstration year 2; (5) Washington demonstration year 4; (6) comparison demonstration year 4; (7) Washington demonstration year 5; (8) comparison demonstration year 5; (9) Washington demonstration year 6; and (10) comparison demonstration year 6.

We calculated the average number of services per 1,000 eligible months and per 1,000 user months by beneficiary group (*g*). We defined *user month* as an eligible month where the number of units of utilization used (for a given service) was greater than zero. We weighted each observation using yearly propensity weights. The average yearly utilization outcomes are measured as:

$$Y_g = \frac{\Sigma_{ig} Z_{ig}}{\left(\frac{1}{1{,}000}\right) * \Sigma_{ig} n_{ig}}$$

Where

Yg = average count of the number services used [for a given service] per eligible or user month within group g.

Zig = the total units of utilization [for a given service] for individual i in group g.

nig = the total number of $\frac{1}{1{,}000}$ the total number of $\frac{1}{1{,}000}$ eligible/user months for individual i in group g.

The denominator above is scaled such that the result is interpreted in terms of average monthly utilization per 1,000 eligible beneficiaries. This presentation is preferable, compared with per eligible, because some of the services are used less frequently and would result in small estimates.

The average percentage of users [of a given service] per eligible month during the predemonstration or demonstration year is measured as follows:

$$U = \frac{\Sigma_{ig} X_{ig}}{\Sigma_{ig} n_{ig}} \quad \text{x } 100$$

Where

U_{ig} = average percentage of users [for a particular service] in a given month among beneficiaries in group *g*.
X_{ig} = the total number of eligible months of service use for an individual *i* in group *g*
n_{ig} = the total number of eligible or user months for an individual *i* in group *g*.

C.1.7 Quality of Care and Care Coordination Measures

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.

1. Average 30-day all-cause risk-standardized readmission was calculated as follows:

$$30 - Risk\ Standardized\ Readmission\ = \frac{\left(\frac{\Sigma_{ig} x_{ig}}{\Sigma_{ig} n_{ig}} X\ C\right)}{Prob_g}$$

Where

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*.
$Prob_g$ = the annual average adjusted probability of readmission for individuals in group *g*. The average adjusted probability equals:

Average adjusted probability of readmission by demonstration group	
Demonstration group	**Average adjusted probability of readmission**
Predemonstration year 1	
Washington	0.2186
Comparison	0.2187
Predemonstration year 2	
Washington	0.2169
Comparison	0.2175
Demonstration year 4	
Washington	0.2162
Comparison	0.2053

Average adjusted probability of readmission by demonstration group	
Demonstration group	**Average adjusted probability of readmission**
Demonstration year 5	
Washington	0.2171
Comparison	0.2053
Demonstration year 6	
Washington	0.2124
Comparison	0.2064

2. Average 30-day follow-up in a physician or outpatient setting after hospitalization for mental illness was calculated as follows:

$$MHFU = \frac{\Sigma_{ig} x_{ig}}{\Sigma_{ig} n_{ig}}$$

Where

$MHFU$ = the average rate of 30-day follow-up care after hospitalization for a mental illness for individuals in group *g*.

X_{ig} = the total number of discharges from a hospital stay for mental health that had a follow-up for mental health within 30 days of discharge for individual *i* in group *g*.

n_{ig} = the total number of months where there was a discharge from a hospital stay for mental health for individual *i* in group *g*.

3. Average ACSC admissions per eligible month, overall and chronic composite (PQI #90 and PQI #92) was calculated as follows:

$$ACSC_{ig} = \frac{\Sigma_{ig} x_{ig}}{\Sigma_{ig} n_{ig}}$$

Where

ASC_g = the average number of ACSC admissions per eligible months for overall/chronic composites for individuals in group *g*.

X_{ig} = the total number of discharges that meet the criteria for AHRQ PQI #90 [or PQI #92] for individual *i* in group *g*.

n_{ig} = the total number of eligible months for individual *i* in group *g*.

4. Preventable ED visits per eligible month was calculated as follows:

$$ER_{ig} = \frac{\Sigma_{ig} x_{ig}}{\Sigma_{ig} n_{ig}}$$

Where

ER_g = the average number of preventable ED visits per eligible months for individuals in group *g*.
X_{ig} = the total number ED visits that are considered preventable based in the diagnosis for individual *i* in group *g*.
n_{ig} = the total number of eligible months for individual *i* in group *g*.

5. Average number of beneficiaries per eligible month who received depression screening during the observation year was calculated as follows:

$$D_g = \frac{\Sigma_{ig} x_{ig}}{\Sigma_{ig} n_{ig}}$$

Where

D_g = the average number of beneficiaries per eligible month who received depression screening in group *g*.
X_{ig} = the total number eligible beneficiaries who ever received depression screening in group *g*.
n_{ig} = the total number of eligible months among beneficiaries in group *g*.

C.1.8 Minimum Data Set Measures

Two measures of annual NF-related utilization are derived from the MDS. 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, poor short-term memory, or severely impaired decision-making skills.

C.1.9 Regression Outcome Measures

Five utilization measures are used as dependent variables in regression analysis to estimate the DinD effect for the entire demonstration period as well as the effect in each demonstration year. These measures are derived from Medicare inpatient, outpatient, carrier claims, and MDS long-stay NF use. All dependent variables are provided on a monthly basis except for the MDS long-stay NF measure and 30-day inpatient readmission measure, which are annual.

The outcome measures include the following:

- *Monthly inpatient admissions:* 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.
- *Monthly ED use:* The monthly probability of having any ED visit that occurred during the month that did not result in an inpatient admission.
- *Monthly skilled nursing facility use:* The monthly probability of having any SNF claim with an admission date during the month of observation.
- *Monthly physician visits*: The count of any evaluation and management (E&M) visit within the month 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.
- *Long-stay NF use*: The annual probability of residing in a facility for 101 days or more during the year.

In addition to the five measures above, this evaluation estimates the demonstration effects on quality of care. The following quality of care and care coordination measures use claims - level information and are adopted from standardized HEDIS and National Quality Forum (NQF) measures.

- *30-day all-cause risk-standardized readmissions*: This is calculated both as the rate of risk-standardized readmission, defined above, as well as the count of the number risk-standardized readmissions that occurs during the year.
- *Preventable ED visits*: This is estimated as a continuous variable of weighted ED visits that occur during the month. The lists of diagnoses that are considered as either preventable/avoidable, or treatable in a primary care setting were developed by researchers at the New York University Center for Health and Public Service Research.[15]
- *30-day follow-up after hospitalization for mental illness (NQF #576)*: This is estimated as the monthly probability of any follow-up visits within 30-days posthospitalization for a mental illness.

[15] https://wagner.nyu.edu/faculty/billings/nyued-background

- *ACSC admissions—overall composite (AHRQ PQI #90)*: The monthly probability of any acute admissions that meet the AHRQ PQI #90 (Prevention Quality Overall Composite) criteria within the month.
- *ACSC admissions—chronic composite (AHRQ PQI #92)*: The monthly probability of any admissions that meet the AHRQ PQI #92 criteria within the month.

C.1.10 Regression Methodology for Determining Demonstration Impact

The regressions across the entire demonstration period compare all demonstration eligible beneficiaries in the FAI State to its comparison group. The regression methodology accounts for both those with and without use of the specific service (e.g., for inpatient services, both those with and without any inpatient use). A restricted DinD equation will be estimated as follows:

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

where separate models will be estimated for each dependent variable. *PostYear* is an indicator of whether the observation is from the pre- or postdemonstration period, *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, postregression predictions of demonstration impact are performed to obtain the marginal effects of demonstration impact.

In addition to estimating the model described in the prior equation, a less restrictive model was estimated to produce year-by-year effects of the demonstration. The specification of the unrestricted model is as follows:

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

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. This specification measures whether changes in dependent variables occur in the first year of the demonstration only, continuously over time, or in some other pattern. 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 or Poisson regressions (e.g., for the number of monthly physician visits). We used regression results to calculate the marginal effects of demonstration impact.

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 D, Tables D-2*** and ***D-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 weighted mean for each of the four groups using the regression results 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 C-2 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 C-2
Logistic regression results on monthly inpatient admissions
(n = 5,657,651 person months)

Independent variables	Coefficient	Standard error	z-value	*p*-value
Post period	−0.2312	0.0179	−12.91	<0.001
Demonstration group	−0.1156	0.0423	−2.73	0.006
Interaction of post period x demonstration group	−0.0349	0.0311	−1.12	0.262
Age (continuous)	0.0024	0.0005	5.01	<0.001
Female	−0.0094	0.0086	−1.08	0.279
Black	0.0192	0.0184	1.04	0.297
Hispanic	−0.1972	0.0356	−5.54	<0.001
Asian	−0.2849	0.0414	−6.89	<0.001
Other race/ethnicity	−0.1554	0.0366	−4.25	<0.001
Disability as reason for Medicare entitlement	−0.0273	0.0119	−2.28	0.022
End-stage renal disease	1.3812	0.0243	56.87	<0.001
Participation in other Shared Savings Program	0.1093	0.0514	2.13	0.033
Hierarchical Condition Category score	0.3014	0.0035	84.92	<0.001
Metropolitan statistical area residence	0.0122	0.0308	0.40	0.691
Medicare spending per dual, ages 19+	0.0000	0.0000	3.48	0.001
Percent of population married	−0.0004	0.0006	−0.62	0.537
Medicare Advantage penetration rate	−0.0817	0.1170	−0.70	0.485
Fraction of duals with Medicaid managed care	−1.9778	2.7023	−0.73	0.464
Medicaid spending per dual, ages 19+	0.0000	0.0000	4.53	<0.001
Fraction of dually elig. beneficiaries using nursing facility, ages 65+	−1.2994	0.3262	−3.98	<0.001
Fraction of dually elig. beneficiaries using personal care services, ages 65+	−0.8078	0.2800	−2.89	0.004
Population per square mile, all ages	0.0001	0.0001	1.01	0.314
Patient care physicians per 1,000 population	−0.0142	0.0623	−0.23	0.820
Percent of adults with college education	−0.0031	0.0008	−4.17	<0.001
Percent of adults who are unemployed	−0.0011	0.0015	−0.77	0.441
Percent of adults with self-care limitation	0.0085	0.0023	3.77	<0.001
Distance to nearest hospital	0.0025	0.0013	1.97	0.049
Distance to nearest nursing facility	−0.0081	0.0018	−4.61	<0.001
Percent of households with individuals younger than 18	0.0005	0.0010	0.45	0.653
Percent of households with individuals older than 60	−0.0005	0.0008	−0.63	0.529
Medicaid-Medicare fee index	−0.4470	0.3151	−1.42	0.156
Intercept	−3.7622	0.3585	−10.50	<0.001

Appendix D

Descriptive and Special Population Supplemental Analysis

Tables D-1, ***D-2***, and ***D-3*** provide the regression-adjusted DinD 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 D-1
Cumulative and annual demonstration effects on service utilization and quality of care measures for eligible beneficiaries in Washington, January 1, 2017–December 31, 2019

Measure	Adjusted DinD estimate	Relative difference (%)	*p*-value	95% confidence interval	90% confidence interval
Probability of inpatient admission					
Cumulative	–0.0015	NS	0.2709	–0.0042, 0.0012	–0.0038, 0.0008
Demonstration year 4	–0.0013	NS	0.3393	–0.0039, 0.0013	–0.0035, 0.0009
Demonstration year 5	–0.0009	NS	0.5337	–0.0037, 0.0019	–0.0033, 0.0015
Demonstration year 6	–0.0024	NS	0.1538	–0.0057, 0.0009	–0.0052, 0.0004
Count of all-cause 30-day readmissions					
Cumulative	–0.0015	NS	0.8827	–0.0219, 0.0188	–0.0186, 0.0155
Demonstration year 4	–0.0057	NS	0.6456	–0.0300, 0.0186	–0.0261, 0.0147
Demonstration year 5	0.0060	NS	0.6718	–0.0218, 0.0338	–0.0173, 0.0293
Demonstration year 6	–0.0056	NS	0.7162	–0.0358, 0.0246	–0.0310, 0.0198
Probability of ACSC admission, overall					
Cumulative	–0.0008	NS	0.1872	–0.0021, 0.0004	–0.0019, 0.0002
Demonstration year 4	–0.0010	NS	0.1384	–0.0024, 0.0003	–0.0022, 0.0001
Demonstration year 5	–0.0007	NS	0.2880	–0.0020, 0.0006	–0.0018, 0.0004
Demonstration year 6	–0.0007	NS	0.2497	–0.0020, 0.0005	–0.0018, 0.0003
Probability of ACSC admission, chronic					
Cumulative	–0.0004	NS	0.3595	–0.0013, 0.0005	–0.0011, 0.0003
Demonstration year 4	–0.0007	NS	0.1521	–0.0017, 0.0003	–0.0016, 0.0001
Demonstration year 5	–0.0004	NS	0.3842	–0.0014, 0.0005	–0.0012, 0.0004
Demonstration year 6	–0.0000	NS	0.9417	–0.0010, 0.0009	–0.0008, 0.0008
Probability of ED visit					
Cumulative	0.0008	NS	0.6612	–0.0028, 0.0044	–0.0022, 0.0039
Demonstration year 4	0.0004	NS	0.8587	–0.0040, 0.0047	–0.0033, 0.0040
Demonstration year 5	–0.0000	NS	0.9820	–0.0040, 0.0039	–0.0033, 0.0033
Demonstration year 6	0.0022	NS	0.2346	–0.0015, 0.0060	–0.0009, 0.0054

(continued)

Table D-1 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures for eligible beneficiaries in Washington, January 1, 2017–December 31, 2019

Measure	Adjusted DinD estimate	Relative difference (%)	*p*-value	95% confidence interval	90% confidence interval
Count of preventable ED visits					
Cumulative	0.0025	NS	0.1305	–0.0007, 0.0057	–0.0002, 0.0051
Demonstration year 4	0.0015	NS	0.4423	–0.0024, 0.0055	–0.0018, 0.0049
Demonstration year 5	0.0028	NS	0.0938	–0.0005, 0.0061	0.0001, 0.0055
Demonstration year 6	0.0031	NS	0.0915	–0.0005, 0.0067	0.0001, 0.0061
Probability of SNF admission					
Cumulative	–0.0039	–24.2	<0.0001	–0.0051, –0.0027	–0.0049, –0.0028
Demonstration year 4	–0.0034	–21.7	<0.0001	–0.0047, –0.0022	–0.0045, –0.0024
Demonstration year 5	–0.0037	–23.6	<0.0001	–0.0052, –0.0023	–0.0049, –0.0025
Demonstration year 6	–0.0044	–27.3	<0.0001	–0.0059, –0.0029	–0.0057, –0.0031
Probability of any long-stay NF use					
Cumulative	–0.0350	–14.8	<0.0001	–0.0441, –0.0259	–0.0427, –0.0274
Demonstration year 4	–0.0291	–13.0	<0.0001	–0.0423, –0.0160	–0.0401, –0.0181
Demonstration year 5	–0.0309	–13.1	<0.0001	–0.0404, –0.0214	–0.0389, –0.0229
Demonstration year 6	–0.0456	–18.3	<0.0001	–0.0574, –0.0338	–0.0555, –0.0357
Probability of 30-day follow-up after mental health discharge					
Cumulative	–0.0364	–10.2	0.0449	–0.0720, –0.0008	–0.0663, –0.0066
Demonstration year 4	–0.0412	NS	0.0536	–0.0830, 0.0006	–0.0763, –0.0061
Demonstration year 5	–0.0420	NS	0.0508	–0.0841, 0.0002	–0.0773, –0.0066
Demonstration year 6	–0.0256	NS	0.1975	–0.0645, 0.0133	–0.0583, 0.0071
Number of physician E&M visits					
Cumulative	–0.2289	–15.2	<0.0001	–0.2926, –0.1651	–0.2824, –0.1754
Demonstration year 4	–0.1729	–11.9	<0.0001	–0.2338, –0.1120	–0.2240, –0.1218
Demonstration year 5	–0.2239	–14.8	<0.0001	–0.2856, –0.1622	–0.2757, –0.1721
Demonstration year 6	–0.2928	–18.7	<0.0001	–0.3795, –0.2061	–0.3656, –0.2200

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

Table D-2
Cumulative and annual demonstration effects on service utilization and quality of care measures for beneficiaries with LTSS use versus those without LTSS use in Washington, January 1, 2017–December 31, 2019

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								
Probability of inpatient admission	Cumulative	LTSS users	0.0011	NS	0.4738	–0.0019, 0.0041	–0.0014, 0.0036	0.0037*
		Non-LTSS users	–0.0026	–6.2	0.0266	–0.0050, –0.0003	–0.0046, –0.0007	
	Demonstration year 4	LTSS users	0.0023	NS	0.1779	–0.0011, 0.0057	–0.0005, 0.0052	0.0047**
		Non-LTSS users	–0.0024	–5.6	0.0413	–0.0046, –0.0001	–0.0043, –0.0005	
	Demonstration year 5	LTSS users	0.0009	NS	0.6325	–0.0028, 0.0046	–0.0022, 0.0040	0.0038
		Non-LTSS users	–0.0029	–6.9	0.0456	–0.0058, –0.0001	–0.0053, –0.0005	
	Demonstration year 6	LTSS users	–0.0001	NS	0.9800	–0.0048, 0.0047	–0.0040, 0.0039	0.0026
		Non-LTSS users	–0.0026	NS	0.0854	–0.0057, 0.0004	–0.0052, –0.0001	
Probability of ED visit	Cumulative	LTSS users	0.0047	NS	0.0868	–0.0007, 0.0100	0.0002, 0.0091	0.0080*
		Non-LTSS users	–0.0034	NS	0.2433	–0.0090, 0.0023	–0.0081, 0.0014	
	Demonstration year 4	LTSS users	0.0079	11.1	0.0035	0.0026, 0.0132	0.0034, 0.0123	0.0129***
		Non-LTSS users	–0.0050	NS	0.0841	–0.0106, 0.0007	–0.0097, –0.0002	
	Demonstration year 5	LTSS users	0.0015	NS	0.6558	–0.0052, 0.0083	–0.0041, 0.0072	0.0056
		Non-LTSS users	–0.0041	NS	0.2276	–0.0107, 0.0026	–0.0097, 0.0015	
	Demonstration year 6	LTSS users	0.0045	NS	0.1380	–0.0014, 0.0104	–0.0005, 0.0095	0.0053
		Non-LTSS users	–0.0008	NS	0.8103	–0.0073, 0.0057	–0.0062, 0.0046	

(continued)

Table D-2 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures for beneficiaries with LTSS use versus those without LTSS use in Washington, January 1, 2017–December 31, 2019

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)								
Count of physician E&M visits	Cumulative	LTSS users	–0.1030	–6.7	0.0318	–0.1971, –0.0090	–0.1820, –0.0241	0.1208*
		Non-LTSS users	–0.2239	–17.9	<0.0001	–0.2786, –0.1692	–0.2698, –0.1779	
	Demonstration year 4	LTSS users	–0.0589	NS	0.2301	–0.1550, 0.0373	–0.1395, 0.0218	0.1381*
		Non-LTSS users	–0.1970	–16.1	<0.0001	–0.2561, –0.1379	–0.2466, –0.1474	
	Demonstration year 5	LTSS users	–0.1057	–6.9	0.0398	–0.2065, –0.0049	–0.1903, –0.0211	0.1198
		Non-LTSS users	–0.2255	–17.9	<0.0001	–0.2885, –0.1626	–0.2784, –0.1727	
	Demonstration year 6	LTSS users	–0.1517	–9.6	0.0032	–0.2527, 0.0508	–0.2365, 0.0670	0.0994
		Non-LTSS users	–0.2511	–19.9	<0.0001	–0.3015, –0.2008	–0.2934, 0.2089	
Probability of SNF admission	Cumulative	LTSS users	–0.0018	–9.8	0.0389	–0.0035, –0.0001	–0.0032, –0.0004	–0.0011
		Non-LTSS users	–0.0008	–19.8	0.0014	–0.0012, –0.0003	–0.0011, –0.0004	
	Demonstration year 4	LTSS users	–0.0016	NS	0.0937	–0.0036, 0.0003	–0.0032, 0.0000	–0.0009
		Non-LTSS users	–0.0007	–19.4	0.0050	–0.0012, –0.0002	–0.0011, –0.0003	
	Demonstration year 5	LTSS users	–0.0022	NS	0.1007	–0.0048, 0.0004	–0.0044, 0.0000	–0.0014
		Non-LTSS users	–0.0007	–20.8	0.0093	–0.0013, –0.0002	–0.0012, –0.0003	
	Demonstration year 6	LTSS users	–0.0015	NS	0.2144	–0.0037, 0.0008	–0.0034, 0.0005	–0.0006
		Non-LTSS users	–0.0008	–20.1	0.0354	–0.0016, –0.0001	–0.0015, –0.0002	
		Non-LTSS users	–0.0018	–9.8	0.0389	–0.0035, –0.0001	–0.0032, –0.0004	

(continued)

Table D-2 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures for beneficiaries with LTSS use versus those without LTSS use in Washington, January 1, 2017–December 31, 2019

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								
Count of preventable ED visits	Cumulative	LTSS users	0.0037	NS	0.0695	–0.0003, 0.0077	0.0003, 0.0071	0.0042
		Non-LTSS users	–0.0005	NS	0.8438	–0.0057, 0.0047	–0.0049, 0.0038	
	Demonstration year 4	LTSS users	0.0063	17.3	0.0056	0.0018, 0.0108	0.0026, 0.0101	0.0082*
		Non-LTSS users	–0.0019	NS	0.5317	–0.0077, 0.0040	–0.0068, 0.0030	
	Demonstration year 5	LTSS users	0.0026	NS	0.3286	–0.0026, 0.0079	–0.0018, 0.0071	0.0022
		Non-LTSS users	0.0004	NS	0.8923	–0.0053, 0.0061	–0.0044, 0.0052	
	Demonstration year 6	LTSS users	0.0021	NS	0.3618	–0.0024, 0.0065	–0.0017, 0.0058	0.0022
		Non-LTSS users	–0.0001	NS	0.9697	–0.0063, 0.0060	–0.0053, 0.0050	
Probability of ACSC admission, overall	Cumulative	LTSS users	–0.0009	NS	0.1783	–0.0022, 0.0004	–0.0020, 0.0002	–0.0003
		Non-LTSS users	–0.0006	NS	0.3566	–0.0018, 0.0006	–0.0016, 0.0004	
	Demonstration year 4	LTSS users	–0.0006	NS	0.4339	–0.0023, 0.0010	–0.0020, 0.0007	–0.0001
		Non-LTSS users	–0.0005	NS	0.3997	–0.0018, 0.0007	–0.0016, 0.0005	
	Demonstration year 5	LTSS users	–0.0008	NS	0.4072	–0.0026, 0.0011	–0.0023, 0.0008	–0.0001
		Non-LTSS users	–0.0007	NS	0.4095	–0.0022, 0.0009	–0.0019, 0.0006	
	Demonstration year 3	LTSS users	–0.0014	NS	0.1070	–0.0030, 0.0003	–0.0027, 0.0000	–0.0009
		Non-LTSS users	–0.0005	NS	0.4559	–0.0018, 0.0008	–0.0016, 0.0006	

(continued)

Table D-2 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures for beneficiaries with LTSS use versus those without LTSS use in Washington, January 1, 2017–December 31, 2019

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)								
Probability of ACSC admission, chronic	Cumulative	LTSS users	–0.0003	NS	0.5471	–0.0013, 0.0007	–0.0012, 0.0005	–0.0001
		Non-LTSS users	–0.0002	NS	0.7325	–0.0011, 0.0008	–0.0010, 0.0006	
	Demonstration year 4	LTSS users	–0.0004	NS	0.4748	–0.0017, 0.0008	–0.0015, 0.0006	–0.0001
		Non-LTSS users	–0.0003	NS	0.5778	–0.0014, 0.0008	–0.0012, 0.0006	
	Demonstration year 5	LTSS users	–0.0003	NS	0.6091	–0.0016, 0.0010	–0.0014, 0.0007	–0.0001
		Non-LTSS users	–0.0003	NS	0.6623	–0.0015, 0.0009	–0.0013, 0.0007	
	Demonstration year 6	LTSS users	–0.0001	NS	0.9106	–0.0013, 0.0011	–0.0011, 0.0009	–0.0002
		Non-LTSS users	0.0001	NS	0.8449	–0.0010, 0.0012	–0.0008, 0.0010	
Probability of 30-day follow-up after mental health discharge	Cumulative	LTSS users	–0.0246	NS	0.3769	–0.0791, 0.0300	–0.0704, 0.0212	0.0258
		Non-LTSS users	–0.0504	–13.0	0.0279	–0.0953, –0.0055	–0.0881, –0.0127	
	Demonstration year 4	LTSS users	–0.0530	NS	0.1055	–0.1172, 0.0112	–0.1069, 0.0009	0.0082
		Non-LTSS users	–0.0612	NS	0.0509	–0.1227, 0.0002	–0.1128, –0.0097	
	Demonstration year 5	LTSS users	–0.0379	NS	0.2890	–0.1079, 0.0321	–0.0966, 0.0209	0.0247
		Non-LTSS users	–0.0626	–15.6	0.0242	–0.1171, –0.0082	–0.1083, –0.0169	
	Demonstration year 6	LTSS users	0.0202	NS	0.6473	–0.0663, 0.1067	–0.0524, 0.0928	0.0477
		Non-LTSS users	–0.0275	NS	0.2445	–0.0739, 0.0188	–0.0664, 0.0114	

(continued)

Table D-2 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures for beneficiaries with LTSS use versus those without LTSS use in Washington, January 1, 2017–December 31, 2019

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)								
Count of all-cause 30-day readmissions	Cumulative	LTSS users	0.0091	NS	0.7122	–0.0391, 0.0572	–0.0313, 0.0495	0.0136
		Non-LTSS users	–0.0069	NS	0.7400	–0.0479, 0.0340	–0.0413, 0.0274	
	Demonstration year 4	LTSS users	0.0161	NS	0.4909	–0.0296, 0.0618	–0.0223, 0.0544	0.0160
		Non-LTSS users	–0.0096	NS	0.6836	–0.0555, 0.0364	–0.0481, 0.0290	
	Demonstration year 5	LTSS users	–0.0062	NS	0.7807	–0.0499, 0.0375	–0.0429, 0.0305	0.0256
		Non-LTSS users	–0.0048	NS	0.8348	–0.0499, 0.0403	–0.0427, 0.0331	
	Demonstration year 6	LTSS users	0.0091	NS	0.7122	–0.0391, 0.0572	–0.0313, 0.0495	–0.0014
		Non-LTSS users	–0.0069	NS	0.7400	–0.0479, 0.0340	–0.0413, 0.0274	

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$
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 International analysis of Medicare fee-for-service claims data.

Table D-3
Cumulative and annual demonstration effects on service utilization and quality of care measures for beneficiaries with SPMI versus those without SPMI in Washington, January 1, 2017–December 31, 2019

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								
Probability of inpatient admission	Cumulative	SPMI	–0.0017	NS	0.4497	–0.0060, 0.0026	–0.0053, 0.0020	0.0001
		Non-SPMI	–0.0018	NS	0.2357	–0.0047, 0.0012	–0.0042, 0.0007	
	Demonstration year 4	SPMI	–0.0006	NS	0.8002	–0.0050, 0.0038	–0.0042, 0.0031	0.0020
		Non-SPMI	–0.0026	NS	0.0706	–0.0054, 0.0002	–0.0050, –0.0002	
	Demonstration year 5	SPMI	–0.0013	NS	0.5489	–0.0055, 0.0029	–0.0049, 0.0023	–0.0006
		Non-SPMI	–0.0007	NS	0.6904	–0.0044, 0.0029	–0.0038, 0.0023	
	Demonstration year 6	SPMI	–0.0030	NS	0.2328	–0.0080, 0.0020	–0.0072, 0.0012	–0.0010
		Non-SPMI	–0.0020	NS	0.2675	–0.0057, 0.0016	–0.0051, 0.0010	
Probability of ED visit	Cumulative	SPMI	–0.0006	NS	0.8627	–0.0075, 0.0063	–0.0064, 0.0052	–0.0013
		Non-SPMI	0.0007	NS	0.7086	–0.0029, 0.0042	–0.0023, 0.0036	
	Demonstration year 4	SPMI	–0.0019	NS	0.6380	–0.0098, 0.0060	–0.0085, 0.0047	–0.0033
		Non-SPMI	0.0015	NS	0.4841	–0.0026, 0.0055	–0.0020, 0.0049	
	Demonstration year 5	SPMI	–0.0010	NS	0.7820	–0.0082, 0.0062	–0.0071, 0.0050	–0.0006
		Non-SPMI	–0.0004	NS	0.8523	–0.0046, 0.0038	–0.0039, 0.0031	
	Demonstration year 6	SPMI	0.0012	NS	0.7244	–0.0055, 0.0080	–0.0045, 0.0069	0.0002
		Non-SPMI	0.0010	NS	0.6285	–0.0031, 0.0052	–0.0025, 0.0045	

(continued)

Table D-3 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures for beneficiaries with SPMI versus those without SPMI in Washington, January 1, 2017–December 31, 2019

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)								
Count of physician E&M visits	Cumulative	SPMI	–0.2286	–13.7	<0.0001	–0.3149, –0.1423	–0.3010, –0.1562	–0.1058**
		Non-SPMI	–0.1228	–10.7	<0.0001	–0.1549, –0.0906	–0.1498, –0.0958	
	Demonstration year 4	SPMI	–0.1637	–10.2	<0.0001	–0.2434, –0.0839	–0.2306, –0.0967	–0.0669*
		Non-SPMI	–0.0967	–8.5	<0.0001	–0.1395, –0.0540	–0.1326, –0.0609	
	Demonstration year 5	SPMI	–0.2201	–13.2	<0.0001	–0.3029, –0.1372	–0.2896, –0.1506	–0.0993**
		Non-SPMI	–0.1208	–10.6	<0.0001	–0.1529, –0.0887	–0.1477, –0.0938	
	Demonstration year 6	SPMI	–0.3024	–17.4	<0.0001	–0.4138, -0.1909	–0.3959, -0.2088	–0.1485***
		Non-SPMI	–0.1538	–13.2	<0.0001	–0.1994, -0.1083	–0.1920, -0.1156	
Probability of SNF admission	Cumulative	SPMI	–0.0047	–25.5	<0.0001	–0.0064, –0.0031	–0.0061, –0.0033	–0.0026**
		Non-SPMI	–0.0022	–21.4	0.0001	–0.0033, –0.0011	–0.0031, –0.0012	
	Demonstration year 4	SPMI	–0.0040	–21.4	<0.0001	–0.0057, –0.0023	–0.0054, –0.0025	–0.0017*
		Non-SPMI	–0.0022	–22.1	0.0005	–0.0035, –0.0010	–0.0033, –0.0012	
	Demonstration year 5	SPMI	–0.0046	–24.9	<0.0001	–0.0063, –0.0028	–0.0061, –0.0031	–0.0026**
		Non-SPMI	–0.0020	–20.3	0.0043	–0.0034, –0.0006	–0.0031, –0.0008	
	Demonstration year 6	SPMI	–0.0056	–30.0	<0.0001	–0.0077, –0.0034	–0.0074, –0.0037	–0.0033*
		Non-SPMI	–0.0023	–21.9	0.0345	–0.0044, –0.0002	–0.0040, –0.0005	

(continued)

Table D-3 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures for beneficiaries with SPMI versus those without SPMI in Washington, January 1, 2017–December 31, 2019

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								
Count of preventable ED visits	Cumulative	SPMI	0.0023	NS	0.4383	–0.0036, 0.0082	–0.0026, 0.0073	0.0007
		Non-SPMI	0.0016	NS	0.2284	–0.0010, 0.0042	–0.0006, 0.0038	
	Demonstration year 4	SPMI	0.0012	NS	0.7191	–0.0054, 0.0078	–0.0043, 0.0067	0.0002
		Non-SPMI	0.0010	NS	0.5772	–0.0025, 0.0045	–0.0019, 0.0039	
	Demonstration year 5	SPMI	0.0023	NS	0.4721	–0.0039, 0.0084	–0.0029, 0.0074	–0.0007
		Non-SPMI	0.0030	7.9	0.0299	0.0003, 0.0056	0.0007, 0.0052	
	Demonstration year 6	SPMI	0.0036	NS	0.2360	–0.0024, 0.0096	–0.0014, 0.0086	0.0028
		Non-SPMI	0.0008	NS	0.7071	–0.0034, 0.0050	–0.0027, 0.0043	
Probability of ACSC admission, overall	Cumulative	SPMI	–0.0009	NS	0.2565	–0.0025, 0.0007	–0.0022, 0.0004	0.0002
		Non-SPMI	–0.0011	NS	0.0934	–0.0024, 0.0002	–0.0022, 0.0000	
	Demonstration year 4	SPMI	–0.0010	NS	0.2942	–0.0028, 0.0008	–0.0025, 0.0005	0.0005
		Non-SPMI	–0.0014	–13.5	0.0435	–0.0028, –0.0000	–0.0026, –0.0003	
	Demonstration year 5	SPMI	–0.0008	NS	0.3656	–0.0027, 0.0010	–0.0024, 0.0007	0.0000
		Non-SPMI	–0.0009	NS	0.1999	–0.0022, 0.0005	–0.0019, 0.0002	
	Demonstration year 6	SPMI	–0.0009	NS	0.2330	–0.0023, 0.0006	–0.0021, 0.0003	0.0001
		Non-SPMI	–0.0010	NS	0.1861	–0.0026, 0.0005	–0.0023, 0.0003	

(continued)

Table D-3 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures for beneficiaries with SPMI versus those without SPMI in Washington, January 1, 2017–December 31, 2019

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)								
Probability of ACSC admission, chronic	Cumulative	SPMI	–0.0007	NS	0.2476	–0.0018, 0.0005	–0.0016, 0.0003	0.0000
		Non-SPMI	–0.0006	NS	0.2034	–0.0016, 0.0003	–0.0015, 0.0002	
	Demonstration year 4	SPMI	–0.0010	NS	0.1919	–0.0024, 0.0005	–0.0022, 0.0003	0.0000
		Non-SPMI	–0.0010	NS	0.0862	–0.0021, 0.0001	–0.0019, –0.0000	
	Demonstration year 5	SPMI	–0.0006	NS	0.3735	–0.0019, 0.0007	–0.0017, 0.0005	0.0002
		Non-SPMI	–0.0008	NS	0.1232	–0.0018, 0.0002	–0.0017, 0.0001	
	Demonstration year 6	SPMI	–0.0004	NS	0.4396	–0.0016, 0.0007	–0.0014, 0.0005	–0.0004
		Non-SPMI	–0.0001	NS	0.8827	–0.0012, 0.0011	–0.0011, 0.0009	
Count of all-cause 30-day readmissions	Cumulative	SPMI	0.0004	NS	0.9735	–0.0238, 0.0246	–0.0199, 0.0207	0.0057
		Non-SPMI	–0.0053	NS	0.7388	–0.0362, 0.0256	–0.0312, 0.0207	
	Demonstration year 4	SPMI	0.0026	NS	0.8637	–0.0269, 0.0321	–0.0222, 0.0273	0.0281
		Non-SPMI	–0.0255	NS	0.2139	–0.0658, 0.0147	–0.0593, 0.0083	
	Demonstration year 5	SPMI	0.0009	NS	0.9600	–0.0333, 0.0351	–0.0278, 0.0296	–0.0267
		Non-SPMI	0.0276	NS	0.1033	–0.0056, 0.0608	–0.0003, 0.0554	
	Demonstration year 6	SPMI	–0.0024	NS	0.8817	–0.0334, 0.0287	–0.0284, 0.0237	0.0182
		Non-SPMI	–0.0206	NS	0.4874	–0.0786, 0.0375	–0.0693, 0.0281	

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$
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 International analysis of Medicare fee-for-service claims data.

Table D-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 and payments 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 Washington 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 D-5***) and NF-related measures derived from the MDS (***Table D-6***). We did not conduct testing between groups or years. The results reflect the underlying experience of the two groups; changes over time are 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 (***Table D-4***). However, there were a few outcomes where some differences were apparent. For example, inpatient psychiatric admissions, hospice stays, behavioral health visits, and outpatient therapy were proportionally much higher for the comparison group compared to the demonstration group. In the case of behavioral health visits and outpatient therapy, the comparison and demonstration groups diverged relative to their predemonstration averages; the comparison group unadjusted averages increased during the demonstration period, whereas the demonstration group unadjusted average decreased from the predemonstration to demonstration period.

As with the service utilization measures, the Washington demonstration eligible beneficiaries were similar to the comparison group in many, but not all, of the RTI quality of care and care coordination measures (***Table D-5***). Although those in the comparison group had a somewhat higher rate of all-cause 30-day readmissions, they also had a higher rate of 30-day follow ups for mental health discharges.

Finally, across all years, the demonstration eligible group had a lower rate of new long-stay NF admissions and a lower percentage of long-stay NF users relative to the comparison group (***Table D-6***). There were differences in some characteristics of long-stay NF residents at admission: relative to the comparison group, demonstration eligible beneficiaries had better functional status, a lower proportion of beneficiaries with severe cognitive impairment, and similar percent with low level of care need.

Table D-4
Proportion, utilization, and payments for institutional and non-institutional services for the demonstration and comparison groups in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Measures by Setting	Group	Predemonstration Year 1	Predemonstration Year 2	Demonstration Period 4	Demonstration Period 5	Demonstration Period 6
Number of demonstration beneficiaries		42,700	44,400	41,203	42,495	39,617
Number of comparison beneficiaries		71,736	79,416	85,272	83,607	74,694
Institutional setting						
Inpatient admissions[1]	Demonstration					
% with use		5.4	5.5	4.7	4.7	4.6
Utilization per user 1,000 months		1,126.1	1,121.5	1,108.8	1,105.3	1,102.5
Utilization per eligible 1,000 months		60.6	62.1	51.9	51.5	50.2
Payments per user month		13,524.4	14,576.4	15,075.4	15,525.7	16,029.0
Payments per eligible month		728.4	807.4	705.9	723.6	729.7
Inpatient admissions[1]	Comparison					
% with use		6.2	5.7	5.2	5.1	5.1
Utilization per user 1,000 months		1,121.5	1,119.7	1,125.3	1,119.7	1,119.3
Utilization per eligible 1,000 months		69.5	64.4	58.4	57.2	57.3
Payments per user month		11,056.4	11,545.2	12,255.1	12,578.2	13,031.5
Payments per eligible month		685.3	663.7	636.5	642.8	667.5
Inpatient psychiatric	Demonstration					
% with use		0.4	0.4	0.3	0.3	0.3
Utilization per user 1,000 months		1,180.9	1,171.9	1,191.9	1,191.5	1,154.8
Utilization per eligible 1,000 months		4.6	4.6	3.4	3.5	3.2
Payments per user month		10,702.5	10,752.7	12,771.1	13,869.2	13,508.9
Payments per eligible month		41.5	41.9	36.5	40.5	37.1
Inpatient psychiatric	Comparison					
% with use		0.7	0.6	0.6	0.6	0.6
Utilization per user 1,000 months		1,117.6	1,131.0	1,128.9	1,142.6	1,129.0
Utilization per eligible 1,000 months		7.5	7.0	6.7	7.1	7.2
Payments per user month		7,273.6	7,928.1	8,184.6	9,269.5	8,723.9
Payments per eligible month		48.9	49.0	48.4	58.0	55.9

(continued)

Table D-4 (continued)
Proportion, utilization, and payments for institutional and non-institutional services for the demonstration and comparison groups in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Measures by Setting	Group	Predemonstration Year 1	Predemonstration Year 2	Demonstration Period 4	Demonstration Period 5	Demonstration Period 6
Inpatient substance abuse	Demonstration					
% with use		0.1	0.1	0.1	0.0	0.0
Utilization per user 1,000 months		1,078.6	1,093.9	1,058.5	1,046.4	1,068.5
Utilization per eligible 1,000 months		0.6	0.7	0.6	0.5	0.4
Payments per user month		5,489.6	6,595.6	8,627.6	8,668.7	10,472.5
Payments per eligible month		3.2	4.4	4.5	4.3	4.1
Inpatient substance abuse	Comparison					
% with use		0.1	0.1	0.1	0.1	0.1
Utilization per user 1,000 months		1,027.2	1,079.8	1,035.0	1,077.2	1,071.6
Utilization per eligible 1,000 months		0.7	0.7	0.7	0.6	0.8
Payments per user month		4,769.6	4,771.6	5,907.4	6,332.9	6,993.3
Payments per eligible month		3.1	3.2	4.0	3.8	5.1
Emergency department use (without admission)	Demonstration					
% with use		8.7	8.6	9.3	9.0	8.9
Utilization per user 1,000 months		1,347.0	1,306.9	1,305.5	1,305.7	1,305.5
Utilization per eligible 1,000 months		117.4	112.8	121.7	117.0	116.4
Payments per user month		597.1	626.2	721.9	772.5	813.5
Payments per eligible month		52.1	54.0	67.3	69.2	72.5
Emergency department use (without admission)	Comparison					
% with use		9.1	8.7	9.3	9.0	8.8
Utilization per user 1,000 months		1,329.8	1,305.2	1,291.3	1,272.3	1,265.7
Utilization per eligible 1,000 months		120.5	114.2	119.7	114.5	110.9
Payments per user month		510.9	543.9	627.7	660.8	673.1
Payments per eligible month		46.3	47.6	58.2	59.5	59.0

(continued)

Table D-4 (continued)
Proportion, utilization, and payments for institutional and non-institutional services for the demonstration and comparison groups in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Measures by Setting	Group	Predemonstration Year 1	Predemonstration Year 2	Demonstration Period 4	Demonstration Period 5	Demonstration Period 6
Emergency department use (psychiatric)	Demonstration					
% with use		0.6	0.6	0.6	0.6	0.5
Utilization per user 1,000 months		1,266.0	1,237.1	1,187.7	1,218.7	1,255.2
Utilization per eligible 1,000 months		7.2	7.0	7.0	7.0	6.7
Payments per user month		479.4	486.6	532.0	564.6	627.5
Payments per eligible month		2.7	2.8	3.1	3.3	3.3
Emergency department use (psychiatric)	Comparison					
% with use		0.5	0.4	0.5	0.5	0.5
Utilization per user 1,000 months		1,118.9	1,118.3	1,112.1	1,155.4	1,127.5
Utilization per eligible 1,000 months		5.4	4.8	5.6	5.4	5.4
Payments per user month		403.1	431.8	423.9	450.7	467.9
Payments per eligible month		2.0	1.9	2.1	2.1	2.3
Observation stays	Demonstration					
% with use		0.9	1.0	0.8	0.8	0.9
Utilization per user 1,000 months		1,043.5	1,045.0	1,040.4	1,029.4	1,044.1
Utilization per eligible 1,000 months		9.6	9.9	8.7	8.3	9.0
Payments per user month		1,750.4	1,972.9	2,412.7	2,409.8	2,444.7
Payments per eligible month		16.1	18.8	20.2	19.3	21.0
Observation stays	Comparison					
% with use		1.1	1.2	1.2	1.2	1.2
Utilization per user 1,000 months		1,040.5	1,039.7	1,050.8	1,040.9	1,052.4
Utilization per eligible 1,000 months		11.1	12.0	13.0	13.0	12.5
Payments per user month		1,561.4	1,592.5	1,901.7	1,951.5	1,995.4
Payments per eligible month		16.6	18.4	23.6	24.4	23.7

(continued)

Table D-4 (continued)
Proportion, utilization, and payments for institutional and non-institutional services for the demonstration and comparison groups in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Measures by Setting	Group	Predemonstration Year 1	Predemonstration Year 2	Demonstration Period 4	Demonstration Period 5	Demonstration Period 6
Skilled nursing facility	Demonstration					
% with use		1.7	1.7	1.1	1.1	1.0
Utilization per user 1,000 months		1,095.5	1,088.9	1,078.9	1,067.2	1,069.3
Utilization per eligible 1,000 months		18.4	19.0	11.6	11.3	11.2
Payments per user month		12,701.9	12,440.1	13,476.4	14,188.2	15,012.2
Payments per eligible month		212.8	217.6	145.2	149.7	157.2
Skilled nursing facility	Comparison					
% with use		1.9	1.9	1.6	1.6	1.6
Utilization per user 1,000 months		1,093.5	1,088.9	1,084.7	1,087.5	1,077.3
Utilization per eligible 1,000 months		21.2	20.2	17.2	17.3	17.4
Payments per user month		9,713.1	9,957.1	10,553.3	11,094.4	11,226.9
Payments per eligible month		188.3	185.0	167.0	176.2	181.0
Hospice	Demonstration					
% with use		1.1	1.7	0.6	0.7	0.6
Utilization per user 1,000 months		1,047.9	1,038.8	1,011.5	1,009.4	1,008.5
Utilization per eligible 1,000 months		11.9	17.5	5.8	6.8	6.4
Payments per user month		3,661.2	3,781.7	3,264.1	3,275.8	3,193.6
Payments per eligible month		41.6	63.8	18.9	22.1	20.4
Hospice	Comparison					
% with use		1.5	2.4	1.5	1.8	1.9
Utilization per user 1,000 months		1,038.0	1,020.3	1,012.1	1,009.4	1,008.0
Utilization per eligible 1,000 months		16.0	24.8	15.6	17.9	19.1
Payments per user month		3,427.2	3,534.5	3,486.1	3,563.5	3,701.2
Payments per eligible month		52.9	85.8	53.8	63.2	70.2

(continued)

Table D-4 (continued)
Proportion, utilization, and payments for institutional and non-institutional services for the demonstration and comparison groups in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Measures by Setting	Group	Predemonstration Year 1	Predemonstration Year 2	Demonstration Period 4	Demonstration Period 5	Demonstration Period 6
Non-institutional setting						
Specialist E&M visits	Demonstration					
% with use		5.9	5.9	6.3	6.1	6.0
Utilization per user 1,000 months		1,101.5	1,103.7	1,097.4	1,093.1	1,097.8
Utilization per eligible 1,000 months		64.9	64.7	68.8	66.9	65.6
Payments per user month		104.8	105.7	104.2	104.5	105.7
Payments per eligible month		6.2	6.2	6.5	6.4	6.3
Specialist E&M visits	Comparison					
% with use		6.0	5.8	6.3	5.9	5.8
Utilization per user 1,000 months		1,107.5	1,108.8	1,114.6	1,106.3	1,099.0
Utilization per eligible 1,000 months		65.9	64.5	69.9	64.8	63.4
Payments per user month		96.0	95.2	95.4	93.9	95.7
Payments per eligible month		5.7	5.5	6.0	5.5	5.5
Primary care E&M visits	Demonstration					
% with use		62.4	62.4	60.1	59.9	59.1
Utilization per user 1,000 months		1,846.4	1,883.7	1,877.1	1,883.7	1,897.8
Utilization per eligible 1,000 months		1,151.9	1,174.7	1,127.6	1,129.0	1,121.8
Payments per user month		123.5	127.5	118.8	122.2	128.0
Payments per eligible month		77.1	79.5	71.4	73.2	75.6
Primary care E&M visits	Comparison					
% with use		66.9	66.5	69.2	69.9	70.2
Utilization per user 1,000 months		1,972.0	1,967.0	2,099.2	2,167.4	2,254.5
Utilization per eligible 1,000 months		1,318.8	1,307.6	1,452.2	1,514.8	1,583.3
Payments per user month		114.8	114.8	122.5	128.9	135.6
Payments per eligible month		76.8	76.3	84.8	90.1	95.2

(continued)

Table D-4 (continued)
Proportion, utilization, and payments for institutional and non-institutional services for the demonstration and comparison groups in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Measures by Setting	Group	Predemonstration Year 1	Predemonstration Year 2	Demonstration Period 4	Demonstration Period 5	Demonstration Period 6
Behavioral health visits	Demonstration					
% with use		6.4	5.0	2.9	2.8	2.8
Utilization per user 1,000 months		1,627.7	2,087.9	2,246.8	2,240.7	2,297.7
Utilization per eligible 1,000 months		104.1	103.7	65.4	63.1	63.5
Payments per user month		62.3	87.5	140.0	146.9	152.7
Payments per eligible month		4.0	4.3	4.1	4.1	4.2
Behavioral health visits	Comparison					
% with use		8.9	6.5	7.3	7.9	8.8
Utilization per user 1,000 months		1,698.9	1,871.7	2,204.5	2,232.4	2,333.2
Utilization per eligible 1,000 months		150.6	121.4	159.9	177.0	204.8
Payments per user month		65.6	77.0	121.5	125.6	133.7
Payments per eligible month		5.8	5.0	8.8	10.0	11.7
Outpatient therapy (PT, OT, ST)	Demonstration					
% with use		5.9	5.6	4.6	4.8	4.8
Utilization per user 1,000 months		13,802.8	12,620.3	12,107.3	11,919.3	10,343.4
Utilization per eligible 1,000 months		808.5	708.8	554.7	569.3	492.6
Payments per user month		532.2	481.0	344.4	354.9	397.3
Payments per eligible month		31.2	27.0	15.8	17.0	18.9
Outpatient therapy (PT, OT, ST)	Comparison					
% with use		7.4	7.0	8.8	9.9	10.6
Utilization per user 1,000 months		24,313.8	23,998.5	25,897.9	26,117.2	23,757.1
Utilization per eligible 1,000 months		1,798.0	1,677.6	2,269.0	2,586.3	2,508.7
Payments per user month		813.1	773.2	736.4	788.6	868.1
Payments per eligible month		60.1	54.0	64.5	78.1	91.7

(continued)

Table D-4 (continued)
Proportion, utilization, and payments for institutional and non-institutional services for the demonstration and comparison groups in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Measures by Setting	Group	Predemonstration Year 1	Predemonstration Year 2	Demonstration Period 4	Demonstration Period 5	Demonstration Period 6
Independent therapy (PT, OT, ST)	Demonstration					
% with use		2.0	2.0	2.7	2.7	2.7
Utilization per user 1,000 months		8,490.4	8,198.5	8,553.6	8,694.6	7,664.0
Utilization per eligible 1,000 months		173.5	163.6	228.9	235.9	207.7
Payments per user month		264.1	247.8	210.1	215.9	224.0
Payments per eligible month		5.4	4.9	5.6	5.9	6.1
Independent therapy (PT, OT, ST)	Comparison					
% with use		1.1	1.0	1.2	1.2	1.3
Utilization per user 1,000 months		8,651.3	8,539.6	10,977.8	11,143.6	10,916.3
Utilization per eligible 1,000 months		91.8	88.8	128.9	137.5	145.8
Payments per user month		263.6	254.2	263.5	265.6	308.8
Payments per eligible month		2.8	2.6	3.1	3.3	4.1
Home health episodes	Demonstration					
% with use		2.4	2.4	2.4	2.4	2.4
Utilization per user 1,000 months		1,002.4	1,002.6	1,002.4	1,001.9	1,001.5
Utilization per eligible 1,000 months		24.3	24.5	23.6	24.2	23.6
Payments per user month		2,776.2	2,786.6	3,036.6	3,096.8	3,092.9
Payments per eligible month		67.4	68.1	71.5	74.8	73.0
Home health episodes	Comparison					
% with use		3.1	2.8	3.0	3.0	2.9
Utilization per user 1,000 months		1,004.7	1,004.5	1,003.7	1,004.1	1,004.1
Utilization per eligible 1,000 months		31.6	28.4	29.6	29.8	29.3
Payments per user month		2,454.1	2,418.3	2,484.6	2,520.8	2,483.4
Payments per eligible month		77.1	68.5	73.4	74.9	72.4

(continued)

Table D-4 (continued)
Proportion, utilization, and payments for institutional and non-institutional services for the demonstration and comparison groups in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Measures by Setting	Group	Predemonstration Year 1	Predemonstration Year 2	Demonstration Period 4	Demonstration Period 5	Demonstration Period 6
Durable medical equipment	Demonstration					
% with use		32.1	30.7	26.5	25.8	25.8
Utilization per user 1,000 months		—	—	—	—	—
Utilization per eligible 1,000 months		—	—	—	—	—
Payments per user month		245.1	241.2	204.5	234.9	261.8
Payments per eligible month		78.7	74.0	54.1	60.5	67.5
Durable medical equipment	Comparison					
% with use		30.9	28.6	24.7	24.0	23.3
Utilization per user 1,000 months		—	—	—	—	—
Utilization per eligible 1,000 months		—	—	—	—	—
Payments per user month		249.1	237.9	204.8	236.4	255.5
Payments per eligible month		77.0	68.0	50.5	56.8	59.5
Other hospital outpatient services	Demonstration					
% with use		41.2	40.8	42.9	41.3	40.9
Utilization per user 1,000 months		—	—	—	—	—
Utilization per eligible 1,000 months		—	—	—	—	—
Payments per user month		695.3	713.4	735.7	823.8	868.0
Payments per eligible month		286.8	290.8	315.5	340.4	354.9
Other hospital outpatient services	Comparison					
% with use		39.0	38.1	38.5	37.2	36.7
Utilization per user 1,000 months		—	—	—	—	—
Utilization per eligible 1,000 months		—	—	—	—	—
Payments per user month		557.3	555.6	672.4	691.3	705.3
Payments per eligible month		217.4	211.9	259.0	256.9	259.1

— = data not available. OT = occupational therapy; PT = physical therapy; ST = speech language therapy.
[1] Includes acute admissions, inpatient rehabilitation, and long-term care hospital admissions.

Table D-5
Quality of care and care coordination outcomes for the demonstration and comparison groups in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Quality and care coordination measures	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 4	Demonstration year 5	Demonstration year 6
30-day all-cause risk-standardized readmission rate (%)	Demonstration	18.0282	18.4094	17.9109	18.2044	18.0132
	Comparison	19.6731	19.3387	18.6814	18.7323	18.6254
Preventable emergency department visits per eligible month	Demonstration	0.0542	0.0519	0.0547	0.0512	0.0505
	Comparison	0.0567	0.0539	0.0550	0.0507	0.0488
Rate of 30-day follow-up after hospitalization for mental illness (%)	Demonstration	40.6780	39.2348	25.5698	26.4166	25.9839
	Comparison	45.8382	41.0094	35.3975	37.0405	35.0560
Ambulatory care sensitive condition admissions per eligible month—overall composite (AHRQ PQI #90)	Demonstration	0.0114	0.0115	0.0097	0.0095	0.0092
	Comparison	0.0143	0.0127	0.0123	0.0118	0.0113
Ambulatory care sensitive condition admissions per eligible month—chronic composite (AHRQ PQI #92)	Demonstration	0.0070	0.0070	0.0072	0.0067	0.0066
	Comparison	0.0085	0.0075	0.0088	0.0079	0.0073
Pneumococcal vaccination for patients age 65 and older per eligible month	Demonstration	0.0009	0.0075	0.0057	0.0019	0.0012
	Comparison	0.0007	0.0056	0.0046	0.0060	0.0076
Screening for clinical depression per eligible month	Demonstration	0.0000	0.0001	0.0004	0.0017	0.0009
	Comparison	0.0002	0.0003	0.0082	0.0034	0.0048

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

Table D-6
MDS long-stay NF utilization and characteristics at admission for the demonstration and comparison groups in Washington, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 4	Demonstration year 5	Demonstration year 6
Annual NF utilization						
Number of demonstration beneficiaries	Demonstration	28,340	29,532	27,546	29,866	28,067
New long-stay NF admissions per 1,000 eligible beneficiaries	Demonstration	23.6	24.8	14.1	12.8	12.9
Number of comparison beneficiaries	Comparison	42,323	46,917	49,108	49,347	44,171
New long-stay NF admissions per 1,000 eligible beneficiaries	Comparison	23.6	24.7	20.8	21.2	22.3
Number of demonstration beneficiaries	Demonstration	33,176	34,459	30,079	32,897	30,778
Long-stay NF users as % of eligible beneficiaries	Demonstration	15.3	15.4	8.7	9.3	9.1
Number of comparison beneficiaries	Comparison	55,446	61,113	62,000	63,765	57,723
Long-stay NF users as % of eligible beneficiaries	Comparison	25.1	24.6	22.0	23.4	24.9
Characteristics of new long-stay NF residents at admission						
Number of admitted demonstration beneficiaries	Demonstration	668	731	387	383	361
Number of admitted comparison beneficiaries	Comparison	998	1,158	1,022	1,045	985
Functional status (RUG-IV ADL scale)	Demonstration	9.1	9.8	9.7	9.7	9.8
Functional status (RUG-IV ADL scale)	Comparison	8.2	8.1	8.4	8.4	8.6
Percent with severe cognitive impairment	Demonstration	31.6	29.9	29.2	30.3	28.7
Percent with severe cognitive impairment	Comparison	39.1	36.5	29.7	33.6	32.4
Percent with low level of care need	Demonstration	1.8	1.1	1.3	0.5	0.1
Percent with low level of care need	Comparison	1.2	2.7	1.2	0.9	0.8

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 International analysis of Nursing Home Minimum Data Set data.

Tables D-7 and ***D-8*** present descriptive statistics for the health home users, compared to those demonstration eligible beneficiaries who were not health home users, for each service by demonstration year, to help understand the utilization experience over time.

Health home users generally had higher utilization than the non-health home users across all institutional and non-institutional service settings, except for hospice use (***Table D-7***). For the quality of care and care coordination measures, non-health home users had higher rates of 30-day all-cause readmissions but lower rates of both overall and chronic ambulatory care sensitive condition admissions per eligible month (AHRQ PQI # 90 and 92, respectively) (***Table D-8***).

Table D-7
Proportion and utilization for institutional and non-institutional services for health home users and non-health home users in Washington, January 1, 2017–December 31, 2019

Measures by setting	Group	Demonstration year 4	Demonstration year 5	Demonstration year 6
Number of demonstration health home users		5,650	6,307	5,841
Number of demonstration non-health home users		35,536	36,164	33,761
Institutional setting				
Inpatient admissions[1]	Health home users			
% with use		5.7	5.7	5.2
Utilization per 1,000 user months		1,119.3	1,115.6	1,094.1
Utilization per 1,000 eligible months		64.2	64.1	56.5
Payments per user month		15,090.3	14,173.7	15,303.8
Payments per eligible month		865.7	814.9	790.6
Inpatient admissions[1]	Non-health home users			
% with use		4.5	4.4	4.4
Utilization per 1,000 user months		1,106.0	1,102.2	1,102.2
Utilization per 1,000 eligible months		49.6	49.0	48.5
Payments per user month		15,095.3	15,766.0	16,126.6
Payments per eligible month		676.7	700.3	709.3
Inpatient psychiatric	Health home users			
% with use		0.3	0.3	0.2
Utilization per 1,000 user months		1,128.7	1,125.0	1,044.9
Utilization per 1,000 eligible months		3.0	3.1	2.1
Payments per user month		10,794.7	13,567.5	9,648.0
Payments per eligible month		29.0	37.8	19.1
Inpatient psychiatric	Non-health home users			
% with use		0.3	0.3	0.3
Utilization per 1,000 user months		1,200.9	1,200.6	1,171.1
Utilization per 1,000 eligible months		3.4	3.4	3.3
Payments per user month		13,324.7	13,694.8	13,986.2
Payments per eligible month		37.5	38.7	39.6

(continued)

Table D-7 (continued)
Proportion and utilization for institutional and non-institutional services for health home users and non-health home users in Washington, January 1, 2017–December 31, 2019

Measures by setting	Group	Demonstration year 4	Demonstration year 5	Demonstration year 6
Inpatient substance abuse	Health home users			
% with use		0.0	0.0	0.0
Utilization per 1,000 user months		1,000.0	1,052.6	1,000.0
Utilization per 1,000 eligible months		0.4	0.5	0.2
Payments per user month		11,428.4	9,014.2	7,842.8
Payments per eligible month		4.9	4.0	1.9
Inpatient substance abuse	Non-health home users			
% with use		0.1	0.0	0.0
Utilization per 1,000 user months		1,064.1	1,044.0	1,070.3
Utilization per 1,000 eligible months		0.6	0.5	0.4
Payments per user month		8,500.4	8,394.6	10,407.4
Payments per eligible month		4.4	4.1	4.3
Emergency department use (without admission)	Health home users			
% with use		11.4	11.0	10.6
Utilization per 1,000 user months		1,346.7	1,319.4	1,306.2
Utilization per 1,000 eligible months		153.6	145.7	137.8
Payments per user month		749.9	814.3	846.2
Payments per eligible month		85.5	89.9	89.3
Emergency department use (without admission)	Non-health home users			
% with use		8.9	8.5	8.6
Utilization per 1,000 user months		1,291.8	1,296.6	1,304.4
Utilization per 1,000 eligible months		114.4	110.3	111.6
Payments per user month		713.1	761.4	804.1
Payments per eligible month		63.2	64.8	68.8
Emergency department use (psychiatric)	Health home users			
% with use		0.7	0.6	0.6
Utilization per 1,000 user months		1,253.0	1,187.7	1,157.9
Utilization per 1,000 eligible months		8.4	7.6	6.9
Payments per user month		564.9	613.6	600.0
Payments per eligible month		3.8	3.9	3.6
Emergency department use (psychiatric)	Non-health home users			
% with use		0.6	0.5	0.5
Utilization per 1,000 user months		1,177.4	1,203.8	1,274.2
Utilization per 1,000 eligible months		6.6	6.6	6.5
Payments per user month		529.7	542.8	628.1
Payments per eligible month		3.0	3.0	3.2

(continued)

Table D-7 (continued)
Proportion and utilization for institutional and non-institutional services for health home users and non-health home users in Washington, January 1, 2017–December 31, 2019

Measures by setting	Group	Demonstration year 4	Demonstration year 5	Demonstration year 6
Observation stays	Health home users			
% with use		1.1	1.1	1.0
Utilization per 1,000 user months		1,030.7	1,031.3	1,036.6
Utilization per 1,000 eligible months		11.6	11.5	10.7
Payments per user month		2,750.2	2,603.4	2,630.0
Payments per eligible month		31.0	29.0	27.2
Observation stays	Non-health home users			
% with use		0.8	0.7	0.8
Utilization per 1,000 user months		1,041.5	1,030.0	1,045.8
Utilization per 1,000 eligible months		8.1	7.6	8.5
Payments per user month		2,344.0	2,377.3	2,408.6
Payments per eligible month		18.2	17.6	19.7
Skilled nursing facility	Health home users			
% with use		1.3	1.3	1.2
Utilization per 1,000 user months		1,084.5	1,059.9	1,062.9
Utilization per 1,000 eligible months		14.4	13.6	13.2
Payments per user month		13,977.5	15,323.6	15,234.7
Payments per eligible month		185.0	196.2	188.9
Skilled nursing facility	Non-health home users			
% with use		1.0	1.0	1.0
Utilization per 1,000 user months		1,079.3	1,067.4	1,067.0
Utilization per 1,000 eligible months		11.1	10.7	10.6
Payments per user month		13,374.7	14,011.1	14,997.5
Payments per eligible month		137.9	140.6	149.0
Hospice	Health home users			
% with use		0.4	0.5	0.5
Utilization per 1,000 user months		1,015.2	1,024.9	1,000.0
Utilization per 1,000 eligible months		3.6	4.8	4.9
Payments per user month		3,146.3	3,111.0	3,101.7
Payments per eligible month		11.1	14.5	15.1
Hospice	Non-health home users			
% with use		0.6	0.7	0.7
Utilization per 1,000 user months		1,011.7	1,008.5	1,009.3
Utilization per 1,000 eligible months		6.3	7.2	6.7
Payments per user month		3,294.2	3,315.5	3,222.7
Payments per eligible month		20.6	23.8	21.4

(continued)

Table D-7 (continued)
Proportion and utilization for institutional and non-institutional services for health home users and non-health home users in Washington, January 1, 2017–December 31, 2019

Measures by setting	Group	Demonstration year 4	Demonstration year 5	Demonstration year 6
Non-institutional setting				
Specialist care E&M visits	Health home users			
% with use		7.5	7.5	7.1
Utilization per 1,000 user months		1,090.1	1,098.1	1,096.1
Utilization per 1,000 eligible months		81.5	82.2	77.8
Payments per user month		100.0	104.1	103.8
Payments per eligible month		7.5	7.8	7.4
Specialist care E&M visits	Non-health home users			
% with use		6.0	5.8	5.7
Utilization per 1,000 user months		1,098.9	1,092.1	1,097.6
Utilization per 1,000 eligible months		66.0	63.9	63.0
Payments per user month		105.0	104.5	105.9
Payments per eligible month		6.3	6.1	6.1
Primary care E&M visits	Health home users			
% with use		67.6	67.6	65.9
Utilization per 1,000 user months		1,993.9	2,024.8	1,997.8
Utilization per 1,000 eligible months		1,347.3	1,368.5	1,316.1
Payments per user month		124.5	130.0	133.2
Payments per eligible month		84.2	87.9	87.8
Primary care E&M visits	Non-health home users			
% with use		58.7	58.6	57.9
Utilization per 1,000 user months		1,851.0	1,852.6	1,875.9
Utilization per 1,000 eligible months		1,087.0	1,085.3	1,086.2
Payments per user month		117.6	120.5	126.7
Payments per eligible month		69.1	70.6	73.3
Behavioral health visits	Health home users			
% with use		4.5	4.6	4.4
Utilization per 1,000 user months		2,307.0	2,292.0	2,378.8
Utilization per 1,000 eligible months		104.1	105.8	105.3
Payments per user month		143.8	151.8	162.9
Payments per eligible month		6.5	7.0	7.2
Behavioral health visits	Non-health home users			
% with use		2.6	2.5	2.5
Utilization per 1,000 user months		2,238.7	2,219.7	2,267.7
Utilization per 1,000 eligible months		58.5	55.2	56.3
Payments per user month		138.5	144.7	148.5
Payments per eligible month		3.6	3.6	3.7

(continued)

Table D-7 (continued)
Proportion and utilization for institutional and non-institutional services for health home users and non-health home users in Washington, January 1, 2017–December 31, 2019

Measures by setting	Group	Demonstration year 4	Demonstration year 5	Demonstration year 6
Outpatient therapy (PT, OT, ST)				
% with use	Health home users	6.3	6.4	6.6
Utilization per 1,000 user months		10,222.3	10,323.7	8,767.2
Utilization per 1,000 eligible months		640.6	656.6	575.3
Payments per user month		286.5	299.3	334.0
Payments per eligible month		18.0	19.0	21.9
Outpatient therapy (PT, OT, ST)				
% with use	Non-health home users	4.3	4.5	4.4
Utilization per 1,000 user months		12,513.7	12,309.6	10,733.7
Utilization per 1,000 eligible months		540.6	553.2	476.4
Payments per user month		356.6	368.1	412.5
Payments per eligible month		15.4	16.5	18.3
Independent therapy (PT, OT, ST)				
% with use	Health home users	4.1	4.0	3.9
Utilization per 1,000 user months		8,191.3	7,954.1	7,096.0
Utilization per 1,000 eligible months		337.5	317.9	280.1
Payments per user month		198.7	195.7	203.4
Payments per eligible month		8.2	7.8	8.0
Independent therapy (PT, OT, ST)				
% with use	Non-health home users	2.4	2.5	2.5
Utilization per 1,000 user months		8,727.4	8,895.8	7,791.8
Utilization per 1,000 eligible months		210.7	220.0	193.3
Payments per user month		213.9	222.1	228.6
Payments per eligible month		5.2	5.5	5.7
Home Health Episodes				
% with use	Health home users	3.7	3.6	3.4
Utilization per 1,000 user months		1,004.3	1,001.9	1,002.0
Utilization per 1,000 eligible months		37.4	36.5	34.1
Payments per user month		3,051.9	3,093.1	3,200.8
Payments per eligible month		113.5	112.7	108.8
Home Health Episodes				
% with use	Non-health home users	2.1	2.2	2.2
Utilization per 1,000 user months		1,002.2	1,001.9	1,001.5
Utilization per 1,000 eligible months		21.2	22.1	21.7
Payments per user month		3,026.2	3,085.8	3,061.4
Payments per eligible month		63.9	68.0	66.4

(continued)

Table D-7 (continued)
Proportion and utilization for institutional and non-institutional services for health home users and non-health home users in Washington, January 1, 2017–December 31, 2019

Measures by setting	Group	Demonstration year 4	Demonstration year 5	Demonstration year 6
Durable Medical Equipment	Health home users			
% with use		36.2	35.1	33.5
Utilization per 1,000 user months		—	—	—
Utilization per 1,000 eligible months		—	—	—
Payments per user month		210.4	244.5	286.0
Payments per eligible month		76.1	85.8	95.9
Durable Medical Equipment	Non-health home users			
% with use		24.8	24.1	24.4
Utilization per 1,000 user months		—	—	—
Utilization per 1,000 eligible months		—	—	—
Payments per user month		203.4	229.5	255.5
Payments per eligible month		50.5	55.4	62.4
Other hospital outpatient services	Health home users			
% with use		53.1	52.4	51.2
Utilization per 1,000 user months		—	—	—
Utilization per 1,000 eligible months		—	—	—
Payments per user month		741.0	836.2	815.4
Payments per eligible month		393.3	438.0	417.4
Other hospital outpatient services	Non-health home users			
% with use		41.0	39.3	39.1
Utilization per 1,000 user months		—	—	—
Utilization per 1,000 eligible months		—	—	—
Payments per user month		731.5	823.5	871.6
Payments per eligible month		300.2	323.7	340.6

— = 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 International analysis of Medicare fee-for-service claims data.

Table D-8
Quality of care and care coordination outcomes for health home users and non-health home users for the Washington demonstration, demonstration years 4–6 (January 1, 2017–December 31, 2019)

Quality and care coordination measures	Group	Demonstration year 4	Demonstration year 5	Demonstration year 6
30-day all-cause risk-standardized readmission rate (%)	Health home users	18.8345	19.2774	17.0570
	Non-Health Home Users	19.2807	19.3049	19.2054
Preventable ED visits per eligible month	Health home users	0.0698	0.0640	0.0606
	Non-Health Home Users	0.0512	0.0482	0.0484
Rate of 30-day follow-up after hospitalization for mental illness (%)	Health home users	31.4024	29.8630	24.9284
	Non-Health Home Users	24.4952	25.7157	25.7204
Ambulatory care sensitive condition admissions per eligible month—overall composite (AHRQ PQI #90)	Health home users	0.0127	0.0122	0.0112
	Non-Health Home Users	0.0092	0.0089	0.0087
Ambulatory care sensitive condition admissions per eligible month—chronic composite (AHRQ PQI #92)	Health home users	0.0092	0.0088	0.0078
	Non-Health Home Users	0.0068	0.0062	0.0063
Pneumococcal vaccination for patients age 65 and older per eligible month	Health home users	0.0004	0.0017	0.0014
	Non-Health Home Users	0.0004	0.0017	0.0008
Screening for clinical depression per eligible month	Health home users	0.0030	0.0021	0.0016
	Non-Health Home Users	0.0062	0.0018	0.0011

AHRQ PQI = Agency for Healthcare Research and Quality Prevention Quality Indicator; ED = emergency department.
SOURCE: RTI International analysis of Medicare FFS claims data.

D.1 Service Use by Demographic Characteristics of Eligible Beneficiaries

To examine any differences in racial and ethnic groups, ***Figures D-1, D-2***, and ***D-3*** provide month-level results for five settings of interest for Washington eligible beneficiaries: inpatient admissions, ED visits that did not result in an admission, 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.

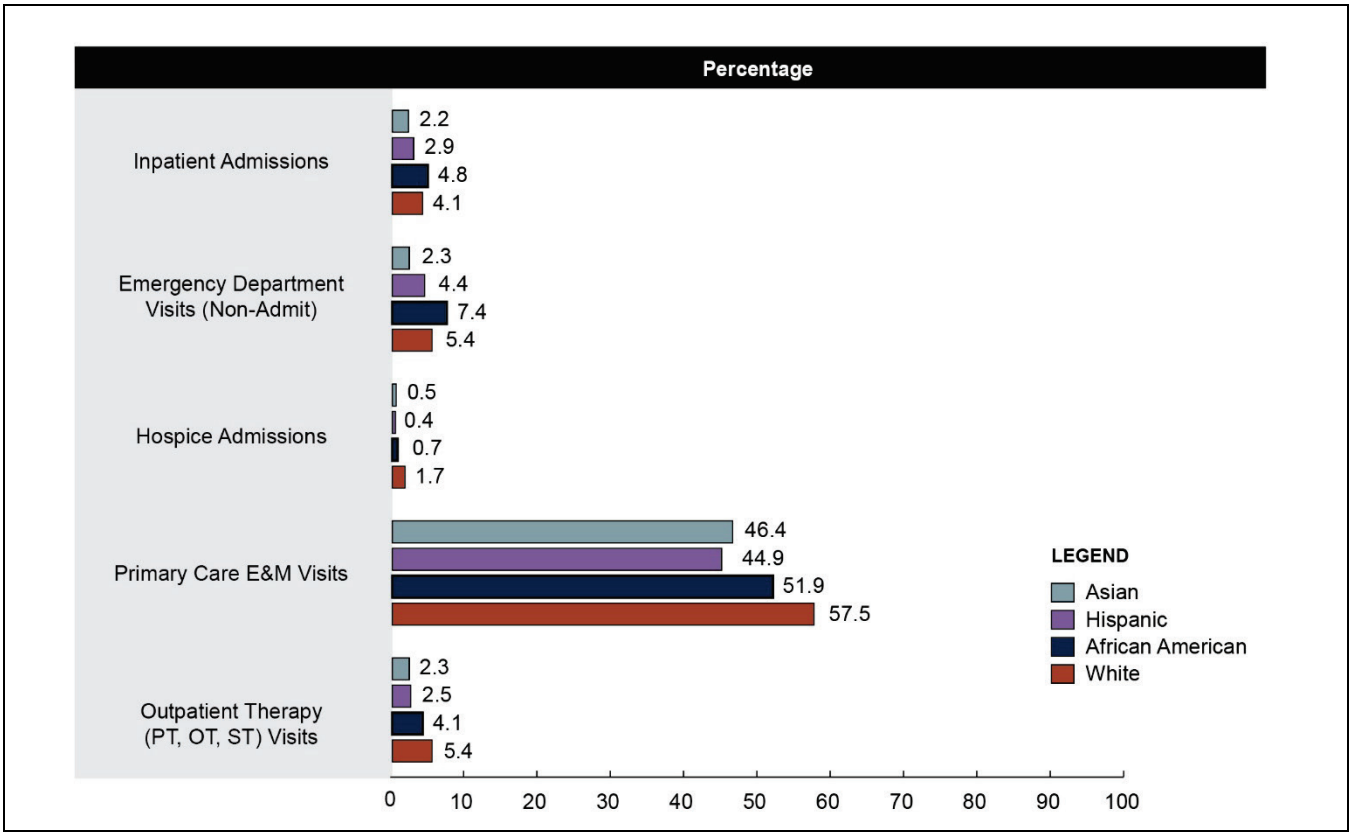
Figure D-1 presents the percentage of use of selected Medicare services. African American beneficiaries had slightly higher inpatient admissions and ED visits, relative to other racial categories, whereas Asians had lower rates of ED visits. White and African American physician E&M and outpatient therapy rates were slightly higher than these rates for Asian and Hispanic beneficiaries.

Regarding counts of services used among users of each respective service, as presented in ***Figure D-2***, African American beneficiaries had slightly more ED visits relative to other racial

groups in months when there was any use, whereas Hispanic beneficiaries had noticeably lower counts of outpatient therapy visits.

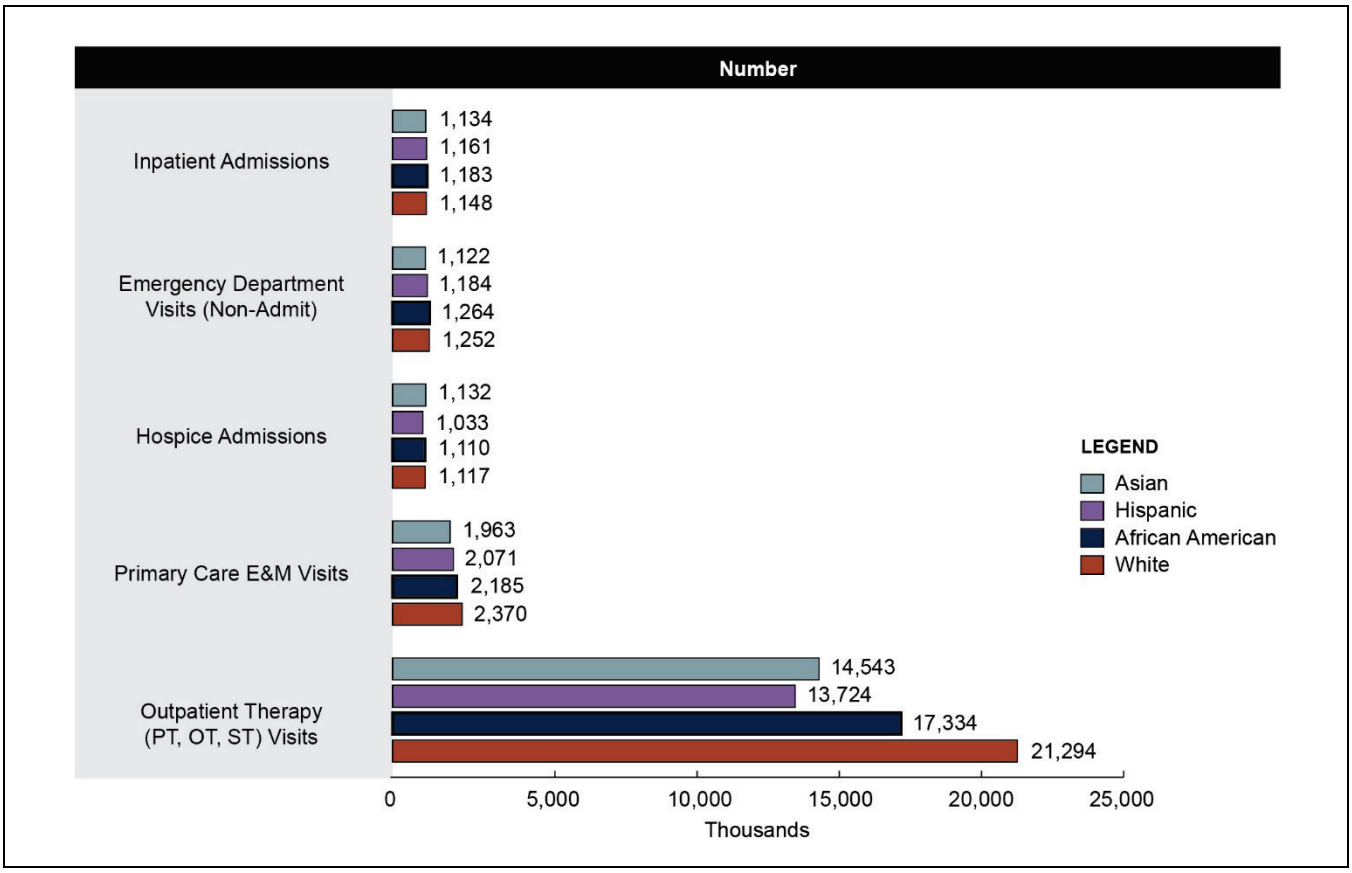
Figure D-3 presents counts of services across all Washington demonstration eligible beneficiaries regardless of having any use of the respective services. When looking at use for all eligible beneficiaries in all eligible months, the results are quite different from those of users of services in ***Figure D-2***. African American beneficiaries had more inpatient admissions and ED visits relative to the other racial groups. Asian and Hispanic beneficiaries had noticeably lower counts of physician E&M and outpatient therapy visits.

Figure D-1
Percent with use of selected Medicare services among Washington demonstration eligible beneficiaries, January 1, 2019–December 31, 2019



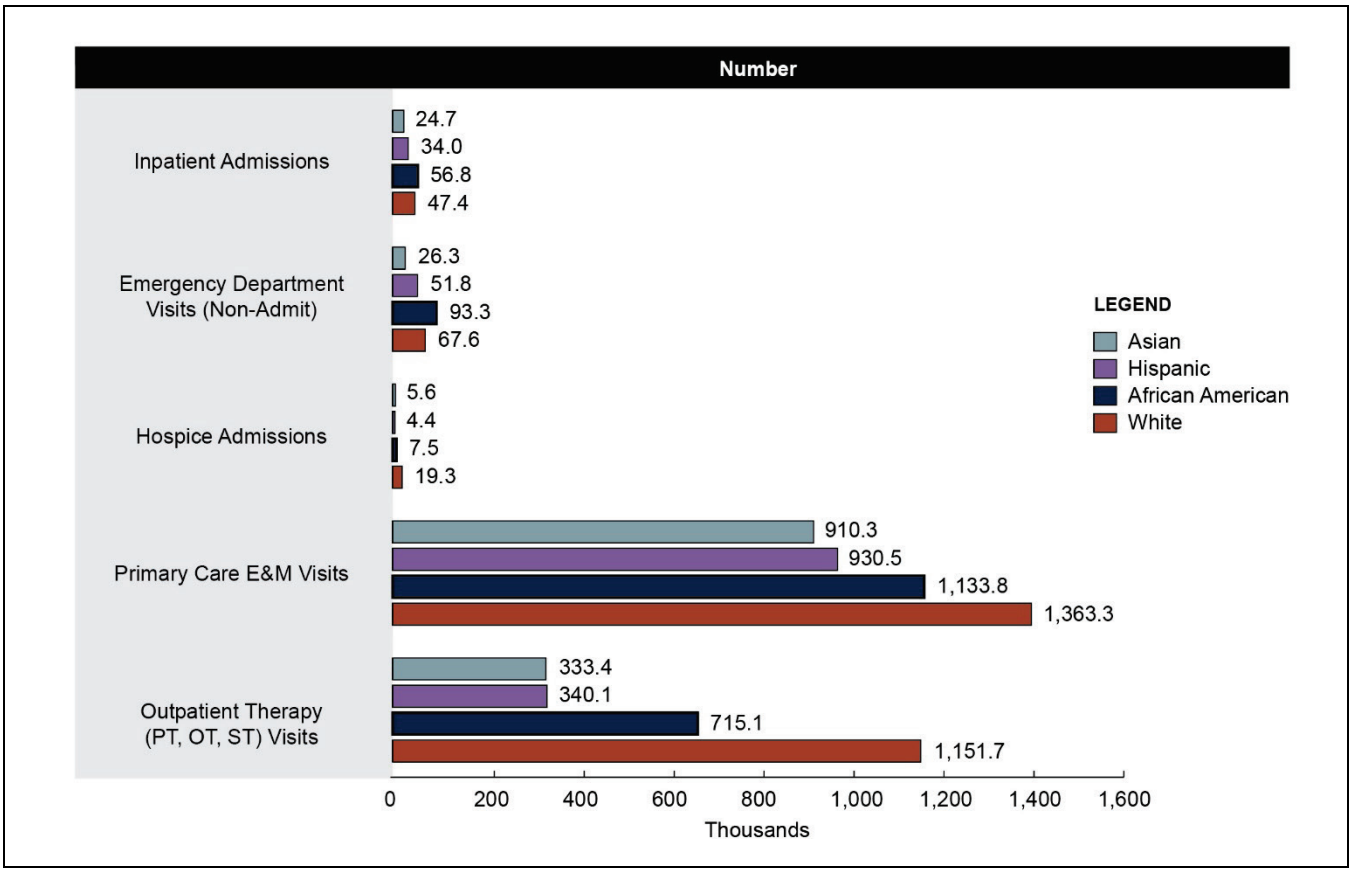
E&M = evaluation and management; OT = occupational therapy; PT = physical therapy; ST = speech therapy.

Figure D-2
Service use per 1,000 user months among Washington demonstration eligible beneficiaries, January 1, 2019–December 31, 2019



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

Figure D-3
Service use per 1,000 eligible months among Washington demonstration eligible beneficiaries, January 1, 2019–December 31, 2019



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

Appendix E

Cost Savings Methodology and Supplemental Tables

E.1 Adjustments to Medicare Expenditures

Two adjustments were made to the monthly Medicare expenditures. The first was to account for Medicare sequestration reductions starting April 1, 2013. The second was the average geographic adjustment to ensure that observed expenditure variations are not caused by differences in Medicare payment policies in different areas of the country. ***Table E-1*** summarizes each adjustment in greater detail.

After applying all adjustments, beneficiary-level monthly expenditures were Winsorized (capped) at the 99th percentile across all comparison group and demonstration group observations to limit the effect of extreme outliers in the data. The results presented in the ***Section 6, Impact on Cost Savings*** and ***Table E-2*** represent the most accurate adjusted impact on Medicare costs.

Table E-1
Adjustments to Medicare expenditures variable

Adjustment description	Reason for adjustment	Adjustment detail
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%.
Average geographic adjustments (AGAs)	FFS claims also reflect geographic payment adjustments. To ensure that change over time is not related to differential change in geographic payment adjustments, payments were "unadjusted" using the appropriate county-specific AGA factor.	Medicare payments were divided by the appropriate county-specific full AGA factor for each year.

FFS = fee-for-service.

E.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.

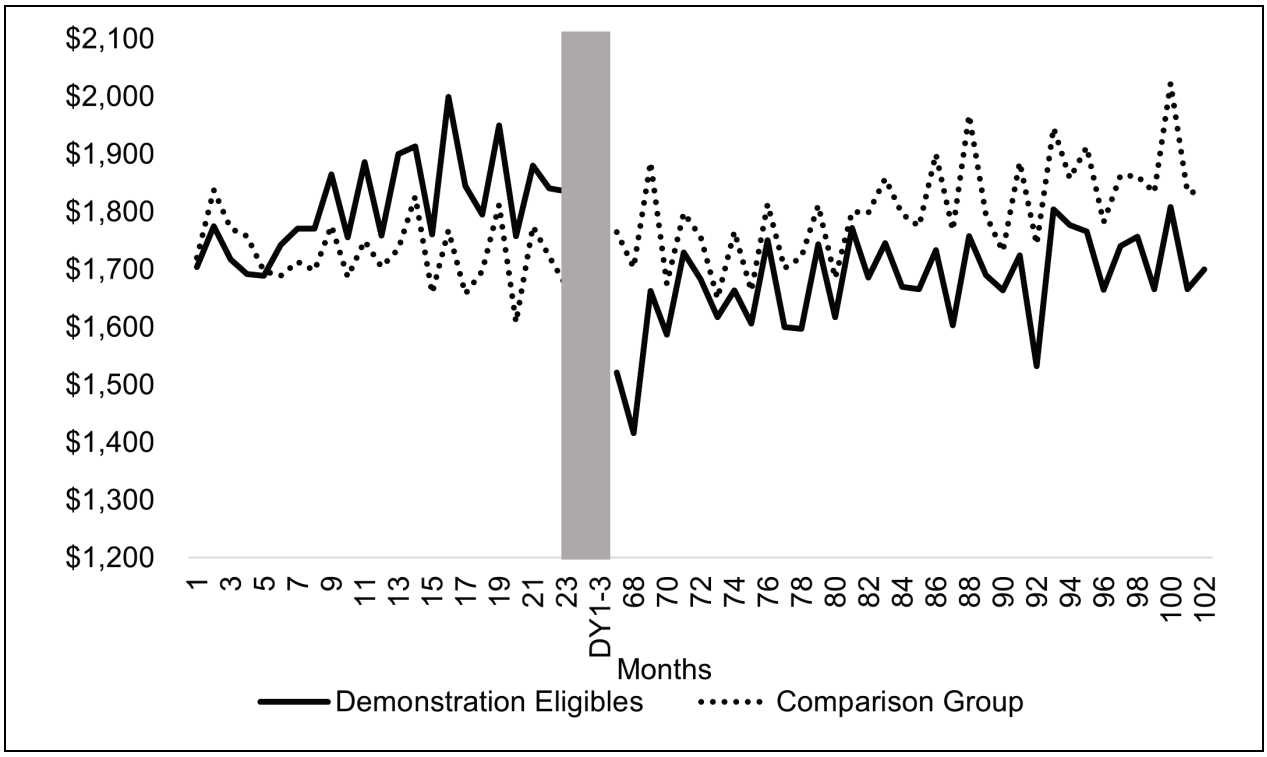
- Demographic variables included in the model were:
  - Age
  - Gender
  - Race/ethnicity
  - Enrolled in another Medicare shared saving program
  - End-stage renal disease status
  - Disability as reason for Medicare entitlement

  - Medicare Advantage status
- Area-level variables included in the savings model were:
  - Medicare spending per Medicare-Medicaid enrollee age 19 or older
  - MA penetration rate
  - Medicaid-to-Medicare FFS fee index for all services
  - Medicaid spending per Medicare-Medicaid enrollee age 19 or older
  - Proportion of Medicare-Medicaid enrollees using
    - Nursing facilities age 65 or older
    - Personal care age 65 or older
    - Medicaid managed care age 19 or older
  - Physicians per 1,000 population
  - 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

E.3 Results

Once we finalized the adjustments, we tested a key assumption of a DinD model: parallel trends: 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 E-1*** shows the resulting plot and suggests that there were parallel trends in the predemonstration period.

Figure E-1
Mean monthly Medicare expenditures (weighted), predemonstration and demonstration period, demonstration and comparison group, July 2011–December 2019



NOTES: This figure shows average monthly Medicare payments (propensity score weighted) in the predemonstration period and in demonstration years 4—6. Demonstration years 1–3 are not shown in this figure because these years were prior to the inclusion of King and Snohomish counties and therefore a different comparison group applies to demonstration years 1–3.
SOURCE: RTI Analysis of Washington demonstration eligible and comparison group Medicare data (program: warar377 part iii b).

E.4 Regression

Table E-2 shows the main results from the DinD analysis for demonstration years 1–6 and the entire demonstration period, for demonstration years 1–3 and 4–6, controlling for beneficiary demographics and market characteristics.

Table E-3 is a summary of the overall impact estimates by demonstration year. Although the regression models show the impact of the demonstration on the unit of analysis, a beneficiary-month, it is also valuable to understand the total impact across all eligible beneficiary months. For example, over demonstration years 4–6 combined, the total impact of the demonstration on Medicare per beneficiary per month expenditures (***Table E-3***) was a statistically significant decrease (savings) of $237.90, relative to the comparison group. There were 1,125,043 eligible beneficiary months in the demonstration group over the same period, which translates to just over $267.6 million in estimated gross Medicare Parts A and B savings. Subtracting the performance payments that CMS made to Washington State for the same period

($50.8 million) from this gross savings, the net savings to Medicare for demonstration years 4–6 combined is over $216 million.[16]

Over demonstration years 1, 2, and 3 combined, the impact on gross Medicare Parts A and B spending was a statistically significant decrease (savings) of $155.92 PMPM, relative to the comparison group. There were 750,624 eligible beneficiary months in the demonstration group during that period, which translates to $117 million in gross estimated Medicare Parts A and B savings. Subtracting the performance payments that CMS made to Washington State for the same period ($36.5 million) from this gross savings, the net savings to Medicare for demonstration years 1, 2 and 3 combined is over $80 million (***Table E-3***).[17]

Table E-2
Demonstration effects on Medicare savings for eligible beneficiaries—Difference-in-difference regression results

Period	Adjusted coefficient DinD ($)	*p*-value	95% confidence interval ($)	90% confidence interval ($)
Demonstration Year 1 (July 2013—December 2014)	−86.37	0.0278	(−163.31, −9.44)	(−150.94, −21.81)
Demonstration Year 2 (January 2015—December 2015)	−213.43	<0.0001	(−273.38, −153.47)	(−263.74, −163.11)
Demonstration Year 3 (January 2016—December 2016)	−144.15	0.0007	(−227.89, −60.41)	(−214.43, −73.87)
Cumulative (Demonstration Years 1—3; July 2013—December 2016)	−155.92	<0.0001	(−209.49, −102.34)	(−200.88, −110.95)
Demonstration Year 4 (January 2017—December 2017)	−190.84	<0.0001	(−281.25, −100.42)	(−266.71, −114.96)
Demonstration Year 5 (January 2018—December 2018)	−236.13	<0.0001	(−323.45, −148.8)	(−309.41, −162.84)
Demonstration Year 6 (January 2019—December 2019)	−291.60	<0.0001	(−402.98, −180.22)	(−385.07, −198.13)
Cumulative (Demonstration Years 4—6; January 2017—December 2019)	−237.90	<0.0001	(−326.47, −149.33)	(−312.23, −163.57)

DinD = difference-in-differences.
SOURCE: RTI analysis of Medicare claims (program: warar387, warar411)

[16] Under the managed fee-for-service model, the State is eligible to share in up to one-half of the total Medicare savings, minus any significant increases in federal Medicaid spending. Pending availability of Medicaid cost results, CMS has issued approximately two-thirds of the maximum potential performance payments to Washington State through demonstration year 6. Thus, final net Medicare savings are anticipated to be less than $88 million.
[17] Pending availability of Medicaid cost results, CMS has issued approximately two-thirds of the maximum potential performance payments to Washington State; final net Medicare savings are anticipated to be less than $61 million.

Table E-3
Aggregate gross and net Medicare savings

Period	Number of eligible person months	Average effect PMPM ($)	Total gross savings ($)	Total Medicare payments ($)[a]	Total net savings ($)	Total net savings ($): 95% CI
DY 1 (2013–2014)	248,736	−86.37	−21,483,328	11,600,000	−9,883,328	(−29,021,076, 9,251,932)
DY 2 (2015)	234,565	−213.43	−50,063,208	10,700,000	−39,363,208	(−53,425,380, −25,298,691)
DY 3 (2016)	267,323	−144.15	−38,534,610	14,200,000	−24,334,610	(−46,720,238, −1,948,982)
Total (DY 1–DY 3)[b]	750,624	−155.92	−117,037,294	36,500,000	−80,537,294	(−120,748,222, −40,318,860)
DY 4 (2017)	360,947	−190.84	−68,883,125	15,500,000	−53,383,125	(−86,016,344, −20,746,298)
DY 5 (2018)	394,762	−236.13	−93,215,151	17,400,000	−75,815,151	(−110,285,769, −41,340,586)
DY 6 (2019)	369,334	−291.60	−107,697,794	17,900,000	−89,797,794	(−130,934,215, −48,661,373)
Total (DY 4–DY 6)[b]	1,125,043	−237.90	−267,647,730	50,800,000	−216,847,730	(−316,492,788, −117,202,671)
Total to date (DY 1–DY 6)[b]	1,875,667	−205.09	−384,680,545	87,300,000	−297,380,545	(−404,837,507, −189,923,583)

CI = confidence interval; DY = demonstration year; PMPM = per member per month.
[a] Actual payment amount, assuming 2/3 of possible maximum allowed (provided by CMS).
[b] The multi-DY totals for "Total gross savings ($)," "Total net savings ($)," and "Total net savings ($): 95% CI" are based on "Average effect PMPM ($)" that is either regression estimated (for DY1–DY3 and DY4–DY6) or calculated as a weighted average (for DY1–DY6), and as such, they are not equal to the simple sum of the corresponding numbers over individual DYs.
SOURCE: WADY1-6_gross_net_savings.xlsx.

E.5 Medicaid Cost Analysis

Table E-4 presents descriptive statistics for FAI eligible beneficiaries in the State of Washington in 2017 through 2019. Due to incompleteness in the Medicaid data in 2016 and prior years, we are only able to examine the Medicaid spending for the most recent years of the FAI demonstration. This data incompleteness in Washington, where a large proportion of the claims for personal care services in Washington are missing from the Medicaid data in 2016 and earlier, prevents us from estimating a DinD impact analysis for this report.

Almost all (96 percent–99 percent) FAI eligible beneficiaries in WA use some Medicaid services in each year. Total Medicaid spending increases from an average of $2,094.40 in 2017 to an average of $2,571.77 in 2019. Inpatient Medicaid spending is less than $20 in all three years—this is expected because Medicare is the primary payer for inpatient care. About 12 percent of the FAI eligible population is using long-term care services in any given year, with average spending per user ranging from $5,132.92 in 2017 to $5,767.23 in 2019. The largest contributor to Medicaid spending in the FAI eligible population in WA is the other FFS spending

(derived from the T-MSIS OT file), which includes personal care services and home- and community-based services (HCBS). Over 94 percent of this sample used services in this category in each year, with the average spending increasing from $1,588.34 in 2017 to $1,914.57 in 2019. Spending for other capitated services more than doubled between 2017 and 2019, but it only accounts for a small proportion of total Medicaid spending.

Total Medicaid spending among the FAI eligible population in Washington grew from 2017 to 2019, averaging over $2,000 per month; and Medicaid spending for other services, including personal care services and HCBS, was the main contributor to total Medicaid spending.

Table E-4
Monthly Medicaid spending for eligible beneficiaries in Washington—2017-2019

Measure	2017	2018	2019
Number of beneficiary months	359,644	393,548	368,101
Number of beneficiaries	41,035	42,332	39,456
Users (% with non-zero spending within the year)	96.3%	96.5%	99.1%
Total spending per beneficiary-month	$2,094.40	$2,237.75	$2,571.77
Total spending per user month	$2,465.06	$2,628.54	$2,684.15
Users of inpatient services (% with non-zero spending within the year)	13.5%	13.7%	12.8%
Inpatient spending per beneficiary-month	$19.73	$19.41	$18.11
Inpatient spending per user month	$1,126.64	$1,146.86	$1,167.37
Users of long-term care services (% with non-zero spending within the year)	12.0%	12.7%	12.1%
Long-term care spending per beneficiary-month	$444.15	$497.62	$534.58
Long-term care spending per user month	$5,132.92	$5,393.89	$5,767.23
Users of other fee-for-service (FFS) (% with non-zero spending within the year)	94.4%	94.6%	94.9%
Other FFS spending per beneficiary-month	$1,588.34	$1,672.31	$1,914.57
Other FFS spending per user month	$2,020.55	$2,142.42	$2,433.33
Users of other capitated services (% with non-zero spending within the year)	31.9%	27.1%	81.4%
Other capitated spending per beneficiary-month	$27.00	$31.23	$79.48
Other capitated spending per user month	$142.45	$147.22	$104.32

Notes: Total spending excludes Medicaid spending for prescription drugs. Inpatient spending calculated from the T-MSIS Analytic File (TAF) Inpatient (IP) claims file. Long-term spending calculated from the TAF Long-term (LT) claims file. Other spending calculated from the TAF Other Services (OT) claims file.
SOURCE: RTI analysis of Medicaid claims (program: WA_MC_DY6_3300)