FINANCIAL ALIGNMENT INITIATIVE

Michigan MI Health Link Second Evaluation Report

March 2022

Prepared for
Nancy Chiles Shaffer
Lanlan Xu
Centers for Medicare & Medicaid Services
Center for Medicare & Medicaid Innovation
Mail Stop WB-06-05
7500 Security Boulevard
Baltimore, MD 21244-1850

Submitted by
Angela M. Greene and Zhanlian Feng
RTI International
3040 East Cornwallis Road
P.O. Box 12194
Research Triangle Park, NC 27707-2194

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FINANCIAL ALIGNMENT INITIATIVE
MICHIGAN MI HEALTH LINK
SECOND EVALUATION REPORT

By

RTI International

Scott Holladay, MPA
Jennifer Howard, PhD
Matt Toth, MSW, PhD
Guadalupe Suarez, BA
Brittany D'Cruz, MA
Ben Huber, MA
Paul Moore, MA
Joyce Wang, MPH
Sachin Peddada, BA
Giuseppina Chiri, PhD
Allison Dorneo, BA
Douglas Fletcher, BS
Nolan Sroczynski, MSPH
Hannah Cohen, BA
Regina Rutledge, PhD
Amy Kandilov, PhD
Nicole Coomer, PhD
Amy E. Chepaitis, PhD
Emily Costilow, MA
Cleanthe (Cleo) Kordomenos, BA
Sunnie Hodge, BA
Ira Dave, MSPH
Noah D'Arcangelo, BA
Wayne Anderson, PhD
Edith G. Walsh, PhD

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

Federal Project Officers: Nancy Chiles Shaffer, PhD, and Lanlan Xu, PhD

RTI International

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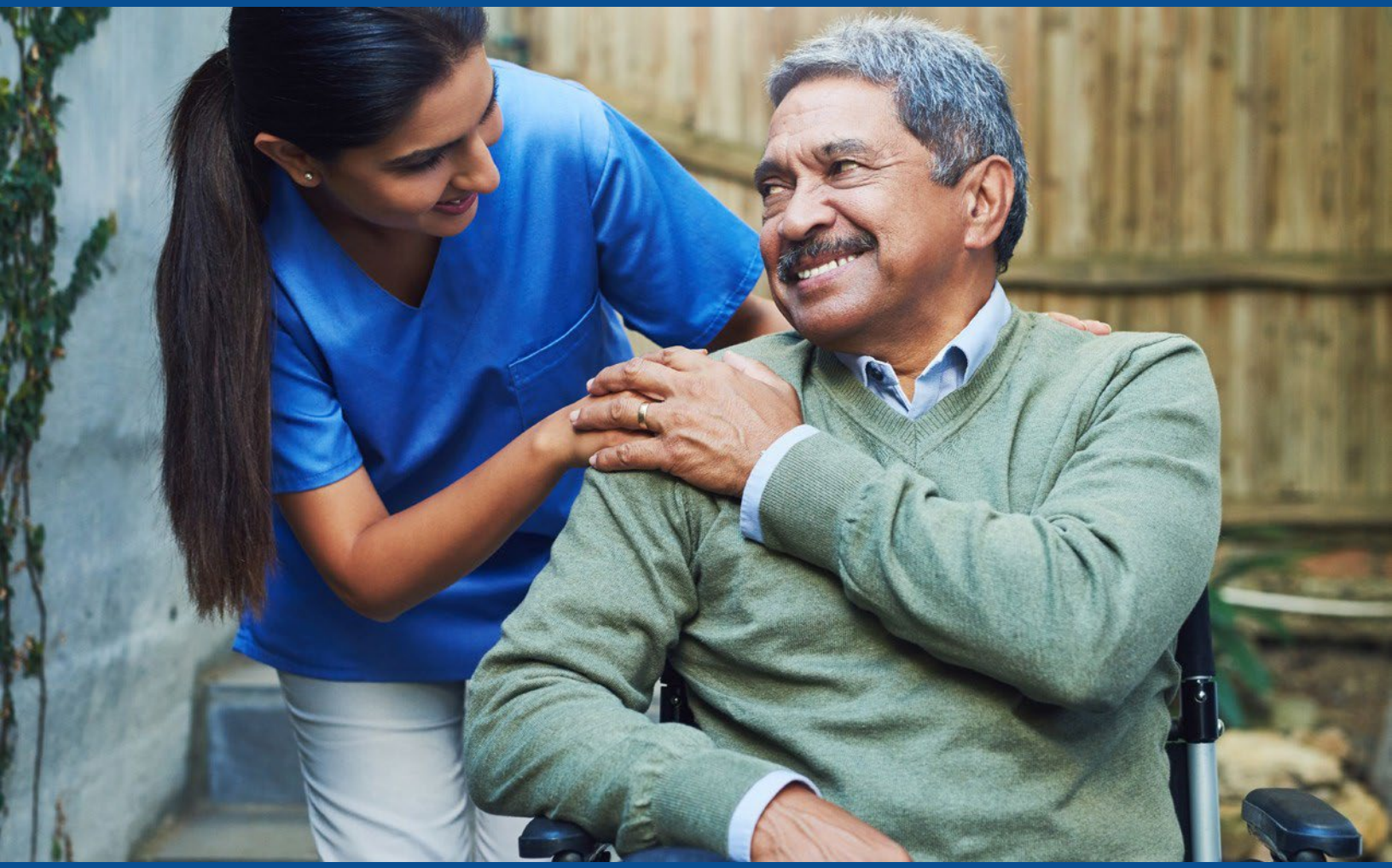
Glossary of Acronyms

AAA	Area Agency on Aging
ACSC	Ambulatory care sensitive condition
ADL	Activities of daily living
ADT	Admission, discharge, and transfer
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CCDA	Consolidated Clinical Document Architecture, a standard for clinical documents that are exchanged electronically
CMS	Centers for Medicare & Medicaid Services
CMT	Contract Management Team
CTM	Complaint Tracking Module
DinD	Difference-in-differences
D-SNP	Dual Eligible Special Needs Plan
ED	Emergency department
EQRO	External Quality Review Organization
FAI	Financial Alignment Initiative
FFS	Fee-for-service
HCBS	Home and community-based services
HCC	Hierarchical Condition Category
HEDIS	Healthcare Effectiveness Data and Information Set
HRA	Health risk assessment
HSAG	Health Services Advisory Group, Michigan's External Quality Review Organization
HSW	Habilitation Supports Waiver
ICO	Integrated Care Organization, Michigan's term for Medicare-Medicaid Plans

ICT	Interdisciplinary Care Team
IICSP	Individual integrated care and supports plan
I/DD	Intellectual and Developmental Disabilities
IRE	Medicare Independent Review Entity
ITT	Intent-to-treat
LTC	Long-term care
LTSS	Long-term services and supports
MA	Medicare Advantage
MARx	Medicare Advantage and Part D Inquiry System
MCO	Managed care organization
MDHHS	Michigan Department of Health and Human Services
MDS	Minimum Data Set
MFFS	Managed fee-for-service
MHLO	MI Health Link Ombudsman, the demonstration ombudsman program
MiHIN	Michigan Health Information Network Shared Services, which connects health information exchanges serving the state
MLR	Medical loss ratio
MMCO	Medicare-Medicaid Coordination Office
MMP	Medicare-Medicaid Plan
MOU	Memorandum of Understanding
NF	Nursing facility
PACE	Program of All-Inclusive Care for the Elderly
PHE	Public health emergency
PIHP	Prepaid Inpatient Health Plan
QIP	Quality improvement project
SDRS	State Data Reporting System

SHIP	State health insurance program
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.

Michigan and CMS launched the MI Health Link demonstration in March 2015 to integrate care for Medicare-Medicaid beneficiaries in four regions. Seven competitively-selected health plans signed contracts to operate Integrated Care Organizations (ICOs), the Michigan term for Medicare-Medicaid Plans.[1] The ICOs receive capitated payments from CMS and the State to finance all Medicare and most Medicaid services. In addition, ICOs provide care coordination, supplemental benefits required under the demonstration, and flexible benefits that vary from plan to plan. Medicaid behavioral health benefits are carved out of the demonstration, and are delivered through the existing system of Prepaid Inpatient Health Plans (PIHPs).

Most full-benefit Medicare-Medicaid beneficiaries, age 21 years or older, who reside in a demonstration region, are eligible to enroll in the demonstration. Two regions in Southeast Michigan—Wayne County (Detroit) and Macomb County—are both served by the same five ICOs. Two ICOs operate in the Southwest Michigan region, a predominately rural region composed of eight counties. One ICO operates in the Upper Peninsula, a sparsely populated 15-county rural region.

[1] Eight health plans were originally selected to operate ICOs, but one plan withdrew prior to demonstration launch.

CMS contracted with RTI International to monitor demonstration implementation and to evaluate its impact on beneficiary experience, quality, utilization, and cost. The evaluation includes individual State-specific reports like this one. This Second Evaluation Report for the Michigan demonstration describes the implementation of the MI Health Link demonstration and analysis of the demonstration's impacts. The report includes findings from qualitative data for 2018–2020 with key updates from early 2021, and quantitative results for the first 3 demonstration years, from March 2015 through December 2018.

Highlights

Despite a series of challenges in 2018 and the first half of 2019, the State and ICOs sought a multi-year extension beyond 2020. These challenges included a surge in enrollment discrepancies, suspension of passive enrollment, and a period of financial uncertainty for the ICOs. During much of 2020, attention focused on responding to the COVID-19 public health emergency (PHE). Despite the challenges, total enrollment reached 40,000, HCBS utilization increased, and enrollees' satisfaction with their ICOs continued to increase from year to year.

The State and CMS executed a 1-year extension during 2020 to allow more time to develop a proposal for a multi-year extension.

Changes in Demonstration Design	During 2019 and 2020, a wide range of proposed changes in the three-way contract were considered, including changes in care coordination, financing, and enrollment. Dialogue between the State, CMS, and stakeholders continued into 2021.
Integration of Medicare and Medicaid	Michigan's behavioral health carve-out continued to pose challenges for the ICOs and PIHPs—especially in Southeast Michigan, where each PIHP works with five different ICOs, each with its own policies and procedures. Nevertheless, PIHPs said that the demonstration has improved coordination of Medicare and Medicaid services.
	The State encourages collaboration between the ICOs and PIHPs by including the PIHPs in monthly operations meetings, as well as quality improvement activities.
Eligibility and Enrollment	The State experienced significant enrollment challenges during 2018, as system changes caused enrollment discrepancies, leading to a 12-month suspension of passive enrollment. Total enrollment declined while passive enrollment was suspended, then rebounded in 2019 and 2020.

Eligibility and Enrollment (continued)	State officials decided in early 2021 to retain deemed enrollment, after considering a change to rapid re-enrollment.[2] Some ICOs favored rapid re-enrollment due to the low retention rate and the cost of providing services to deemed enrollees they were not able to retain. However, advocates and a majority of ICOs favored retaining deeming.
	D-SNPs emerged during this reporting period as a challenge for ICO enrollment in Southeast and Southwest Michigan.
Care Coordination	Stakeholder feedback on the effectiveness of care coordination was mixed. ICOs made improvements that increased enrollee access to waiver services and behavioral health services. However, advocates expressed concern about the adequacy of care coordination for nursing facility residents, particularly during the PHE.
	Reaching new enrollees remained a challenge despite ICO efforts. In 2020, ICOs were unable to reach over 30 percent of new enrollees.
	Some ICOs continued to experience staffing challenges, leading to high caseloads and affecting their ability to conduct face-to-face visits in 2018 and 2019, even before the PHE. Stakeholders reported that high turnover rates also made it difficult to contact care coordinators on beneficiaries' behalf.
Stakeholder Engagement	Michigan continued to conduct robust stakeholder engagement, although it scaled back some activities when Federal implementation funding ended in August 2018.

[2] Deemed enrollment allows enrollees who lose Medicaid eligibility to remain enrolled in their ICOs and receive both Medicare and Medicaid services for up to 3 months, allowing time to re-establish Medicaid eligibility. Under rapid re-enrollment, enrollees who lose Medicaid eligibility would be disenrolled from their ICOs, but would have been re-enrolled in their original ICO if Medicaid eligibility was regained within 2 months.

Stakeholder Engagement (continued)	In 2020, the State focused on obtaining stakeholder input on its demonstration extension proposals through a series of virtual meetings with stakeholder groups and enrollee surveys.
Financing and Payment	Delays in finalizing Medicaid rates and enrollment reconciliation by the State continued to cause financial uncertainty for the ICOs. Although the State and ICO payment reconciliation process improved from 2018 to 2020, repayment and recoupment still posed a financial challenge for ICOs.
	The State temporarily increased Medicaid capitation rates to the ICOs by 3.9 percent in 2020 to account for an increase in payments to direct care workers and the risks associated with COVID-19.
	Overall, the cost experience for ICOs from 2018 to 2020 was mixed. However, a consistent message from ICOs was the importance of setting the Medicaid capitated rate on the historical experience of ICO enrollees, rather than on the experience of dual eligible beneficiaries in Medicaid fee-for-service.
Quality of Care	The State was active in quality management throughout 2018–2020, convening the ICOs and PIHPs to discuss quality topics. The External Quality Review Organization completed the first compliance review of the ICOs, and a vendor completed waiver audits for home and community-based services (HCBS) for several years.
	Michigan continued to conduct Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys of the ICO enrollees, and began transitioning from use of the CAHPS Adult Medicaid Health Plan survey to the HCBS CAHPS survey. In 2020, both surveys were conducted for the State, while CAHPS reporting to CMS was suspended.
Beneficiary Experience	During 2018–2020, MI Health Link enrollees reported high satisfaction with the demonstration.

Beneficiary Experience (continued)	Based on State-reported quality and performance data, the MI Health Link demonstration appears to have improved access to HCBS and behavioral health services.
Demonstration Impact on Service Utilization and Quality of Care	As shown in ***Table ES-1,*** over the course of the first 3 demonstration years, the number of monthly physician evaluation and monitoring visits increased among all demonstration eligible beneficiaries, relative to the comparison group. However, the probability of having any long-stay nursing facility (NF) use also increased relative to the comparison group. There was no demonstration impact on inpatient admissions, emergency department (ED) visits, skilled nursing facility (SNF) admissions, preventable ED visits, ambulatory care sensitive condition (ACSC) admissions (overall or chronic), 30-day all-cause readmissions, or 30-day follow-up after mental health discharge.
	The demonstration impacted the population that receives long-term services and supports (LTSS) differently than the non-LTSS population (***Table ES-1***). The demonstration effect for those with LTSS use was a decrease in the probability of inpatient admissions, the probability of ED visits, and the number of physician visits, relative to the demonstration effect for the non-LTSS population. The demonstration was also associated with a decrease in the monthly number of preventable ED visits, and the probability of ACSC admissions (overall and chronic), relative to the demonstration effect for non-LTSS users.
	Table ES-1 shows the demonstration also impacted beneficiaries with serious and persistent mental illness (SPMI) differently than those without SPMI. The only demonstration effect for those with an SPMI was a decreased probability of inpatient admissions, relative to the demonstration effect for those without SPMI.

Demonstration Impact on Cost Savings	As summarized in ***Table ES-2***, relative to the comparison group, the demonstration was associated with increases in Medicare expenditures for all demonstration years and cumulatively throughout the demonstration period.[3]
	The Medicare savings calculations are based on Medicare Parts A and B spending either through fee-for-service or Medicare Advantage/ICO capitated rates. These estimates do not include Medicare Part D expenditures, nor do they consider the actual payments for services paid by the ICO plans.

Table ES-1 summarizes the cumulative impact estimates for the Michigan demonstration during demonstration years 1–3 (demonstration start through 2018), 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.

[3] The demonstration year 1 effect estimate differs from the results shown in the First Evaluation Report. This difference is due to changes in our methodology. See ***Appendix F*** for more details.

Table ES-1
Summary of Michigan cumulative demonstration impact estimates for demonstration period, March 1, 2015–December 31, 2018

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

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

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

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

Table ES-2 summarizes the demonstration effects on total Medicare Parts A and B expenditures for all eligible beneficiaries, including both the cumulative effect over the 3-year demonstration period and the annual effect for each demonstration year.

Table ES-2
Summary of Michigan demonstration effects on total Medicare expenditures among all eligible beneficiaries, March 1, 2015–December 31, 2018

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

NOTES: Statistical significance is defined at the α = 0.05 level. For numeric estimates of the demonstration's effect on total Medicare expenditures, see ***Figure 17*** in ***Section 6***. Red color-coded shading indicates where the direction of the DinD estimate was unfavorable. To ensure accessibility for text readers and individuals with sight disabilities, cells shaded red receive a superscript "R." In the column for "Demonstration effect," an *Increase* or *Decrease* refers to the *relative* change in an outcome for the demonstration group compared to the comparison group, based on the DinD regression estimate of the demonstration effect during the specified measurement period.
SOURCE: RTI analysis of Medicare claims (program: mi_dy3_cs1481_GLM.log).

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.

The Michigan MI Health Link demonstration began on March 1, 2015. Eligible beneficiaries enroll in a capitated Medicare-Medicaid Plan which covers all Medicare and Medicaid services, required supplemental services and care coordination, and flexible benefits, which vary from plan to plan.

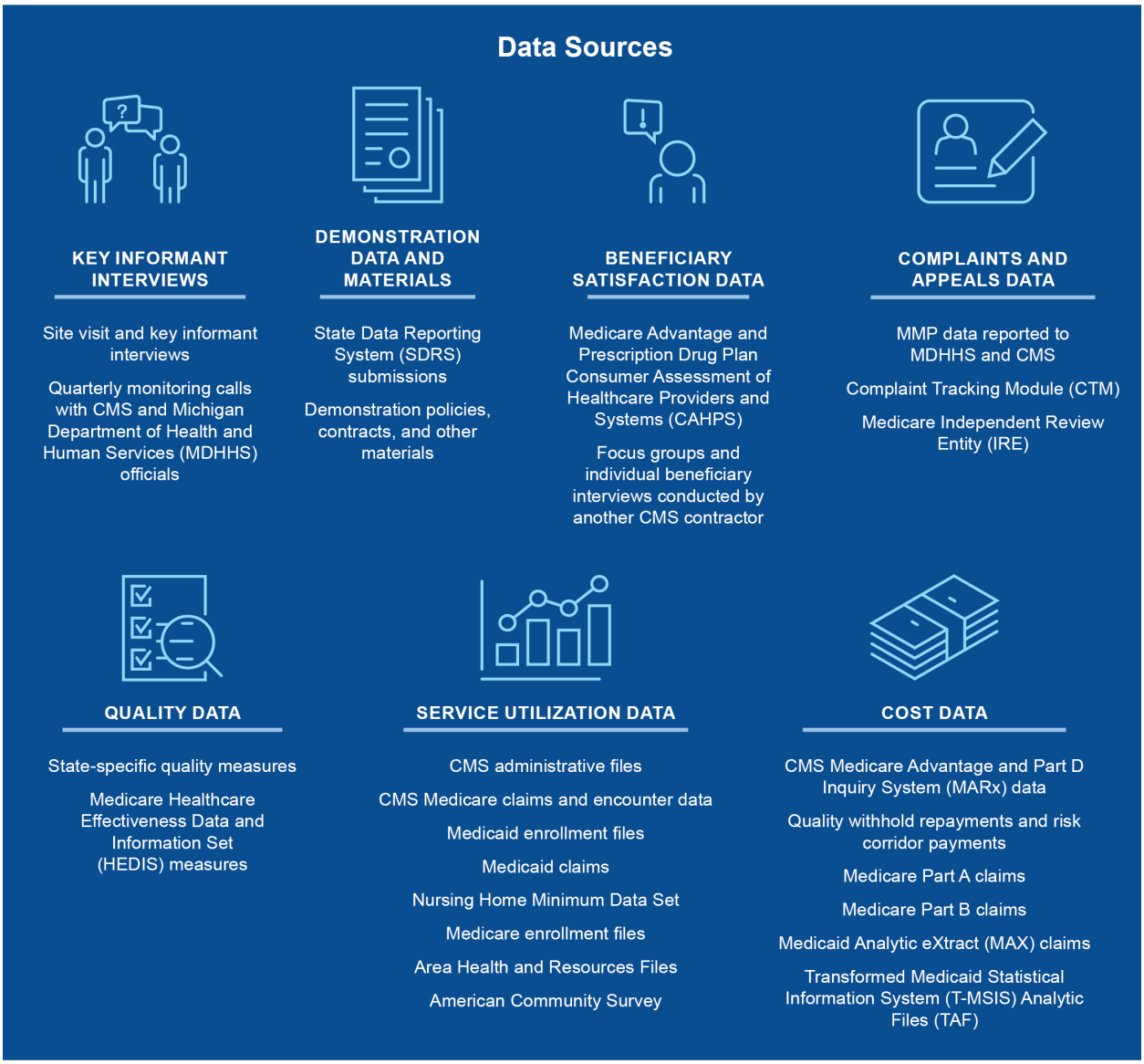
The First Evaluation Report includes extensive background information about the demonstration.

1.2 Purpose of this Report

CMS contracted with RTI International to monitor the implementation of the demonstrations under the Financial Alignment Initiative and to evaluate their impact on beneficiary experience, quality, utilization, and cost. In this report we include qualitative evaluation information for calendar years 2018, 2019, and 2020—the third, fourth, and fifth demonstration years, respectively—with relevant updates from early 2021. We refer to this timespan as "the reporting period" in the qualitative narrative. We provide updates to previous evaluation reports in key areas, including enrollment, care coordination, beneficiary experience, and stakeholder engagement activities, and discuss the challenges, successes, and emerging issues identified during the reporting period. We present quantitative analysis results on service utilization, quality of care, and costs for the demonstration period spanning March 1, 2015 through December 31, 2018. The difference in timeframes between qualitative and quantitative analyses is due to the longer lag of secondary data used in quantitative analysis.

1.3 Data Sources

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



SECTION 2

Demonstration Design and State Context

2.1 Changes in Demonstration Design

The three-way contract between CMS, the State, and the seven Integrated Care Organizations (ICOs) has been amended several times to make changes in care coordination, financing, quality measures, and other operational aspects of the demonstration. The contract was amended in 2016 to extend the demonstration through December 31, 2020, and to strengthen care coordination requirements. In 2018 the contract was amended again; changes included an adjustment in the aggregate savings rate (see ***Section 3.5, Financing and Payment)***, and changes in the timeframe for initial assessments and licensure requirements for care coordinators (see ***Section 3.3, Care Coordination)***.

During 2019, the State began discussing an extension of the demonstration with CMS, the ICOs, and stakeholders; those discussions were delayed by the onset of the COVID-19 public health emergency (PHE) in early 2020. To allow more time for stakeholder engagement and finalizing changes, the State and CMS agreed to a 1-year extension through December 31, 2021, amending the contract by addendum. Changes in this addendum included an increase in the quality withhold, changes to some quality withhold measures, and an increase in the target medical loss ratio (three-way contract addendum, 2020). During the second half of 2020, the State resumed dialogue with stakeholders about a multi-year extension, as discussed in ***Section 3.4, Stakeholder Engagement***. According to State officials, discussion topics included care coordination, quality, and financing; the State officials said they expected to finalize their proposals, gain CMS approval, and execute the amended contract in 2021. We will discuss changes included in the anticipated 2021 contract amendment in the next evaluation report.

2.2 Overview of State Context

2.2.1 Medicaid Managed Care

Michigan has a long history of using managed care to deliver Medicaid services. It has used managed care organizations (MCOs) to deliver a comprehensive range of services, and specialty plans to deliver behavioral health services and HCBS waiver services. Michigan first made enrollment into comprehensive managed care organizations (MCOs) mandatory for many Medicaid beneficiaries in 1997. In November 2011, Michigan began allowing Medicare-Medicaid beneficiaries to voluntarily enroll in Medicaid MCOs for some of their Medicaid benefits.[4] Although most of the plans selected for the demonstration had previously operated Michigan Medicaid MCOs and/or Dual Eligible Special Needs Plans (D-SNPs) in Michigan, they lacked experience with LTSS and Medicaid behavioral health services for beneficiaries with complex needs because those services are carved out of the Medicaid MCO capitation payment.

Michigan uses prepaid inpatient health plans (PIHPs) to deliver Medicaid behavioral health and substance use services to Medicaid beneficiaries beyond the first 20 outpatient visits per year. The PIHPs serve all areas of the State and provide services for mental illness and

[4] When the demonstration began, beneficiaries in the demonstration regions were passively enrolled in MMPs and were no longer able to enroll or re-enroll in Medicaid MCOs. Enrollment in Medicaid MCOs is still an option for Medicare-Medicaid beneficiaries outside the demonstration regions, and over 45,000 were enrolled in December 2020 (Health Management Associates, December 2020).

substance use disorders, and also waiver services for individuals with intellectual and developmental disabilities (I/DD). There is one PIHP per geographic area, and they are all public entities based in the State's community behavioral health system. All Medicaid beneficiaries (including Medicare-Medicaid enrollees) living in a PIHP's geographic service area are considered to be enrolled in the PIHP, and the PIHP receives a capitation payment for each of these enrollees. Michigan retained the behavioral health carve-out for the demonstration; PIHPs manage the behavioral health needs of MI Health Link enrollees. The ICOs manage enrollees' physical health needs, coordinate their care, and directly contract with PIHPs to deliver the Medicare behavioral health benefit.

Outside the demonstration, nursing facility services and State Plan personal care are carved out of managed care and covered under Medicaid fee-for-service (FFS). The large personal care program, which includes State-funded services as well as Medicaid services, is administered by the Michigan Department of Health and Human Services (MDHHS) county offices. Home and community-based service (HCBS) waiver services are delivered through the PIHPs and prepaid ambulatory health plans (PAHPs).[5] The I/DD waiver is administered by the PIHPs, whereas the MI Choice waiver for older adults and individuals with disabilities is administered by waiver agencies (or waiver agents), primarily area agencies on aging (AAAs), which evolved into PAHPs in recent years. Under MI Health Link, most long-term services and supports (LTSS) are carved into the ICO capitation, including nursing facility services, personal care, and HCBS waiver services for older adults and individuals with physical disabilities. As mentioned above, the PIHPs continue to manage the I/DD waiver.

2.2.2 State Budget

During 2020, Michigan made some budget cuts in anticipation of a State budget shortfall during the pandemic. The Governor ordered temporary furloughs for about two-thirds of State employees, including employees working on MI Health Link. Affected employees were furloughed 1 day a week between mid-May and late July (Eggert, Detroit Free Press, 2020). State officials said the demonstration was also affected by a hiring freeze and limits on discretionary spending, which were implemented in March 2020.

2.2.3 Federal Funding

Michigan was one of 15 states that successfully competed to receive a $1 million design award in 2011 to support the development of its original demonstration proposal. Michigan also received 2 years of implementation funding from CMS totaling $12.2 million, as discussed in the First Evaluation Report. Additionally, since the start of the demonstration, the State has received approximately $2.9 million of Federal funding from CMS, in collaboration with the Federal Administration for Community Living, for the demonstration ombudsman and one-on-one beneficiary counseling about insurance options. The most recent award of $643,045 per year was shared between those two programs and covers August 2020 through April 2024.

[5] The two types of specialty plans, the PIHPs and PAHPs, are managed care plans that receive capitated payments from the State to deliver a limited range of Medicaid services, as discussed above, rather than the comprehensive range of benefits delivered by the MCOs and ICOs.

SECTION 3

Update on Demonstration Implementation

In this section, we provide updates on important aspects of the demonstration that have occurred since the First 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

Michigan's behavioral health carve-out continued to pose challenges for the ICOs and PIHPs, especially in Southeast Michigan, where each PIHP works with five different ICOs, each with its own policies and processes. Nevertheless, PIHPs said the demonstration has improved coordination of Medicare and Medicaid services.

The State encourages collaboration between the ICOs and PIHPs by including the PIHPs in monthly operations meetings, as well as quality improvement activities.

During the first 3 years of the demonstration, Michigan, CMS, and the ICOs integrated Medicare and Medicaid services to provide a unified set of benefits and care coordination for enrollees, including carving LTSS into comprehensive managed care. The demonstration maintains the behavioral health carve-out, but improved coordination by integrating financing of behavioral health services through the PIHPs; the PIHPs receive a capitation payment from the State for Medicaid behavioral health services, and a sub-capitation payment from the ICOs for Medicare behavioral health services. The ICOs provide care coordination and collaborate with the PIHPs to coordinate physical and behavioral health services. In this section we will provide updates on these and other areas of integration.

3.1.1 Joint Management of the Demonstration

During the reporting period (2018–2020), CMS and the State continued to collaborate through the Contract Management Team (CMT), which held weekly team meetings, and monthly meetings with each ICO. CMS and the State also met every other week to discuss enrollment. The PHE dominated CMT meetings with ICOs during the spring of 2020 and was a major topic throughout the year. As the year progressed, special topics returned to the agenda, including flu shots, waiver services, racial and cultural competence, and social determinants of health. Each month's agenda also included quality reporting and the status of ICOs' performance improvement plans.

ICOs provided mixed feedback about their communications with the CMT. They said the State and CMS generally did a good job of informing and listening to the plans, and although the State and CMS were responsive to ICO concerns at times, responses and decisions were not always timely.

Several ICOs noted that the administrative burden of the demonstration, including reporting requirements related to State and Federal oversight, was a challenge. One plan said in 2020 that there was a lot of duplication and overlap in reporting requirements, with measures that are similar but have different timeframes and specifications.

At the State level, the Integrated Care Division (ICD) within MDHHS manages MI Health Link. The ICD is responsible for a wide range of MI Health Link functions, including administering the MI Health Link HCBS waiver, reviewing level of care determinations for the waiver, quality management, contract management, and enrollment.

State officials were able to expand ICD staffing in several key areas between 2018 and 2020, which enabled them to process HCBS waiver applications in a timely manner (see ***Section 3.3, Care Coordination***), and expand quality management (see ***Section 3.6, Quality of Care***).

In 2020, a stakeholder noted that the level of staffing, staff retention, and the quality of staff working on MI Health Link had been strengths for Michigan throughout the demonstration. State officials said that the PHE had posed a challenge due to remote work, short work weeks for several months, and a hiring freeze, but that staff had risen to the occasion and kept MI Health Link operating smoothly.

In addition to CMT meetings with the plans, the State convenes all of the ICOs and PIHPs for 3-hour Operations Meetings each month. These meetings include updates and discussion on topics such as quality, enrollment, data, and waiver policy. Plans are typically represented by mid-level managers and directors, though sometimes CEOs participate, according to State officials. The State also convenes the ICOs and PIHPs for meetings of the Quality Sub-Workgroup (see ***Section 3.6 Quality of Care***).

3.1.2 Integrated Delivery System

Integrated Care Organizations

Since the beginning of the demonstration there have been seven ICOs, as shown in ***Table 1***. During this report period, two of the plans were acquired by large corporations. Aetna was acquired by CVS in 2018. Meridian was acquired by WellCare in 2018, and WellCare was acquired by Centene in 2019. Centene also owns Michigan Complete Health. The two ICOs owned by Centene operate in different regions, and continued to operate separately in 2020 and early 2021. Centene is consolidating the two contracts effective January 1, 2022. In addition, in 2019, another ICO, HAP Midwest, rebranded its ICO and Medicaid products as HAP Empowered.

Four of the ICO sponsors operate D-SNPs in Michigan, as well as ICOs, including one D-SNP which launched for 2021. D-SNP and ICO service areas overlap, and in three demonstration regions some beneficiaries can enroll in either an ICO or a D-SNP operated by the same company (ICRC, 2020).[6] Michigan does not contract with D-SNPs to deliver any Medicaid services.

[6] Though D-SNPs emerged during this reporting period, the eligibility rules of the MI Health Link demonstration enable beneficiaries to be passively enrolled into the demonstration from D-SNPs and other types of Medicare Advantage plans.

Table 1
Managed care entities in the Michigan demonstration, by region

Region	ICOs	PIHPs
Upper Peninsula (Region 1)	Upper Peninsula Health Plan	NorthCare Network
Southwest Michigan (Region 4)	Aetna Better Health MeridianComplete	Southwest Michigan Behavioral Health
Wayne County (Region 7)	Aetna Better Health AmeriHealth Caritas HAP Empowered Michigan Complete Health Molina Healthcare	Detroit-Wayne Integrated Health Network
Macomb County (Region 9)	Aetna Better Health AmeriHealth Caritas HAP Empowered Michigan Complete Health Molina Healthcare	Macomb County Community Mental Health Services

Behavioral Health Integration

Under MI Health Link, the carve-out of Medicaid behavioral health services was maintained. As shown in ***Table 1***, there is one PIHP per region. Each PIHP receives capitated payments from the State for Medicaid behavioral health, including I/DD waiver services, and sub-capitation payments from the ICOs for Medicare behavioral health services. Although the PIHPs are not parties to the three-way contract and do not participate in CMT calls, they are active participants in the State's Operations meetings and the Quality Sub-Workgroup alongside the ICOs.

Coordination between the ICOs and the PIHPs has been an ongoing challenge, particularly in Southeast Michigan (Wayne and Macomb Counties), which are served by five different ICOs. In 2019 and 2020, the PIHPs in those counties continued to report that working with five ICOs required extra work because each plan has their own policies and processes. For example, the PIHPs said that while the ICOs were auditing the same functions, each plan asked for slightly different information, or information in a different format. Medicare payments remained a challenge, because the PIHPs have to reconcile payments with five different plans (see ***Section 3.5, Financing and Payment***). Other ongoing challenges included health information exchange (see ***Section 3.3, Care Coordination***), and quality reporting (see ***Section 3.6, Quality of Care***).

Despite these challenges, there is a higher degree of integration under MI Health Link than outside the demonstration, according to PIHPs. During early site visits, PIHPs described the lack of coordination between Medicare behavioral health providers and the Medicaid behavioral health system prior to the demonstration. In 2020, a PIHP said that "there is no structure for care integration" between the D-SNPs and PIHPs, in contrast to MI Health Link, which requires the ICOs and PIHPs to use the State's MiHIN health information exchange to facilitate sharing referrals and assessments between the entities.

LTSS Integration

LTSS services are carved out of Michigan Medicaid managed care, but carved into MI Health Link. During 2015–2017, the State and ICOs experienced several challenges with LTSS administration.

The State developed a 1915(b)/(c) waiver specifically for the demonstration, and created a unit within the MDHHS Integrated Care Division (ICD) to administer this MI Health Link HCBS waiver, including conducting nursing facility (NF) level of care determinations and reviewing waiver application packets. During early 2018, a large backlog of applications developed but was eliminated by the end of 2018, as discussed in the First Evaluation Report. During 2018, the State began conducting audits of each plan's administration of waiver services, see ***Section 3.6, Quality of Care***.

Advocates continued in 2019 and 2020 to express concern that some Medicare-only beneficiaries were unable to access the MI Health Link waiver, even if they met the special income limit and need waiver services, because they could not obtain a level of care determination.[7] This was particularly frustrating because the MI Health Link waiver had more than 2,000 unused waiver slots throughout this reporting period, whereas the MI Choice waiver outside the demonstration often had a waiting list in some regions. The State and CMS reported on several occasions that they had discussed options to address this operational challenge, but as of the end of 2020, they had not identified a feasible solution.

During the early years of the demonstration, ICOs addressed challenges with transitioning State Plan personal care to managed care, increasing oversight, and improving administration. During the 2018–2020 timeframe, personal care seemed to operate smoothly under the demonstration, according to ICOs and advocates, except for when ICOs did not consistently send denial notices when they reduced enrollees' personal care services.

Health Care Provider Arrangements and Services

During the reporting period, ICOs did not report any significant challenges with their health care provider networks. One ICO operating in Southeast Michigan said in 2020 that there was a lingering misperception among some medical providers that billing is more complex for MI Health Link. A PIHP in the same area said that small health care providers were less likely than larger provider organizations to contract with ICOs.

Downstream Entities

The ICOs each rely on several downstream entities for some aspects of service delivery. ICOs use vendors' dental networks, and contract with transportation brokers, AAAs, and the

[7] The MI Health Link waiver criteria allow individuals with incomes exceeding the normal Medicaid limits to qualify under the special income level (up to 300 percent of the SSI benefit), provided they also meet the institutional level of care and other criteria. However, the State relies on the ICOs to conduct level of care determinations, and the ICOs cannot conduct them on individuals who are not enrolled in MI Health Link; thus, beneficiaries must already have both Medicare and Medicaid and be enrolled in an ICO to obtain a level of care determination and qualify for the MI Health Link waiver. Prior to the demonstration launch, the State solicited bids for a single, conflict-free entity to conduct level of care determinations for MI Health Link, but no bids meeting the selection criteria were received (see the First Evaluation Report).

PIHPs. State officials said in 2020 that the External Quality Review Organization (EQRO) compliance review in 2019 had identified ICO oversight of these downstream entities as an opportunity for improvement (see ***Section 3.6, Quality of Care***).

In 2019 one ICO said it had worked to improve the quality and reliability of transportation services provided through a vendor. When the plan solicited bids from other companies in 2018, it was able to negotiate a new agreement with its existing vendor that included penalties if the vendor failed to meet certain standards, or if grievances related to transportation increased. Earlier in the demonstration, other ICOs had reported similar efforts to improve transportation quality.

HCBS Provider Arrangements

Most ICOs contracted with the local AAAs to arrange HCBS waiver services and State Plan personal care, collect claims from the providers, and transmit payments from the ICO to the providers. ICOs said in 2018 and 2019 that the AAAs in several regions were slow in starting services. During the reporting period, some ICOs made changes in their HCBS arrangements. One ICO transitioned to contracting directly with HCBS providers. Another plan added a personal care provider agency to its network because the AAA had staffing challenges. A third ICO said it hoped to supplement the AAA network by contracting directly with some HCBS providers.

One AAA said in 2020 that it had experienced various challenges arranging HCBS for the ICOs, although the challenges had reduced over time. The AAA said it was sometimes difficult to arrange services due to LTSS workforce shortages, a nationwide challenge. Service delays sometimes occurred because ICOs did not send authorizations on time. Small HCBS providers, such as Adult Family Care homes, experienced challenges enrolling as ICO providers, submitting claims, and waiting for payments from the ICOs, although the timeliness of payments improved over time. ICOs sometimes rejected claims for services they had previously authorized, according to the AAA.

Alternative Payment Methods

Each year of the reporting period, ICOs reported that they were working to increase use of alternative payment methods (APMs). Plans said most providers begin with a pay-for-reporting or pay-for-performance arrangement, and some later transition to risk arrangements, usually upside risk only, although it has been difficult to move providers along the APM continuum. To address the challenge of small numbers of ICO members in providers' panels, some health plans aggregate results for all of their members who are served by a provider organization, across various lines of business, in measuring results. One ICO whose parent organization did not operate a range of products in Michigan reported that it had not been able to implement any APMs.

ICOs reported using quality withholds in their Medicare behavioral health sub-contracts with the PIHPs to incentivize performance on behavioral health measures, and some PIHPs said they use pay-for-performance incentives in their contracts with some behavioral health providers.

3.2 Eligibility and Enrollment

Michigan experienced significant demonstration enrollment challenges during 2018, which were largely resolved by mid-2019.

Support among ICOs for deemed enrollment has declined since it was implemented in 2016.

D-SNPs are an emerging challenge to ICO enrollment in Southeast and Southwest Michigan.

In this section we provide updates on eligibility and enrollment processes, including integration of eligibility systems, enrollment methods, and outreach. We also discuss significant events affecting enrollment patterns during the timeframe covered by this report, including challenges with systems, suspension of passive enrollment, and the growth of D-SNP enrollment.

As described in detail in the First Evaluation Report, during the first 2 years of the demonstration (2015 and 2016), Michigan experienced challenges with enrollment, including beneficiaries opting out and disenrolling, enrollment data discrepancies, and a 7-month period when passive enrollment was paused as the State worked to operationalize monthly passive enrollment. By the end of 2017, enrollment had increased to more than 38,000, a 35 percent enrollment rate. Most discrepancies were being promptly resolved, and the State and ICOs had implemented a system of deemed enrollment to improve enrollee retention.

3.2.1 Passive Enrollment

Passive enrollment was suspended for 12 months from June 2018 through May 2019, due to systems challenges that resulted in a large increase in discrepancies, as described below. While passive enrollment was suspended, total enrollment in MI Health Link declined by more than 5,400 enrollees.[8] One ICO said in 2018 that the enrollment decline created staffing challenges, as the plan was unsure whether to retain or lay off care coordinators. Another ICO said in 2019 that the decline in enrollment raised questions internally about whether its MI Health Link product was viable.

When passive enrollment resumed for enrollments effective June 2019, the State had to temporarily return to its original assignment algorithm while it revised the performance-based passive enrollment algorithm, described in the First Evaluation Report.[9] Some of the

[8] State-reported data through RTI's State Data Reporting System in 2018 and 2019.

[9] The original algorithm assigned beneficiaries to ICOs based on previous managed care enrollment, if applicable; otherwise, they were randomly assigned. The performance-based algorithms were intended to reward ICOs that achieved better performance on certain measures, by assigning them larger shares of new enrollees. Several of the measures reflect ICOs' capacity to serve new enrollees, such as members with assessments completed within 60 days of enrollment, and members with care plans completed within 90 days. The State also sought to use performance data from recent quarters, which would best reflect the ICOs' capacity to serve new enrollees.

performance measures originally used for the performance-based assignment algorithm had been retired or changed by CMS from quarterly to annual. There were insufficient recent data available in 2019 on timely completion of health risk assessments (HRAs) and care plans because there had been few new enrollees during the preceding 12-month period. The revised algorithm, implemented in late 2019, uses nine measures (see ***Section 3.6, Quality of Care***).

3.2.2 Summary Data

After passive enrollment was suspended in April 2018, enrollment declined from 35.0 percent in December 2017, to 33.6 percent in December 2018 (see ***Table 2***).[10] Enrollment growth resumed in 2019 and continued in 2020. Michigan suspended Medicaid eligibility terminations during the PHE, while continuing to enroll new beneficiaries, which may account for the increase in eligible beneficiaries in 2020, as well as the increased number of MI Health Link enrollees.

Table 2
Demonstration enrollment at the end of each calendar year

Enrollment indicator	Number of beneficiaries			
	December 2017	December 2018	December 2019	December 2020
Eligibility Beneficiaries eligible to participate in the demonstration as of the end of the month	109,417	103,971	104,638	109,548
Enrollment Beneficiaries currently enrolled in the demonstration at the end of the month	38,259	34,887	37,968	40,164
Percentage enrolled Percentage of eligible beneficiaries enrolled in the demonstration at the end of the month	35.0%	33.6%	36.3%	36.7%

SOURCE: RTI International: State Data Reporting System (SDRS), quarterly reports for the quarters ending February 28, 2018, February 28, 2019, February 29, 2020, and February 28, 2021.

3.2.3 Enrollment Challenges

Enrollment System Challenges

During 2018, several system changes affected MI Health Link enrollment. The biggest change was an upgrade in the State's Community Health Automated Medicaid Processing

[10] Enrollment and eligibility data reported in the State Data Reporting System (SDRS) may not match the finder file data used for quantitative analyses, because of the timing for completion and submitting the finder file versus the SDRS. The definition of eligibility used here, and in ***Section 6, Demonstration Impact on Cost Savings***, includes FFS and Medicare Advantage populations. By contrast, the definition of eligibility in ***Section 5, Demonstration Impact on Service Utilization and Quality of Care,*** includes only demonstration-eligible FFS beneficiaries.

System (CHAMPS) Medicaid Management System in January 2018, through a project called CHAMPS Modernizing Continuum of Care. Changes included replacing the level of care codes with Program Enrollment Type (PET) codes, which indicate beneficiaries' managed care enrollment and setting, such as community-well, HCBS waiver, private NF, county NF, or one of the settings where hospice services are provided. The upgrade allowed certain providers, such as nursing facilities, to enter PET codes, admissions, and discharges into CHAMPS, to ensure up-to-date information is available to identify enrollees with higher care needs and ensure accurate payments to providers and plans. During the same period, the State's enrollment broker, Maximus, also upgraded its system.

After the CHAMPS upgrade, ICOs and State officials observed a growing volume of enrollment discrepancies, including Medicare-Medicaid discrepancies, PET code discrepancies, and other problems. As a result of these issues, the State suspended passive enrollment into MI Health Link, effective for June 2018 enrollments. Over the following year, there were quarterly updates to the CHAMPS system to address various challenges, and the State's MI Health Link team worked with the ICOs to identify and resolve discrepancies. The State was able to resolve the CHAMPS issues and resume passive enrollment for enrollments effective in June 2019.

Michigan also launched a new "universal caseload" system for handling public assistance cases in some of its county offices during 2018. Under the universal caseload system, calls from a multi-county area are handled by a pool of caseworkers, rather than assigning each case to a specific worker. The new system began with a pilot in February 2018 and was expanded to 50 counties in fall 2018 (MDHHS, n.d.). All counties in the Upper Peninsula were included in the new system. Other MI Health Link regions were not affected.

Advocates and ICO officials said that rather than improving efficiency, the new system initially led to long wait times for callers, a large backlog of cases, and an increase in Medicaid eligibility terminations in the Upper Peninsula, resulting in increased disenrollments from MI Health Link. In 2019, a new governor took office, and the new MDHHS director made some changes to address problems with the universal caseload system (MDHHS, 2019). Some advocates continued to express concern about the universal caseload system during 2020.

Enrollee Addresses

Obtaining accurate addresses for enrollees has been an ongoing challenge for the ICOs, because Medicare and Medicaid enrollment files often contain out-of-date contact information (see ***Section 3.3, Care Coordination***). Even when the ICOs obtain current addresses, the Medicaid enrollment transaction files may overwrite those addresses in the ICOs' systems, unless the plans' systems have separate fields for alternate addresses. State officials said the only solution is for ICOs to ask enrollees to call their county MDHHS offices and update their addresses, which is challenging due to large staff caseloads, long call waiting times at the county offices, and enrollees' limited cell phone minutes.

Medicaid Eligibility Redeterminations and Deemed Enrollment

The State and ICOs implemented deemed enrollment in 2016 to increase retention of demonstration enrollees who temporarily lost Medicaid because their eligibility was not re-determined on time. Enrollees who lose Medicaid eligibility may remain enrolled in their ICOs

and receive both Medicare and Medicaid services for up to 3 months, allowing time to re-establish Medicaid eligibility.[11] Initially, the State and ICOs considered deeming a successful policy, despite the expense for ICOs, because it helped retain enrollees and stabilize enrollment levels. State officials and the ICOs said the plans worked with members to complete their redeterminations on time, to avoid the risk of deeming.

During the timeframe of this report, ICOs expressed mixed views on deeming. Two ICOs said in 2019 that deeming was positive and had helped them retain enrollees. One of those ICOs emphasized that they worked hard to limit the number of enrollees who needed to use deeming, due to the cost of services for members who were not retained. However, other ICOs said in 2019 and 2020 that deeming was costly, and that it had been difficult for enrollees to regain Medicaid eligibility during the deeming period.

Both ICOs interviewed in 2020 said they favored a change from deeming to rapid re-enrollment, which would allow beneficiaries who are disenrolled to return to their original ICO if they regain Medicaid eligibility within 2 months of disenrollment. State officials said in 2020 that they were considering a change to rapid re-enrollment under the contract extension. Ultimately, the State decided in 2021 to continue use of deemed enrollment and improve their deeming infrastructure, because they agreed with stakeholder feedback that deeming provides stronger beneficiary protection than rapid re-enrollment. CMS officials said deeming was favored by advocates and a majority of ICOs.

Other Enrollment Challenges

As the source of truth for demonstration enrollment, Michigan advises ICOs to consider beneficiaries eligible for the demonstration if they are enrolled in either Medicare or Medicaid. In the case of a discrepancy, ICOs are to provide services until the discrepancy is resolved.[12] During the 2018–2020 site visits, the ICOs cited the lack of a single source of truth as an ongoing challenge, primarily because it increased the number of discrepancies.

ICOs said in 2018 and 2019 that enrollment reconciliation by the State was changing the enrollment spans of some beneficiaries after several years of enrollment, due to old discrepancies. In some cases, ICOs had to repay capitation payments but were unable to recoup payments made to providers. One PIHP expressed frustration about "rolling truth," because they could verify a beneficiary's MI Health Link enrollment, but then it would disappear from the system due to retroactive changes in the span of coverage. As a result, the PIHP said some provider organizations were using screenshots to document what they saw in the system in case it was changed retroactively.

Marketing Campaign

In 2015, stakeholders expressed disappointment that the State had not conducted marketing to support the launch of MI Health Link, as discussed in the First Evaluation Report. During 2019, the marketing campaign was finally planned, and was implemented during the fall

[11] Under deeming, beneficiaries may receive only the Medicaid services that are carved into the demonstration. Medicaid behavioral health services delivered through a PIHP may be disrupted during the deeming period.
[12] ICOs compare the Medicaid enrollment file and the Medicare Transaction Reply Report (TRR), and work with the State to resolve any discrepancies they identify.

of 2019 and winter of 2020. The campaign included social media ads, billboards in some regions, and radio ads in other regions. A vendor distributed posters and brochures to the offices of providers used by many Medicare beneficiaries. Mailers were also sent to current enrollees during the fall 2020 Medicare open enrollment period, to inform them that no action was needed to remain enrolled in their current ICOs. Demonstration enrollment increased during 2020; the marketing campaign may have been a factor, along with the temporary suspension of Medicaid case closures during the PHE.

Competition from D-SNPs

Since 2016, Dual Eligible Special Needs Plans (D-SNPs) have experienced rapid growth across Michigan, including three of the four demonstration regions—Wayne County, Macomb County, and Southwest Michigan. In 2020, statewide D-SNP enrollment surpassed ICO enrollment, although ICOs still had higher enrollment in the demonstration regions. Four managed care companies operating ICOs have D-SNPs in the same regions (Integrated Care Resource Center, 2020). One company operating both ICO and D-SNP products noted that D-SNP financing is more advantageous for companies, and that integrated D-SNPs would be a good alternative to ICOs when the demonstration ends.

D-SNPs pose a challenge to demonstration enrollment because they face fewer marketing restrictions, according to one ICO, and because it is difficult for Medicare-Medicaid beneficiaries to differentiate between an ICO and a D-SNP, according to advocates. On the other hand, one ICO executive noted that after parent companies market their D-SNP products to beneficiaries, the State may passively enroll those beneficiaries into an ICO operated by the same company.

3.3 Care Coordination

The effectiveness of care coordination was mixed. ICOs made improvements that increased enrollee access to waiver services and behavioral health services. However, advocates expressed concern about the adequacy of care coordination for NF residents, particularly during the PHE.

Reaching new enrollees remained a challenge despite ICO efforts. In 2020, ICOs were unable to reach over 30 percent of new enrollees.

Some ICOs faced staffing challenges, including high caseloads, that affected their ability to do face-to-face visits in 2018 and 2019. Stakeholders reported that high turnover rates made it difficult to contact care coordinators on a beneficiary's behalf.

In this section we provide a summary of the MI Health Link care coordination model. The 2019 contract amendment to the three-way contract made several changes to the MI Health Link's care coordination approach. We highlight the impact of these changes as well as the status of and major accomplishments in key care coordination components and processes: outreach,

assessments and care plans, workforce, LTSS coordination, care transitions, and information exchange.

3.3.1 Outreach to New Enrollees

As part of the 2019 contract amendment, the requirement for attempts to contact enrollees was updated to align with an extended assessment completion period. The ICOs could no longer count attempts to contact enrollees that occur more than 20 days before their effective date of enrollment towards their five attempts to complete a Level I assessment (see further information on the Level I assessment later in this section). Plans continued to encounter challenges reaching new enrollees due to out-of-date contact information (see ***Section 3.2, Eligibility and Enrollment***). ICOs described several methods by which they attempted to obtain correct contact information for new enrollees, such as locating correct contact information in pharmacy claims data, or contacting members' primary care providers, specialty providers, or personal care providers.

Although the State expects ICOs to make five attempts to reach Level 1 enrollees, the State and CMS also track the percentage of enrollees ICOs are unable to reach following three attempts. The percentage of enrollees the ICOs were unable to reach following three attempts remained between 23 and 25 percent during 2018 and the first half of 2019, before rising to 30 percent and higher for the remainder of the reporting period, as shown in ***Table 3***.

Michigan ICOs requested and were granted a suspension of face-to-face requirements during the PHE. Later in 2020, the ICOs reported that the suspension of face-to-face interactions with many members during the PHE made reaching some enrollees more challenging. Although one plan noted that members were easier to reach by phone because they were not "out and about," some members were harder to reach because ICOs could not use methods such as dropping by enrollees' homes.

Table 3
Percentage of members that ICOs were unable to reach following three attempts, within 90 days of enrollment, 2015–2020

Quarter	Calendar year 2015	Calendar year 2016	Calendar year 2017	Calendar year 2018	Calendar year 2019	Calendar year 2020
Q1	N/A	16.5	21.4	24.8	24.8	31.2
Q2	6.0	15.4	23.8	23.2	22.4	33.4
Q3	27.5	25.3	22.0	24.7	30.1	34.6
Q4	19.2	23.4	23.0	22.0	37.0	35.7

ICO = Integrated Care Organization; MMP = Medicare-Medicaid Plan; N/A = not applicable; Q = quarter.
NOTE: Because the Michigan demonstration began in March 2015, data are not applicable for quarter 1 of 2015.
SOURCE: RTI analysis of MMP-reported data for Core Measure 2.1 as of May 2021. The technical specifications for this measure are in the Medicare-Medicaid Capitated Financial Alignment Model Core Reporting Requirements document.

3.3.2 Assessments and Care Plans

Prior to the 2019 contract amendment, ICOs were required to complete Level I assessments using a comprehensive health risk assessment tool within 45 days. If either the initial screen, which involves reviewing an enrollee's utilization history, or the Level I assessment indicates the need for a specialized assessment, the appropriate Level II assessment must be conducted in person within the next 15 days. Level II assessments focus on LTSS, behavioral health, substance use disorders, intellectual and developmental disabilities (I/DD), and complex medical needs.

The 2019 contract amendment extended assessment completion requirements for Level I assessments from 45 to 60 days and did not change the timeframe for Level II assessments. Even with the extension for Level I assessments, one plan noted in 2020 that it was still challenging to meet the deadlines, and as a result there were members they could not reach within the timeframe; as a result, the ICO was put on a performance improvement plan.

As shown in ***Table 4***, ICOs were able to complete approximately 60 percent of assessments for all members within 90 days of enrollment from early 2016 until mid-2019, when percentages dropped. From 2015 through 2020, for members willing to participate and reachable, the percentage of assessments completed was at or above 85 percent after quarter 2 of 2016.

Table 4
Members whose assessments were completed within 90 days of enrollment, 2015–2020

Quarter	Total number of members whose 90th day of enrollment occurred within the reporting period and who were currently enrolled at the end of the reporting period	Percentage of assessments completed within 90 days of enrollment	
		All members	All members willing to participate and who could be reached
2015			
Q1	N/A	N/A	N/A
Q2	134	91.0	98.4
Q3	22,743	42.3	63.6
Q4	15,662	36.9	48.2
2016			
Q1	1,688	58.2	73.0
Q2	1,103	61.1	74.1
Q3	8,334	65.4	91.7
Q4	2,466	67.4	91.3
2017			
Q1	2,467	62.9	85.1
Q2	3,428	64.0	90.8
Q3	2,919	61.0	84.7
Q4	2,522	61.4	85.7

(continued)

Table 4 (continued)
Members whose assessments were completed within 90 days of enrollment, 2015–2020

Quarter	Total number of members whose 90th day of enrollment occurred within the reporting period and who were currently enrolled at the end of the reporting period	Percentage of assessments completed within 90 days of enrollment	
		All members	All members willing to participate and who could be reached
2018			
Q1	2,371	64.2	94.5
Q2	2,360	64.3	94.5
Q3	2,222	58.1	88.4
Q4	883	65.1	91.1
2019			
Q1	1,575	63.9	95.4
Q2	1,319	67.3	94.9
Q3	3,039	56.1	90.4
Q4	4,409	47.1	85.5
2020			
Q1	2,391	55.7	94.0
Q2	3,456	52.7	95.4
Q3	2,508	49.3	94.7
Q4	2,764	47.8	96.0

MMP = Medicare-Medicaid Plan; N/A = not applicable; Q = quarter.
NOTE: Because the Michigan demonstration began in March 2015, data are not applicable for quarter 1 of 2015.
SOURCE: RTI analysis of MMP-reported data for Core Measure 2.1 as of May 2021. The technical specifications for this measure are in the Medicare-Medicaid Capitated Financial Alignment Model Core Reporting Requirements document.

As described in detail in the First Evaluation Report, care coordination by the ICOs integrates medical care, behavioral health, and LTSS. Integrated care teams led by care coordinators are responsible for developing and implementing care plans—referred to as Individual Integrated Care and Supports Plans (IICSPs) in Michigan—to address each enrollee's needs. The 2019 contract amendment clarified that an enrollee's integrated care team may also include additional members such as family caregivers, specialty providers, personal care providers, and an NF representative (CMS, 2019).

Table 5 shows that from 2015–2017, care plan completion rates ranged from 25 to 44 percent for all members, except for a very high rate in the first demonstration quarter. After declining in 2015, care plan completion rates for all members willing to complete a care plan or who were reachable increased every quarter except one from 2016 through 2017, but remained low. As discussed in the First Evaluation Report, in 2016 a new signature requirement was implemented that created challenges, possibly contributing to the low care plan completion rates in 2016 and 2017. This measure (MI 2.1) was retired in quarter 1 of 2018; we present care plan data for 2018–2020 in ***Table 6*** using a core measure that has different specifications, which may

have improved completion rates.[13] The State reported that before the PHE, the Quality Sub-Workgroup had discussed ways to improve care plan completion rates and facilitated sharing of best practices (see ***Section 3.6, Quality of Care***).

Table 5
Members with an Individual Integrated Care and Supports Plan within 90 days of enrollment, 2015–2017

Quarter	Total number of members whose 90th day of enrollment occurred within the reporting period	Percentage of care plans completed within 90 days of enrollment	
		All members	All members willing to complete a care plan and who could be reached
2015			
Q1	N/A	N/A	N/A
Q2	141	85.8	93.8
Q3	24,024	35.6	43.5
Q4	16,691	26.5	32.8
2016			
Q1	1,723	24.6	27.8
Q2	1,145	31.0	36.2
Q3	8,792	29.1	37.0
Q4	2,542	35.9	43.8
2017			
Q1	2,546	35.2	44.0
Q2	3,508	29.1	37.7
Q3	3,065	35.8	46.6
Q4	2,629	44.2	57.4

MMP = Medicare-Medicaid Plan; N/A = not applicable; Q = quarter.
NOTE: Because the Michigan demonstration began in March 2015, data are not applicable for quarter 1 of 2015.
SOURCE: RTI analysis of MMP-reported data for State-specific Measure MI 2.1 as of February 2021. The technical specifications for this measure are in the Medicare-Medicaid Capitated Financial Alignment Model Michigan-Specific Reporting Requirements document.

As shown in ***Table 6***, in 2018 through 2020, the percentage of care plans completed within 90 days for all members varied, with a low of 37 percent and a high of 59 percent, both in 2019. In 2018 through 2020, the percentage of care plans completed within the required

[13] The MI 2.1 measure required ICOs to include all beneficiaries enrolled during a quarter, regardless of whether they disenrolled before the end of the quarter (CMS, 2015, Michigan-Specific Reporting Requirements, p. MI-23) effective March 1, 2015. The Core 3.2 measure requires plans to include only beneficiaries who are currently enrolled at the end of the quarter (CMS, Core Reporting Requirements, 2019, p.33). Given the disenrollment rate for the demonstration, this difference in specifications could help explain the improved care plan completion rate in 2018–2020, compared to the earlier period.

timeframe for enrollees willing to participate and reachable also varied, with a low of 63 percent in quarter 3 of 2018 and a high of 93 percent in quarter 4 of 2020.

Table 6
Members with an Individual Integrated Care and Supports Plan within 90 days of enrollment, 2018–2020

Quarter	Total number of members whose 90th day of enrollment occurred within the reporting period and who were currently enrolled at the end of the reporting period	Percentage of care plans completed within 90 days of enrollment	
		All members	All members willing to complete a care plan and who could be reached
2018			
Q1	2,364	48.9	70.3
Q2	2,360	50.5	71.2
Q3	2,218	43.6	63.2
Q4	881	54.7	74.5
2019			
Q1	1,575	56.7	82.3
Q2	1,319	59.4	83.9
Q3	3,039	48.9	73.6
Q4	4,409	37.1	67.0
2020			
Q1	2,391	47.6	80.8
Q2	3,456	49.0	86.7
Q3	2,508	48.7	90.4
Q4	2,764	48.7	93.2

MMP = Medicare-Medicaid Plan; Q = quarter.
SOURCE: RTI analysis of MMP-reported data for Core Measure 3.2 as of May 2021. The technical specifications for this measure are in the Medicare-Medicaid Capitated Financial Alignment Model Core Reporting Requirements document.

The percentage of members with at least one documented care goal discussion greatly increased after 2015, remaining above 91 percent in all quarters from 2016 through 2020, and nearing 100 percent in 2019 and 2020, as shown in ***Table 7***.

Table 7
Members with documented discussion of care goals, 2015–2020

Quarter	Total number of members with an initial care plan completed	Percentage of members with at least one documented discussion of care goals in the initial care plans
2015		
Q1	42	35.7
Q2	2,426	83.3
Q3	9,781	57.5
Q4	8,493	75.5
2016		
Q1	3,280	98.0
Q2	4,214	95.7
Q3	4,168	92.2
Q4	2,737	91.1
2017		
Q1	2,251	92.6
Q2	1,940	96.2
Q3	2,498	94.3
Q4	2,454	97.7
2018		
Q1	3,031	94.2
Q2	2,006	97.1
Q3	1,352	96.1
Q4	1,276	98.3
2019		
Q1	1,838	99.5
Q2	1,494	99.1
Q3	1,970	99.5
Q4	1,960	99.3
2020		
Q1	2,154	98.7
Q2	2,280	99.3
Q3	2,023	98.5
Q4	1,766	99.3

MMP = Medicare-Medicaid Plan; Q = quarter.
SOURCE: RTI analysis of MMP-reported data for State-specific Measure MI 2.3 as of May 2021. The technical specifications for this measure are in the Medicare-Medicaid Capitated Financial Alignment Model Michigan-Specific Reporting Requirements document.

3.3.3 Care Coordination Staffing

As described in the First Evaluation Report, the 2016 amendment to the three-way contract required in-person meetings to develop IICSPs at a time and location convenient to the enrollee. The amendment required that some of the care plan reviews be conducted in-person, rather than by telephone, with in-person reviews at least every quarter for high-risk enrollees and every other quarter for moderate-risk enrollees. Some ICOs said that they increased care coordination staffing in response to the 2016 changes; the increased staffing is reflected in the total number of full time equivalent care coordinators and the member load per care coordinator in ***Table 8***. In 2018 and 2019, plans reported staffing challenges that affected their ability to complete the face-to-face visits, such as high caseloads and building sufficient trust with enrollees to be able to enter their homes or discuss their concerns.

The 2019 contract amendment relaxed professional licensure requirements for care coordinators to include limited licensed bachelor-level social workers. Although the State did not feel this change would have a major impact on the demonstration, the change allowed ICOs to expand their care coordinator hiring pool, which was particularly helpful for plans with higher staff turnover. Despite this added flexibility, as shown in ***Table 8,*** care coordinator caseloads (member loads) only slightly decreased between 2018 and 2019. A beneficiary advocate noted in 2020 that the high turnover rate among care coordinators made it difficult to know whom to reach out to with an enrollee issue (see ***Section 4, Beneficiary Experience***). Plans used different approaches when turnover was an issue; for example, some used temporary staff.

Table 8
Care coordination staffing, 2015–2020

Calendar year	Total number of care coordinators (FTE)	Percentage of care coordinators assigned to care management and conducting assessments	Member load per care coordinator assigned to care management and conducting assessments	Turnover rate (%)
2015	192	95.8	193.9	14.3
2016	186	98.4	205.3	31.1
2017	233	99.1	169.6	21.3
2018	228	97.8	164.7	23.2
2019	248	98.0	160.2	27.3
2020	244	92.2	179.5	28.7

FTE: full time equivalent; MMP = Medicare-Medicaid Plan.
SOURCE: RTI analysis of MMP-reported data for Core Measure 5.1 as of May 2021. The technical specifications for this measure are in the Medicare-Medicaid Capitated Financial Alignment Model Core Reporting Requirements document.

Since August 2018, Michigan has used an online learning management system to provide training for ICO care coordinators. Before that time, the Michigan Disability Rights Coalition conducted in-person training on person-centered planning and self-determination, but those trainings ended when the Federal implementation funding ended in August 2018. Several trainings are available to care coordinators on the learning management system. In addition to

person-centered planning and self-determination trainings, care coordinators can receive training on advance directives, cultural competency, disability awareness, and critical incidents. In fall 2020, the State added a new training for waiver staff and care coordination teams focused on the functional needs of enrollees with disabilities and emergency preparedness. Both MDHHS and plans can track utilization of trainings.

3.3.4 LTSS Coordination

HCBS Waiver

Michigan experienced steady growth in waiver enrollment and improved LTSS balance between enrollees in waiver and NF settings (MDHHS, 2021). Growth in the HCBS waiver followed changes by the State in 2018 to improve the waiver application process (see the First Evaluation Report). In 2020, the State reported that although face-to-face interactions were paused due to the PHE, ICOs were successful in reaching waiver enrollees. Additionally, despite a continued backlog in level of care determinations, a pause in in-person level of care determinations, and some staffing challenges due to the PHE, waiver applications were being processed in a timely manner.

Nursing Facilities

Care coordination for nursing facility (NF) residents arose as a challenge in 2020, and the CMT and ICOs increased their attention to this population. Prior to the PHE, the MI Health Link Ombudsman (MHLO) visited many NFs in 2018–2019 and conducted interviews to determine whether the demonstration improved quality of life and quality of care for enrollees living in NFs. MHLO said in 2020 that it could not document any improvements. Other advocates echoed their concerns, and one added that the ICOs were not facilitating NF transitions as was hoped.

MHLO concluded in late 2020 that ICOs were not providing adequate support during the PHE for enrollees experiencing neglect and long periods of isolation due to restrictions on visits, NF understaffing, and reduced oversight. MHLO asked the State to require ICOs to address these concerns by conducting window visits with residents, identifying residents' needs and preferences, and advocating with NF staff.

The CMT responded quickly to the advocates' concerns, discussing the issue with ICOs during their next monthly meetings and exploring the feasibility of window visits and other safe practices for engaging NF residents. State officials noted in early 2021 that both ICOs and NFs faced considerable challenges due to the PHE; despite the challenges, State officials said many of the ICOs made efforts to contact members by phone, and the State allowed window visits when that was safe.

The State also sent a letter to all nursing facilities, encouraging them to apply for funding to obtain tablets for residents who did not have mobile devices, to facilitate contacts with care coordinators, as well as family and friends.[14] The letter encouraged NFs to work with ICOs to help residents who wished to transition to the community.

[14] Funding for electronic devices was available from the Civil Monetary Penalties Grant Program.

In addition to the letter, the State reviewed several years' data to identify NF residents interested in transitioning to the community and shared those lists with the ICOs.[15] State officials said the response from the ICOs and beneficiary advocates was positive. The State plans to continue to pull these data at regular intervals and share lists with the ICOs. State officials said they made NF-to-community transitions a standing topic for CMT calls and operations meetings.

State officials said in early 2021 that transitions reported by the ICOs nearly doubled from 49 in 2019, to 84 in 2020.[16] They expressed hope that transitions would increase now that ICOs have more referrals and increased monitoring, adding that the ICOs had already begun helping some residents on the lists provided by the State. However, several ICOs noted that even before the PHE, there were multiple barriers to transitions, including HCBS workforce shortages, and challenges arranging affordable housing and durable medical equipment and completing the HCBS waiver enrollment process prior to discharge. The PHE made it more difficult to communicate with NFs and transition residents to the community.

3.3.5 Behavioral Health Care Coordination

State officials said that overall, coordination between the ICOs and PIHPs was successful during the reporting period, despite ongoing challenges associated with the carve-out (see ***Section 3.1, Integration of Medicare and Medicaid***). State officials said encounter data analysis showed that a significant number of new enrollees began using behavioral health services within 12 months of demonstration enrollment, which they attributed to referrals from the ICOs to the PIHPs (see ***Section 4, Beneficiary Experience***). The ICOs and PIHPs collaborated one-on-one in coordinating enrollee care, and the State facilitated collaboration through the operations meetings, the quality sub-workgroup, and the current quality improvements project (QIP), aimed at improving follow-up after hospitalization for mental illness (see ***Section 3.6, Quality of Care***).

Some challenges remained in coordinating behavioral health services between the ICOs and PIHPs, including electronic record exchange, privacy restrictions, and care transitions (see below).

3.3.6 Care Transitions

Although ICOs and PIHPs reported improvements in notifications of hospitalizations over time, difficulty obtaining timely notifications remained a challenge to coordinating care transitions. As one ICO reported in 2020, it struggled to get hospitalization notifications because not all hospitals consistently used MiHIN, or transmitted all of the necessary information. To improve post-hospitalization care transitions, ICOs and PIHPs have implemented various strategies, such as designating dedicated care transition staff, who can facilitate notifications by collaborating with hospitals. One ICO said in 2019 that it was using a vendor to access secure information from hospitals' electronic health records (EHR) systems as a workaround to fill

[15] The Minimum Data Set is used to assess residents of nursing facilities. Section Q of the Minimum Data Set allows residents to express their interest in learning about opportunities to transition to the community. State officials said that the ICOs had faced challenges obtaining Section Q data directly from facilities, especially during the PHE, hence the need for the State to provide lists to the ICOs.

[16] In addition to the transitions reported by the ICOs, State officials said nursing facilities referred some enrollees directly to transition coordinators who serve the FFS population, rather than working through the ICOs. As a result, several residents a month were disenrolling and using HCBS outside the demonstration.

gaps. Another ICO received daily discharge lists and contacted enrollees within two weeks of their discharges. In 2020, a third plan said that notification of admissions had improved over the previous 18 months, and that if the hospital does not provide a discharge date, the ICO uses an algorithm to estimate the date.

Challenges with notifications for mental health hospitalizations have made those transitions a particular challenge. Because the PIHPs are the payers for behavioral health services, they receive notifications of hospitalizations, then share the information with the ICOs through weekly reports. A PIHP said specialty psychiatric hospitals did not send them hospitalization notifications, so they had to collect the information manually from each hospital's EHR system, which slowed down the process. The ICOs and PIHPs were working to improve information flow through a QIP which began in 2018 (see ***Section 3.6, Quality of Care***).

3.3.7 Information Exchange

The State continued to work to increase communication functionality between the ICOs and PIHPs through MiHIN, and to ensure that all of the ICOs were using it. Some plans were reluctant to make the necessary investments when the end date of the demonstration was approaching, as one ICO explained in 2019. One ICO was sending referrals and HRAs manually by secure email, rather than automatically from their care management system through MiHIN, after cancelling the contract of the vendor who supported health information exchange. This caused challenges for timely completion of Level II assessments and measuring timeliness, according to two PIHPs. As of late 2020 the State was aware of this concern and was working with the ICOs to ensure they were all using MiHIN to exchange records with the PIHPs by early 2021.

One ICO also raised concerns in 2018 and 2020 about the capacity of one or more PIHPs to send and receive files through MiHIN. However, only one ICO expressed that concern, so it may have been an isolated challenge.

3.4 Stakeholder Engagement

The State continued extensive stakeholder engagement, although it scaled back some activities when federal implementation funding ended.

In 2020, the State focused on obtaining stakeholder input on its demonstration extension proposals through a series of virtual meetings with stakeholder groups and enrollee surveys.

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 has remained robust in Michigan. The State continued to actively engage a wide variety of stakeholders, including providers, enrollees, and advocates, although the types of meetings changed due to financial constraints and the PHE. These changes

included a pause in Advisory Committee meetings from August 2018 until September 2019, and the end of Lunch and Learn beneficiary outreach events in August of 2018.

The State continued to hold monthly operational meetings with the ICOs and PIHPs. In 2019, the State implemented a quality sub-workgroup that included ICO and PIHP representatives. The sub-workgroup held monthly meetings in 2019 and 2020 to discuss a wide range of quality topics (e.g.., unable to reach rates) and capture best practices (see ***Section 3.6, Quality of Care***).

Beginning in 2019 and through 2020, the State held meetings with ICOs, PIHPs, beneficiaries and other stakeholders (e.g., advocates, AAAs, and nursing facilities) to discuss a potential multi-year extension of the program. After the onset of the PHE, the State obtained a 1-year extension of the demonstration through December 31, 2021, which allowed more time to develop and discuss proposals. After the extension had been granted in 2020, the State resumed robust stakeholder engagement activities to inform a multi-year extension. These activities, from September through December 2020, included a series of virtual meetings for the various stakeholder groups to obtain input on some of the extension proposals. The State also obtained input from the MI Health Link Advisory Committee and participated in ICO member advisory meetings to get additional enrollee feedback.

In late 2020, two enrollee surveys were conducted to obtain feedback about proposed changes, and over 1,100 enrollees responded. Michigan State University administered a formal survey to a sample of enrollees to obtain feedback for the State. In addition, the State invited other enrollees to participate in a separate survey and allowed them to participate either online or by calling during three days of "office hours." The office hours consisted of a 1-800 number that enrollees could call for assistance completing the survey. State officials said the office hours were a "heavy lift" for staff, but they were "very pleased" with the number of enrollees who participated in the two surveys. See ***Section 4. Beneficiary Experience***, for discussion of the survey results.

3.4.1 MI Health Link Advisory Committee

In the first half of 2018, the State continued to conduct Advisory Committee meetings and adopted a more member-friendly meeting structure by shortening presentations and incorporating more time for member feedback and discussion. During these discussions, Advisory Committee members expressed concerns with not being notified when their care coordinators changed. As a result, the State added a contract provision requiring ICOs to notify enrollees in writing within 2 weeks if their care coordinators changed. Additionally, in 2018, CMS marketing guidance gave states the option of allowing ICOs to provide online versions of member handbooks instead of sending out hard copies. Although the State was leaning towards requiring hard copies, Advisory Committee members decided that an online version was more accessible and that it was not necessary to send hard copies, except by request. As a result, in 2019 the State offered ICOs that flexibility.

In August of 2018, Advisory Committee meetings were paused due to the end of federal implementation funding. Meetings resumed in September of 2019, supported by a federal grant to the Ombudsman program that provided funding for transportation and meeting room rentals.

In 2019, one meeting was held for each committee—one in the Upper Peninsula, one in Southwest Michigan, and one in Southeast Michigan (Macomb and Wayne Counties). In 2020, due to the COVID-19 pandemic, a virtual Advisory Committee meeting was held in late October. In August 2020, MDHHS was awarded approximately $600,000 for ombudsman and SHIP counseling and a portion of that funding was designated for transportation when in-person advisory committee meetings resume after the PHE.

3.4.2 Member Advisory Meetings

ICOs are required to engage enrollees and other stakeholders through their member advisory committees. During 2018 and 2019, the ICOs engaged member advisory committees via in-person quarterly meetings. In 2020, ICOs switched to virtual or telephonic meetings due to the PHE. Two ICOs noted that the switch to virtual or telephonic meetings was initially challenging for members, and one ICO provided an early walk-through for members on how to participate in conference calls ahead of its member advisory meeting.

3.5 Financing and Payment

ICOs continued to experience financial uncertainty due to delays in finalizing Medicaid rates and enrollment reconciliation by the State, resulting in recoupments and repayments. Although the State and ICO payment reconciliation process improved from 2018 to 2020, uncertainty still posed a financial challenge for ICOs.

Medicaid capitation rates paid by Michigan to the ICOs temporarily increased by 3.9 percent in 2020 to account for an increase in payments to direct care workers and the risks associated with the PHE.

Overall, the cost experience for ICOs from 2018 to 2020 was mixed. However, a consistent message from ICOs was the importance of setting the Medicaid capitation rates based on the historical experience of ICO enrollees, rather than on the cost experience of dual eligible beneficiaries in Medicaid FFS.

In this section we outline changes in financing and payment during the report period and relevant findings relating to these changes. Similar to what was reported in the First Evaluation Report, reconciliation and repayments continued to be a challenge for the State and ICOs, and there were concerns about the adequacy of the Medicaid portion of the capitated rates.

3.5.1 Rate Methodology

Rating Categories and Risk Adjustment

MI Health Link plan payments are based on risk-adjusted capitation rate categories. These rates are discounted to ensure savings to Medicare and Medicaid and are subject to quality withholds. Medicaid rate cell miscategorizations, errors or delays in establishing enrollment

status, and capitation payment delays have required reconciliation between the State and ICOs, as well as recoupments and repayments.

During the 2018 and 2019 site visits, ICOs raised concerns about Medicaid capitation payments, related to challenges with the State's enrollment system. System-generated errors in coding enrollees' settings (community, HCBS, or NF) have sometimes resulted in incorrect Medicaid capitation payments, and non-payment of the Medicaid capitation rate for some enrollees. In 2019, the State reconciled payments back to 2017, resulting in retroactive disenrollments, recoupments, and repayments (see ***Section 3.2, Eligibility and Enrollment***). Retroactive disenrollments forced the ICOs to refund capitation payments made by the State, but the plans had trouble recovering payments made to providers or obtaining reimbursement from other payers. In 2018 and 2019 some plans mentioned ongoing challenges with discrepancies caused by the lack of a single source of truth for enrollment status. Complicating this issue further, multiple changes to the Medicaid rates paid to plans were made in 2019: first the 2017 rate, then two different 2018 rates, and finally two different 2019 rates – which added to the reconciliation challenges.

In 2020, ICOs continued to express concern with Medicaid capitation payment reconciliation related to enrollment and rate cell allocation. Two ICOs noted that while the reconciliation process was improving in terms of timeliness, delays, and incorrect payments for enrollees in the nursing home rate cell, which generates the highest capitation payments, continued to be a challenge. ICOs said the situation has required time-consuming reconciliation processes, delaying finalization of Medicaid payment each year.

During 2020, Medicaid rate adjustments were more timely than in 2019, according to State officials, with 2020 rates used starting February 2020. In April 2020, MDHHS temporarily revised the capitation rates to reflect increased risk associated with the PHE. Specifically, there was a $2 per hour increase for direct care workers, and a 3.9 percent overall average increase in the capitation rate for the community-well and the nursing home level of care (LOC) – HCBS waiver rate cells (MDHHS, 2020).

Despite the challenges posed by the PHE, reconciliation, and payment delays, ICOs' views on the adequacy of the capitation rates in 2020 varied. One ICO reported that the rates were adequate while another expressed concern. All three ICOs interviewed in 2020 said that a modification to the Medicaid rate setting methodology to use the historical experience of the enrolled population as the baseline, rather than the historical experience of FFS Medicaid enrollees, would be an important discussion topic for the contract extension.[17]

Savings Percentages

The savings percentage for both Medicare and Medicaid rates was reduced from 4 percent to 3 percent for demonstration years 3, 4, and 5 (2018, 2019, and 2020). Under the original 3-way contract, if more than one-third of the plans experienced a revenue loss greater than 3 percent for demonstration year 1 (Michigan three-way contract, 2013, p. 170), then the

[17] While the rates are primarily based on FFS experience, the rate development for the Community Well rate cell also includes the experience of Medicare-Medicaid beneficiaries enrolled in Medicaid Health Plans (Milliman, 2020).

savings percentages would remain at 3 percent. In 2019-2020, generally, ICOs and the State did not comment on the savings percentage, although one ICO noted that 3 percent savings on the Medicare rate, in addition to the administrative component, made it difficult for the plan to be profitable.

Quality Withhold Percentages

For demonstration years 3 through 5 (2018–2020) the Medicare and Medicaid quality withhold was 3 percent. During this timeframe, CMS published results of quality withhold analyses for demonstration years 2 (calendar year 2017) and 3 (calendar year 2018).[18] For 2017, five ICOs received 100 percent of their withholds; two other ICOs received 75 percent (CMS, n.d.). For 2018, three plans received 75 percent of the withhold amount, while four plans received 100 percent (CMS, n.d.). We discuss the quality withhold measures in ***Section 3.6, Quality of Care***.

Medical Loss Ratio

The target medical loss ratio (MLR) in Michigan is 85 percent. Demonstration year 2 (2017) MLR results ranged from 86.3 to 107.6 percent; two ICOs had MLRs greater than 100 percent, while one ICO had a MLR of 99.6 percent. For demonstration year 3 (2018), MLR results ranged from 85.2 to 112.9 percent; 3 ICOs' MLRs exceeded 100 percent.

One ICO with an MLR below 100 percent noted in 2019 that it had an existing D-SNP plan; some members who entered the ICO from the D-SNP were already managed, helping the plan keep its MLR below 100 percent. In 2020, another ICO, whose MLR exceeded 105 in both demonstration year 2 and demonstration year 3, attributed its performance to low Medicaid capitation rates.

3.5.2 Encounter Data

In 2019, State officials noted that enhancing the quality of Medicaid encounter submissions had been a major focus. The State indicated that monthly meetings with the ICOs to discuss encounters had been very valuable in helping to improve quality. However, the ICOs continued to face challenges in submitting Medicaid encounters. One ICO in 2019 noted that Medicaid submissions were problematic, particularly dental encounters. One ICO in 2020 expressed similar concerns related to downstream entities. Additionally, one ICO reported additional efforts to help better categorize long-stay and post-acute care encounter submissions.

3.5.3 Cost Experience

Overall, the cost experience for ICOs has been mixed. In 2018, ICOs cited personal care and other HCBS as key drivers in the ICOs' costs. One ICO noted that the rates do not adequately account for higher utilization of personal care services in MI Health Link, and thus are too low. Another ICO reported that nursing home and waiver-cell rates do not account for the actual service needs of the enrollees. ICOs in 2019 and 2020 reported the financial uncertainty

[18] Results of the quality withhold analyses are published on the CMS webpage for the Michigan demonstration: https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/Michigan.

associated with Medicaid rate cell assignments and delays in payment reconciliations as an additional concern. By 2020 ICOs reported that while recoupment and repayment timeliness have improved, there were still delays that contribute to financial uncertainty.

In 2019 and 2020, ICOs consistently reported their concern for how the Medicaid capitated rates were set, specifically the use of the historical experience of the Medicaid FFS population (Michigan three-way contract, 2013). ICOs have explained that the historical service use and spending in the FFS population, blended with the MCO capitated rate for programs that serve the dually eligible population, does not reflect the actual needs of the demonstration enrollee population. ICOs have consistently advocated for using the historical experience of demonstration enrollees in rate development. ICOs have noted that State officials have been receptive to this idea and it is part of the contract modification and extension discussion.

The PHE has also impacted ICO cost experience. In 2020 two ICOs indicated that the impact of the PHE was an increase in inpatient admissions and costs, especially for the nursing home population. As described above, a temporary increase in the community-well and nursing home level of care waiver rate cells was introduced to support the direct care workers and increased risk associated with the PHE.

3.6 Quality of Care

The State was very active in quality management activities throughout 2018–2020. State staff convened the ICOs and PIHPs to discuss quality topics, the EQRO completed the first compliance review of the ICOs, and a vendor completed HCBS waiver audits.

Michigan continued to conduct Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys of ICO enrollees, and began transitioning from use of the CAHPS Adult Medicaid Health Plan survey to the HCBS CAHPS survey. In 2020, both surveys were conducted for the State, while CAHPS reporting to CMS was suspended.

Most ICOs improved their performance over time on Healthcare Effectiveness Data and Information Set (HEDIS) measures related to blood pressure control, 30-day follow-up after hospitalization for mental illness, medication review (one of the Care for Older Adults measures), and plan all-cause readmissions for enrollees ages 18–64 and 65+.

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

3.6.1 Quality Measures

ICOs are required to report standardized quality measures, including core and State-specific demonstration measures. Four State-specific measures were retired in 2018, and two were suspended, as discussed in the First Evaluation Report. In 2019, the two measures suspended the previous year—Level I and Level II Assessment Completion for Individuals with I/DD (MI1.1) and Level I and Level II Assessment Completion for Individuals with Mental Illness (MI1.2)—were retired. Another measure—Members Using Self-Directed Arrangements Through A Fiscal Intermediary (MI5.2)—was suspended (CMS, 2019). In 2020, the measure MI5.2, which had been suspended in 2019, was retired. And another measure—Adherence to Anti-Psychotic Medications for Individuals with Schizophrenia (MI5.3)—was suspended (CMS, 2020).

A subset of the measures ICOs are required to report are designated as quality withhold measures. The State and CMS use performance on those measures to determine what portion of the withheld payments will be returned to each plan. During 2018, one of the State quality withhold measures was changed. Annual dental visits (MIW8) replaced urinary tract infection (MIW7), which was used for demonstration years 2 and 3 (2017–2018); the new measure will be used for demonstration years 4–6 (2019–2021). The change was made because dental visits affected a much larger number of enrollees, according to State officials; however, plans continued to report the urinary tract infection measure, which is a State-specific reporting measure. State officials said in 2019 that additional changes might be needed because the plans were meeting most of the benchmarks for withhold measures.[19]

In 2020, four state withhold measures were added when the three-way contract was amended and extended, and one measure was removed, according to CMS. The new measures were minimizing institutional stay, antidepressant medication management, colorectal cancer screening, and medication reconciliation post-discharge, effective for demonstration year 6 (2021). The documentation of care goals was removed as a measure for demonstration year 6 because the plans were performing well.[20]

An ICO said in 2018 that one CMS withhold measure—follow-up after hospitalization for mental illness (FUH)—is challenging because they depend on the PIHPs to report hospitalizations to them. A PIHP said in 2018 that the measure is a "huge challenge" for PIHPs because they collect the information manually, then send it to the ICOs.[21] The State has facilitated cooperation between ICOs and PIHPs on the topic; see ***Section 3.3, Care***

[19] For demonstration year 2 (2017), all of the ICOs met the benchmark for three of the four State-specific measures, and five of seven met the other measure's benchmark. The plans also did well in demonstration year 3 (2018), with all seven plans meeting the benchmark for two measures, and six plans meeting the benchmark for each of the other two measures. The CMS core measures were more challenging for the plans. ICO quality withhold analyses may be accessed at: https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/Michigan.

[20] Six of the seven ICOs met the Documentation of Care Goals benchmark of 95 percent for demonstration year 3, the most recent year with published results (CMS, n.d.).

[21] The PIHPs are incentivized to improve performance on the FUH measure because they are the payers for behavioral health services and want to avoid rehospitalizations, and at least some ICOs have made the FUH measure a quality withhold measure in their contracts with the PIHPs. Additionally, the PIHPs' contracts with Medicaid include quality measures, and follow-up within 7 days after a psychiatric hospitalization is one of the measures.

Coordination, as well as the discussion of *Quality Improvement Projects* in the following sub-section.

3.6.2 Quality Management Structure and Activities

There was a high level of quality activity related to the demonstration during the 2018–2020 period, including the first EQRO compliance review, waiver quality audits, State beneficiary satisfaction surveys, and a new quality workgroup. Much of the activity was coordinated by the two MI Health Link quality analysts, who organize and facilitate all quality-related activities for the demonstration, except the waiver audits. They also work with the State's Actuarial Division on encounter data quality.

The quality analysts facilitate the Quality Sub-Workgroup. The workgroup members are subject matter experts from each of the ICOs and PIHPs. They met monthly during 2019 and 2020 to address a wide range of quality topics. According to the State, these topics included barriers and promising practices for improving performance on demonstration measures, how to calculate data reported to the CMT, the passive enrollment algorithm, CAHPS, and HEDIS. In 2020, State officials said there is considerable interaction in the meetings because participants come prepared; promising practices and other ideas are captured in the meeting notes.

The State also launched a MI Health Link Quality and Performance Dashboard in 2020, which compiles recent data on the demonstration's performance on completion of assessments, the care coordinator to member ratio, and utilization of behavioral health, HCBS waiver, and personal care services (MDHHS, 2020).

External Quality Review Organization Activity.

In 2018, the State finalized a contract with its EQRO, Health Services Advisory Group (HSAG), to conduct a compliance review of the ICOs, facilitate the ICOs' Quality Improvement Projects, and validate the plans' quality measures. The compliance reviews were conducted in 2018 and 2019, and the EQRO report was submitted in 2020. It was the first compliance review for the ICOs, and the EQRO reviewed for compliance with all 11 Federal Medicaid managed care standards. The EQRO reviewed a sample of each ICO's care plans at the request of the State, which had been alerted to care plan challenges through the waiver quality audit process.

The EQRO compliance review resulted in corrective action plans for all of the ICOs. State officials said the major issues were related to:

- coordination and continuity of care, including the need for better care plans, better follow-up on enrollee needs, and better monitoring;
- coverage and authorization of services, including ensuring that enrollees receive 10-day notices when services are reduced or denied, or when payment is denied; and
- some steps in the grievance and appeals process that needed improvement.

Other significant opportunities for improvement for most plans were sub-contractual relationships and delegation to downstream entities, and the plans' quality assessment and performance improvement programs (HSAG, 2020c). An ICO said in 2020 it had learned from

the process, and never felt it was a "gotcha" type of review. Another plan said it was incorporating the EQRO recommendations into its action plan for the next year.

Quality Improvement Projects

In 2018, the plans completed their first QIP topic, all-cause readmissions. For the second cycle, State officials said they selected follow-up after hospitalization for mental illness (FUH) as the topic to encourage collaboration between the ICOs and PIHPs. In 2020, the EQRO reported strong performance by all of the ICOs on the design stage of their QIPs, with 100 percent scores for six plans and 91 percent for the other plan. However, the EQRO noted elsewhere in its report that lower statewide HEDIS results for behavioral health measures indicated the need for closer collaboration between the ICOs and PIHPs (HSAG, 2020c).

Most ICOs and PIHPs said FUH was a challenge, although one ICO questioned the need for this QIP because it had already worked on FUH as a CMS quality withhold measure, a Medicare Advantage star measure, and a HEDIS measure, and it had been the topic of a Medicaid pilot. Other ICOs said in 2018, 2019, and 2020 that follow-up was a challenge because they have to wait for the PIHPs to send them reports on hospitalizations, while PIHPs said that obtaining information from hospitals was a challenge (see earlier in this section and ***Section 3.3, Care Coordination***).

Passive Enrollment Algorithm

Michigan began using an algorithm based on performance measures to allocate passive enrollment in 2017. They selected measures that reflect ICOs' current performance and capacity to serve new enrollees. As discussed in ***Section 3.2, Eligibility and Enrollment***, passive enrollment was suspended from mid-2018 until mid-2019. When passive enrollment resumed, the State revised the performance measures, and increased the number of measures from six to nine, with an emphasis on care coordination. The measures used for 2019 and 2020 were:

- three measures related to assessments and care plans—Level 1 assessments completed within 60 days of enrollment, new enrollees who received an in-person assessment, and care plans completed within 90 days;
- the care coordinator to member ratio;
- satisfaction with care coordination;
- waiver participants who received more than one waiver service;
- timeliness of encounter submissions;
- emergency department behavioral health services utilization; and
- first follow-up visit within 30 days of hospital discharge (State of Michigan, 2019).

HCBS Waiver Quality Audits

The State completed the first round of quality audits for the MI Health Link waiver in 2018. Those audits covered the first year of the demonstration, 2015, when ICOs were still learning about the HCBS waiver, and 6 of the 7 plans had corrective action plans, according to

State officials. Because waiver audits were delayed by understaffing in MDHHS, problems with waiver administration were sometimes remediated before the plans received findings and recommendations from the auditors. In 2018, the State contracted with a vendor to conduct the audits, which has helped expedite the process. The State also amended the waiver in 2019 to streamline the audit process. During 2019, the 2016 and 2017 audits were completed; by the end of 2020, the vendor had started the 2019 audits, and State officials said they were close to current.

State officials said some of the challenges identified through the audits included care plans that did not address all of the assessed needs, delays in starting services, and insufficient oversight of the AAAs and providers. An ICO said that it was sometimes hard to reconcile the person-centered and medical perspectives, and that auditors sometimes expected to see services to address medical needs that the enrollee had declined. During 2019, the State provided training for the ICOs on waiver compliance issues, such as monitoring of waiver providers and critical incidents.

State CAHPS Surveys

Michigan contracts with HSAG, its EQRO, to conduct CAHPS surveys of MI Health Link enrollees. For several years, the State surveyed enrollees with the CAHPS Adult Medicaid Health Plan survey, which overlapped with the Medicare survey that the ICOs conduct for CMS. To reduce duplication, the State decided to discontinue use of the Adult CAHPS after 2020, and replace it with the HCBS CAHPS. The State will also add a few supplemental questions to the Medicare survey, with CMS approval.

In 2020, CMS suspended the CAHPS survey[22] requirement for MA plans and MMPs due to the PHE, while the State proceeded with both the Adult and HCBS surveys. HSAG mailed the Adult survey to a sample of MI Health Link enrollees, surveyed a sample of HCBS waiver and personal care users by phone, and prepared a report on each survey (HSAG, 2020a; HSAG 2020b). See ***Section 4.1, Impact of the Demonstration on Beneficiary Experience***, for discussion of these CAHPS results. As planned before the PHE, State officials said they would drop the Adult CAHPS for 2021, while the HCBS survey would continue. State officials hoped to get a higher response rate for the HCBS survey in 2021 so they can compare plans' results.

3.6.3 HEDIS Quality Measures Reported for Michigan ICOs

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

Five of the 13 Medicare HEDIS measures for MMP enrollees that RTI analyzes are reported in ***Figures 1-6***, with results on all 13 measures appearing in ***Tables B-1a and B-1b*** in ***Appendix B***. RTI identified these measures in its Aggregate Evaluation Plan based on their

[22] CMS also suspended HEDIS reporting due to the PHE, as noted later in this section.

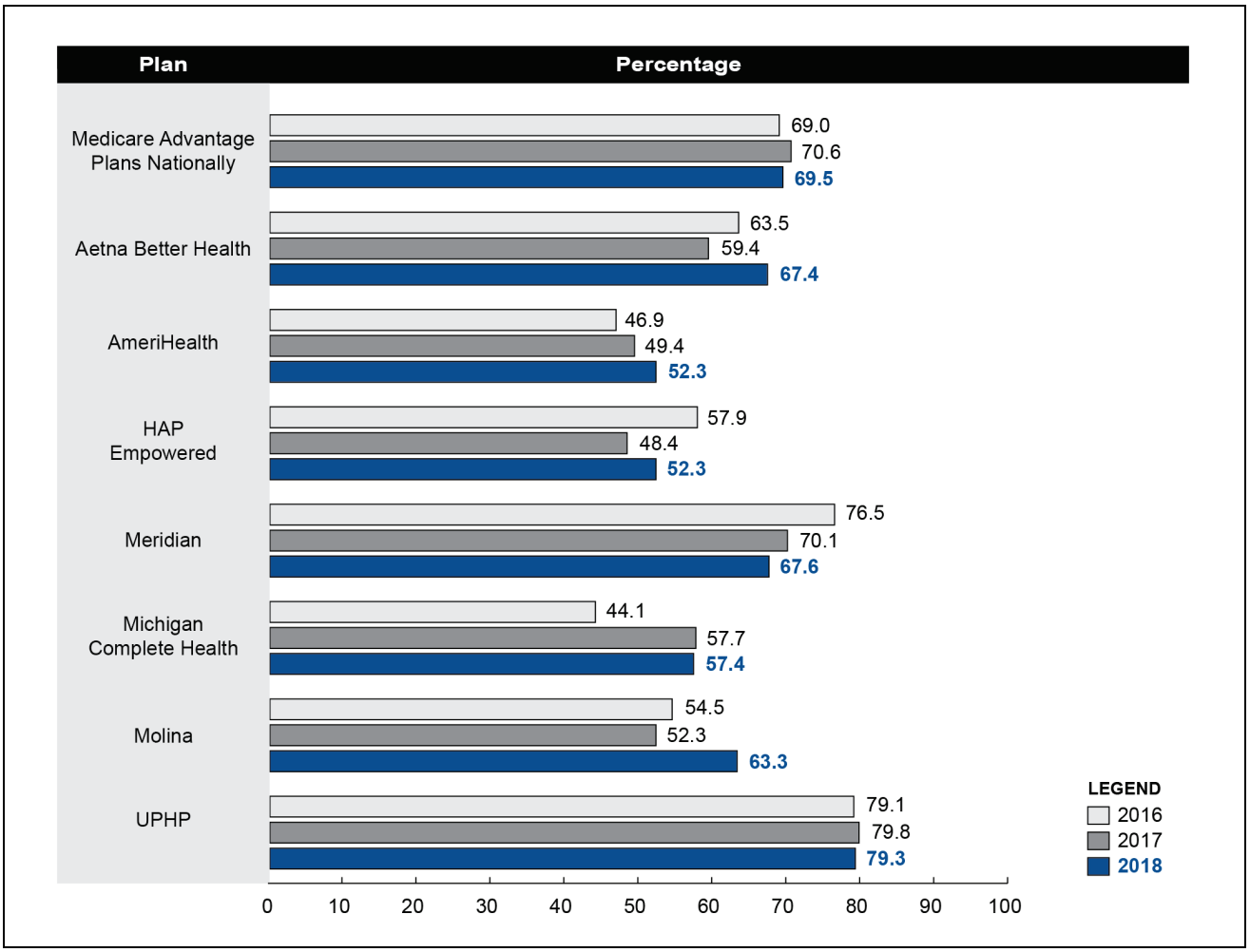
completeness, reasonability, and sample size. Calendar year data for 2016–2018 were available for all seven Michigan ICOs. In response to the COVID-19 PHE, CMS did not require Medicare plans (including MMPs) to submit HEDIS 2020 data covering the 2019 measurement year. Medicare plans (including MMPs) resumed normal reporting for measurement year 2020, with those data becoming available later in 2021.

Detailed descriptions of the measures can be found in the RTI Aggregate Evaluation Plan. Results reported in ***Figures 1-6*** show Michigan ICOs' HEDIS performance data for calendar years 2016 through 2018 on measures for blood pressure control, 30-day follow-up after hospitalization for mental illness, good control of Hemoglobin A1c (HbA1c) levels (<8.0 percent), medication review (one of the Care for Older Adults measures) and plan all-cause readmissions (ages 18-64 and 65+).

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

As shown in ***Figure 1***, most ICOs improved performance on blood pressure control from 2016 to 2018. Of ICOs showing improved performance, some steadily improved while others had 1 year of decline during the period.

Figure 1
Blood pressure control[1], 2016–2018:
Reported performance rates for Michigan ICOs



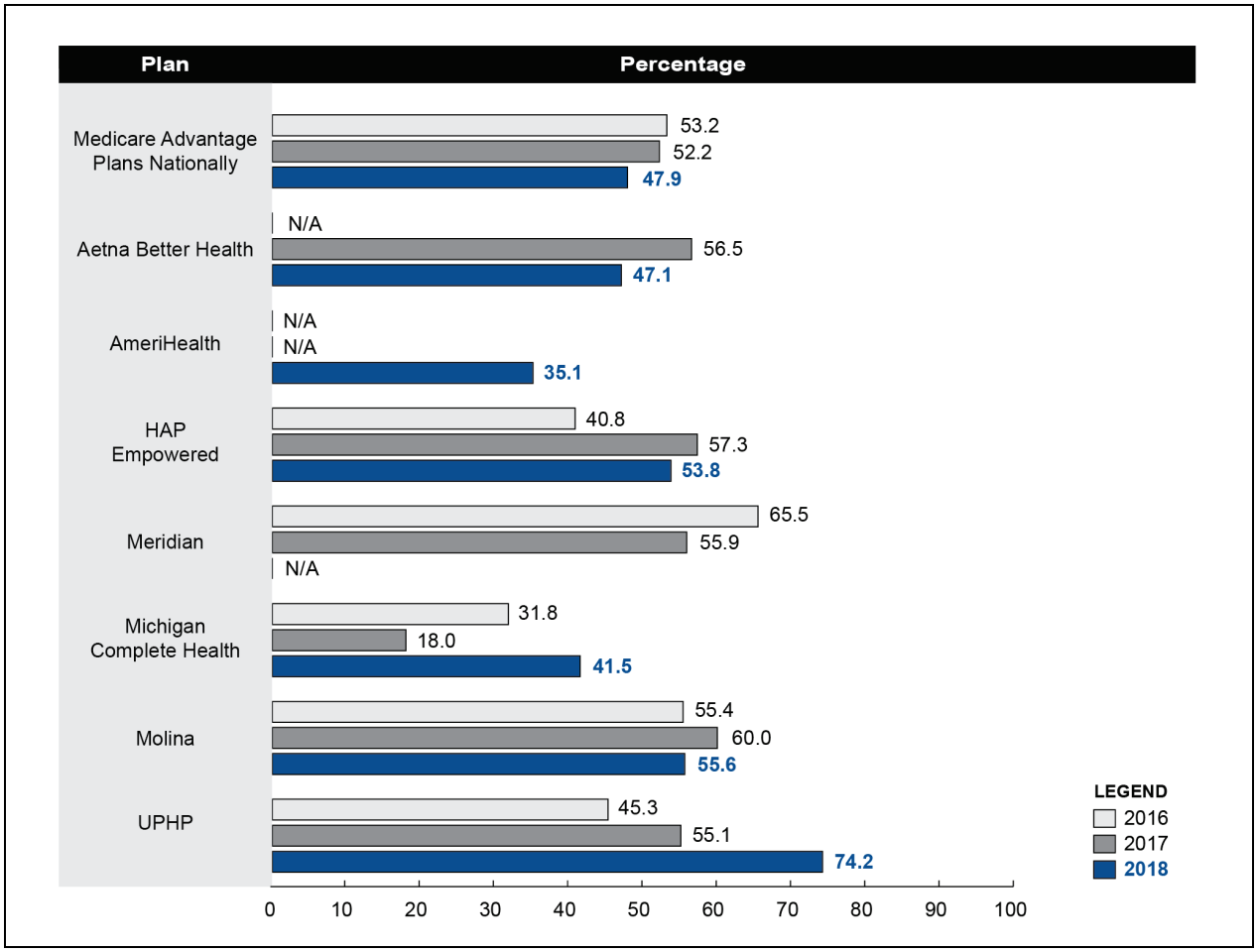
HAP = Health Alliance Plan; HEDIS = Healthcare Effectiveness Data and Information Set; ICO = Integrated Care Organization; UPHP = Upper Peninsula Health Plan.

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

SOURCE: RTI analysis of 2016 through 2018 HEDIS measures.

Figure 2 shows that for the four ICOs meeting sample size requirements for reporting across all years, performance improved on 30-day follow-up after hospitalization for mental illness. Of ICOs showing improved performance, one (Upper Peninsula) steadily improved year over year.

Figure 2
30-day follow-up after hospitalization for mental illness[1] 2016–2018: Reported performance rates for Michigan ICOs



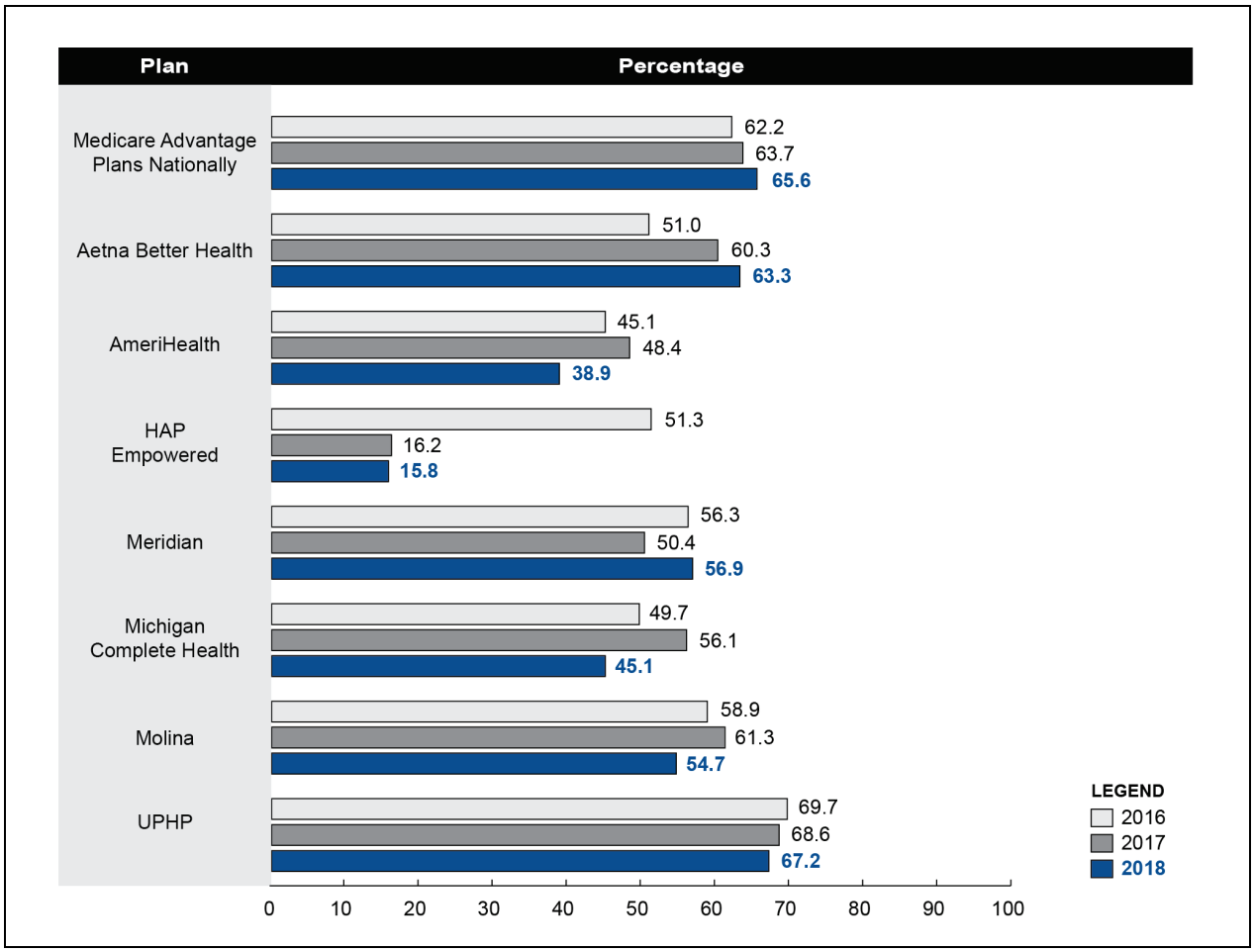
HAP = Health Alliance Plan; HEDIS = Healthcare Effectiveness Data and Information Set; ICO = Integrated Care Organization; N/A = not applicable, where the number of enrollees in the MMP's provided HEDIS data available for inclusion in the measure was less than 30, and therefore not reported per RTI's decision rule for addressing low sample size; UPHP = Upper Peninsula Health Plan.

[1]NCQA implemented a significant specification change with HEDIS 2018 (calendar year 2017), disallowing same-day follow-up visits. National benchmarks fell from HEDIS 2018 to HEDIS 2019 (calendar year 2017 to calendar year 2018).

SOURCE: RTI analysis of 2016 through 2018 HEDIS measures.

As shown in ***Figure 3***, two ICOs—Aetna Better Health and Meridian—improved performance on controlling HbA1c levels (<8.0 percent) from 2016 to 2018, whereas performance worsened for remaining ICOs.

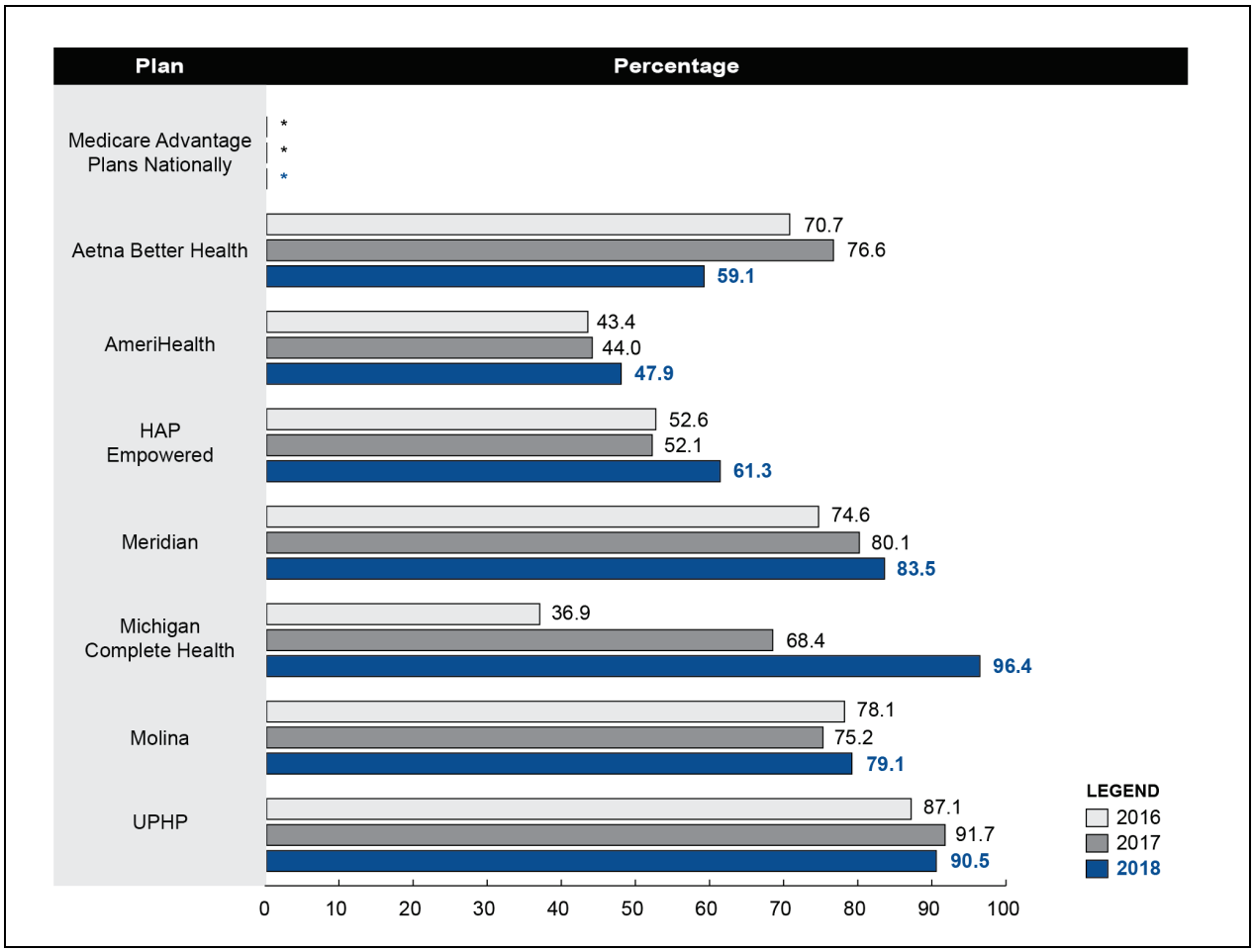
Figure 3
Good control of HbA1c level (<8.0%), 2016–2018:
Reported performance rates for Michigan ICOs



HAP = Health Alliance Plan; HEDIS = Healthcare Effectiveness Data and Information Set; ICO = Integrated Care Organization; UPHP = Upper Peninsula Health Plan.
SOURCE: RTI analysis of 2016 through 2018 HEDIS measures.

Figure 4 shows that for medication review (one of the Care for Older Adults measures), almost all ICOs improved performance from 2016 to 2018. National MA plan mean data are not available for the Care for Older Adult measures.

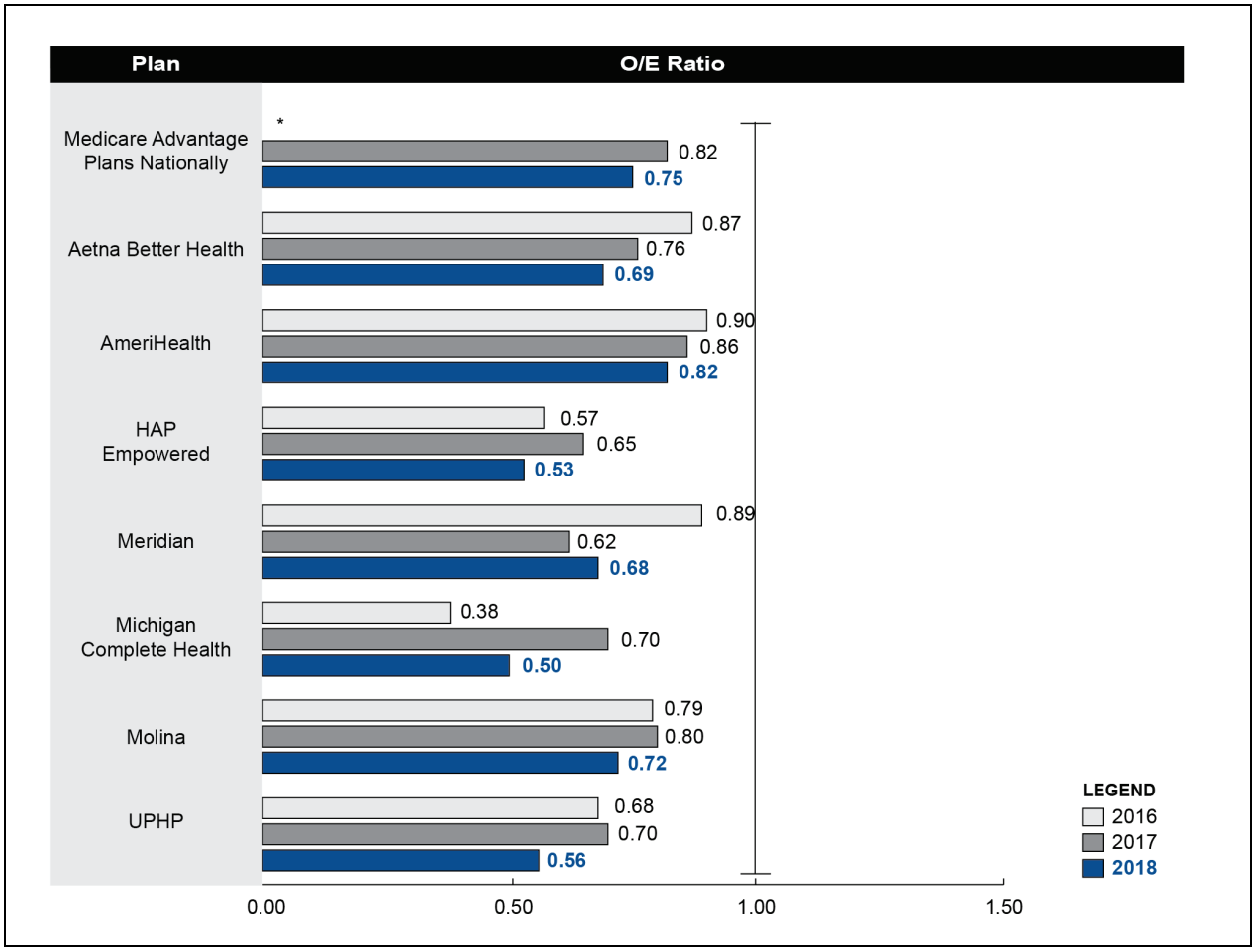
Figure 4
Medication review (one of the Care for Older Adults measures), 2016–2018: Reported performance rates for Michigan ICOs



* = not available, where MA plans nationally did not provide HEDIS data for this measure; HAP = Health Alliance Plan; HEDIS = Healthcare Effectiveness Data and Information Set; ICO = Integrated Care Organization; MA = Medicare Advantage; UPHP = Upper Peninsula Health Plan.
SOURCE: RTI analysis of 2016 through 2018 HEDIS measures.

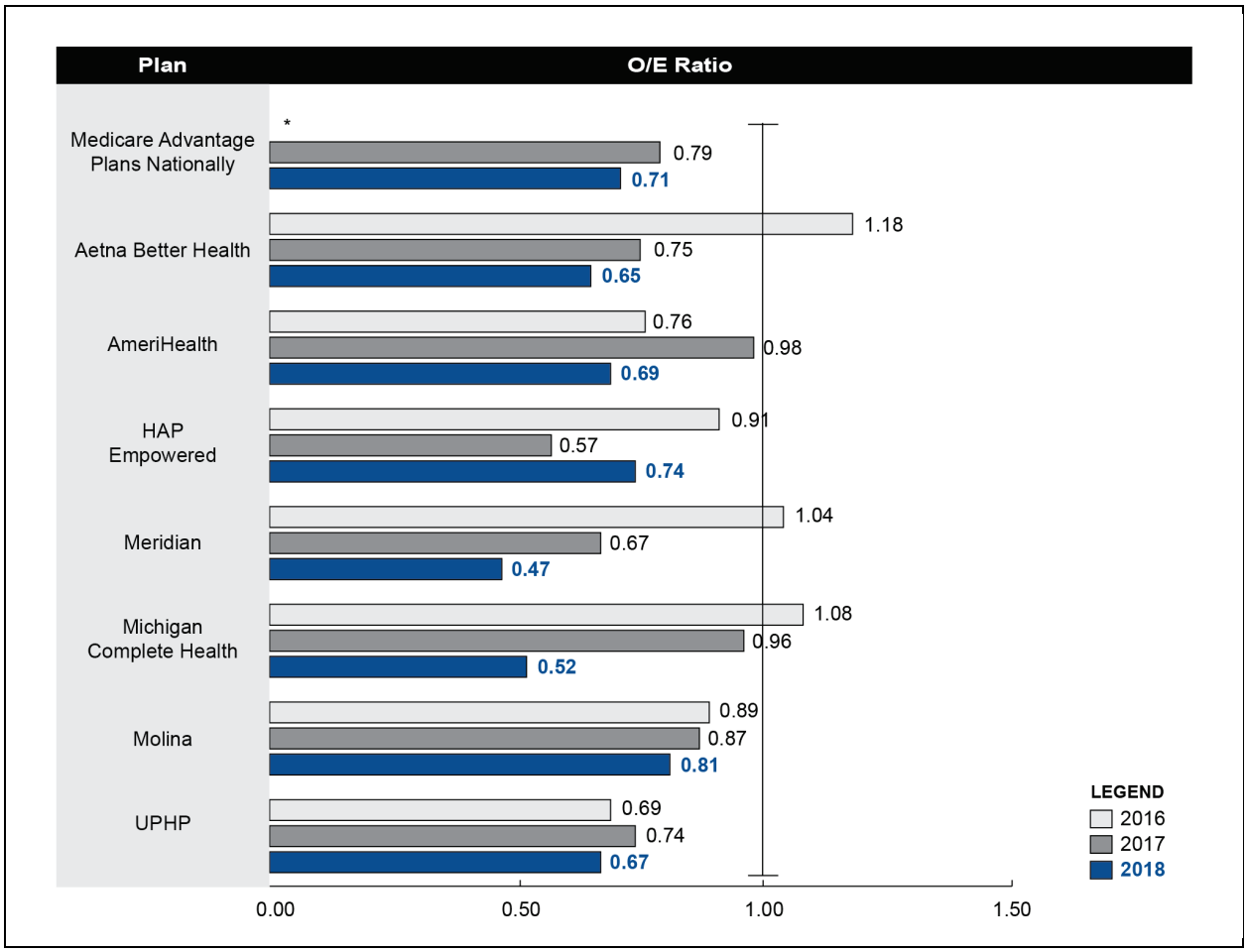
Plan all-cause readmissions for enrollees ages 18–64 and 65+ are reported in ***Figure 5*** and ***Figure 6***, respectively, as an observed-to-expected ratio, whereby an MMP's observed readmission rate is compared to its expected readmission rate given its beneficiary case mix. A value below 1.0 (shown by the vertical line at $x = 1$) is favorable and indicates that MMPs had fewer readmissions than expected for their populations based on case mix. ***Figure 5*** shows that all ICOs reported lower than expected readmissions for enrollees ages 18–64 across all years, and performance during this time generally improved. ***Figure 6*** shows that some ICOs reported higher than expected readmissions for enrollees ages 65+ in 2016, but that most ICOs improved year over year performance such that by 2018, all ICOs had lower than expected readmissions.

Figure 5
Plan all-cause readmissions: Ages 18–64, 2016–2018:
Reported observed-to-expected ratios for Michigan ICOs



* = not available, where RTI did not have access to MA plan national HEDIS data for this measure; HAP = Health Alliance Plan; HEDIS = Healthcare Effectiveness Data and Information Set; ICO = Integrated Care Organization; MA = Medicare Advantage; UPHP = Upper Peninsula Health Plan.
SOURCE: RTI analysis of 2016 through 2018 HEDIS measures.

Figure 6
Plan all-cause readmissions: Ages 65+, 2016–2018:
Reported observed-to-expected ratios for Michigan ICOs



* = not available, where RTI did not have access to MA plan national HEDIS data for this measure; HAP = Health Alliance Plan; HEDIS = Healthcare Effectiveness Data and Information Set; ICO = Integrated Care Organization; MA = Medicare Advantage; UPHP = Upper Peninsula Health Plan.
SOURCE: RTI analysis of 2016 through 2018 HEDIS measures.

SECTION 4

Beneficiary Experience

During the reporting period, MI Health Link enrollees reported high satisfaction with MI Health Link.

Based on State-compiled utilization data, the MI Health Link demonstration appears to have improved access to HCBS and behavioral health services.

One of the main goals of the demonstration under the FAI is to improve the beneficiary experience accessing Medicare and Medicaid services. In this section we highlight beneficiary experience with MI Health Link, and provide information on beneficiary protections, data related to complaints and appeals, and critical incident and abuse reports.

For beneficiary experience, we draw on findings from the CAHPS survey; focus groups and individual in-depth beneficiary interviews conducted on behalf of CMS by Alan Newman Research; a State-sponsored survey conducted by Michigan State University (MSU); a survey conducted by State staff; and stakeholder interviews. See ***Appendix A*** for a full description of these data sources.

4.1 Impact of the Demonstration on Beneficiaries

4.1.1 Overall Satisfaction with MI Health Link

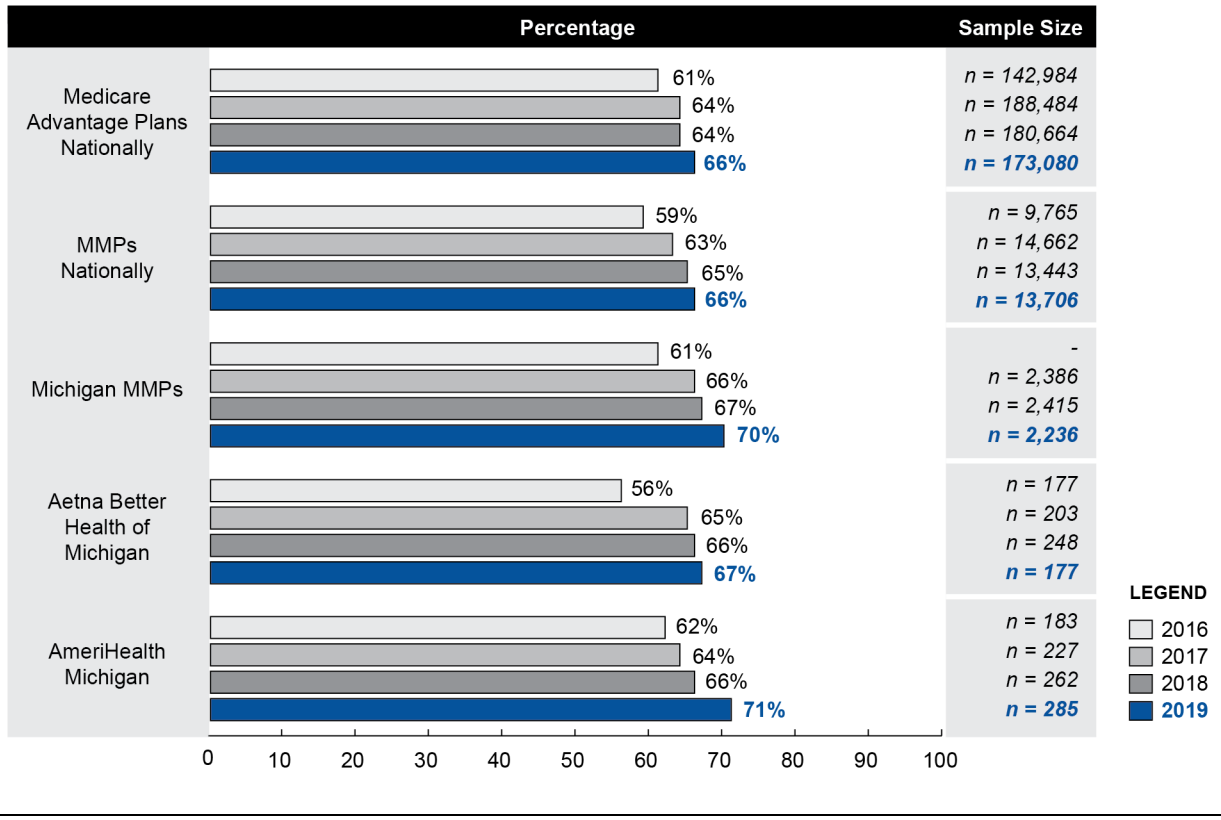
Focus groups and individual beneficiary interviews in 2019 identified the following as key reasons for high satisfaction:

- access to high quality health care providers
- additional benefits and services
- no co-pays for medical care and most prescription drugs
- free over-the-counter medical supplies

Many participants also reported positive experiences with their care coordination, describing their care coordinators as helpful and in regular communication, although some reported concerns related to care coordinator turnover or other aspects of care coordination. Participants also described having care plans that accurately summarized their needs and goals. Most participants felt their lives were positively affected by being enrolled in MI Health Link.

Figure 7 shows that the percentage of CAHPS respondents who rated their health plan as a 9 or 10 increased for all seven Michigan MMPs (ICOs) from 2016 to 2019. The percentage increased each year for four of the MMPs and varied during the time period for three of the MMPs.[23]

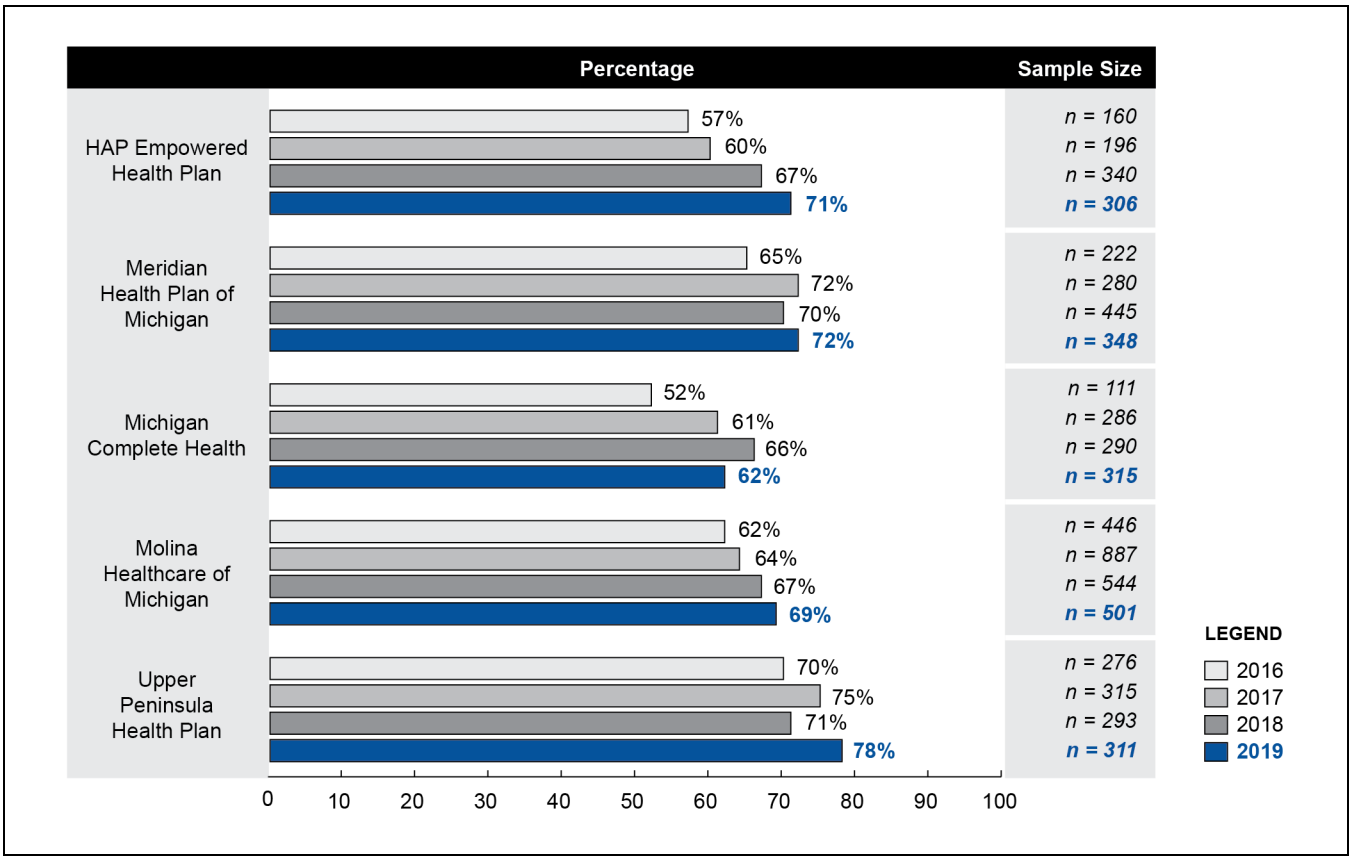
Figure 7
Beneficiary overall satisfaction, 2016–2019:
Percentage of beneficiaries rating their health plan as a 9 or 10



(continued)

[23] We provide national benchmarks from MA plans, where available, understanding that there are differences in the populations served by the MI Health Link 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.

Figure 7 (continued)
Beneficiary overall satisfaction, 2016–2019:
Percentage of beneficiaries rating their health plan as a 9 or 10



- = sample size data not available; CAHPS = Consumer Assessment of Healthcare Providers and Systems; MMP = Medicare-Medicaid Plan.
NOTE: The MMP Fidelis SecureCare of Michigan changed its name to Michigan Complete Health in 2018.
SOURCE: CAHPS data for 2016–2019. This item was case mix adjusted. The CAHPS question used for this item was: "Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your health plan?"

As shown in ***Figure 8***, the percentage of CAHPS respondents who rated their drug plan as a 9 or 10 increased for most Michigan MMPs from 2016 to 2019. However, increases were not steady from year to year for all MMPs.

Figure 8
Beneficiary overall satisfaction, 2016–2019:
Percentage of beneficiaries rating their prescription drug plan as a 9 or 10

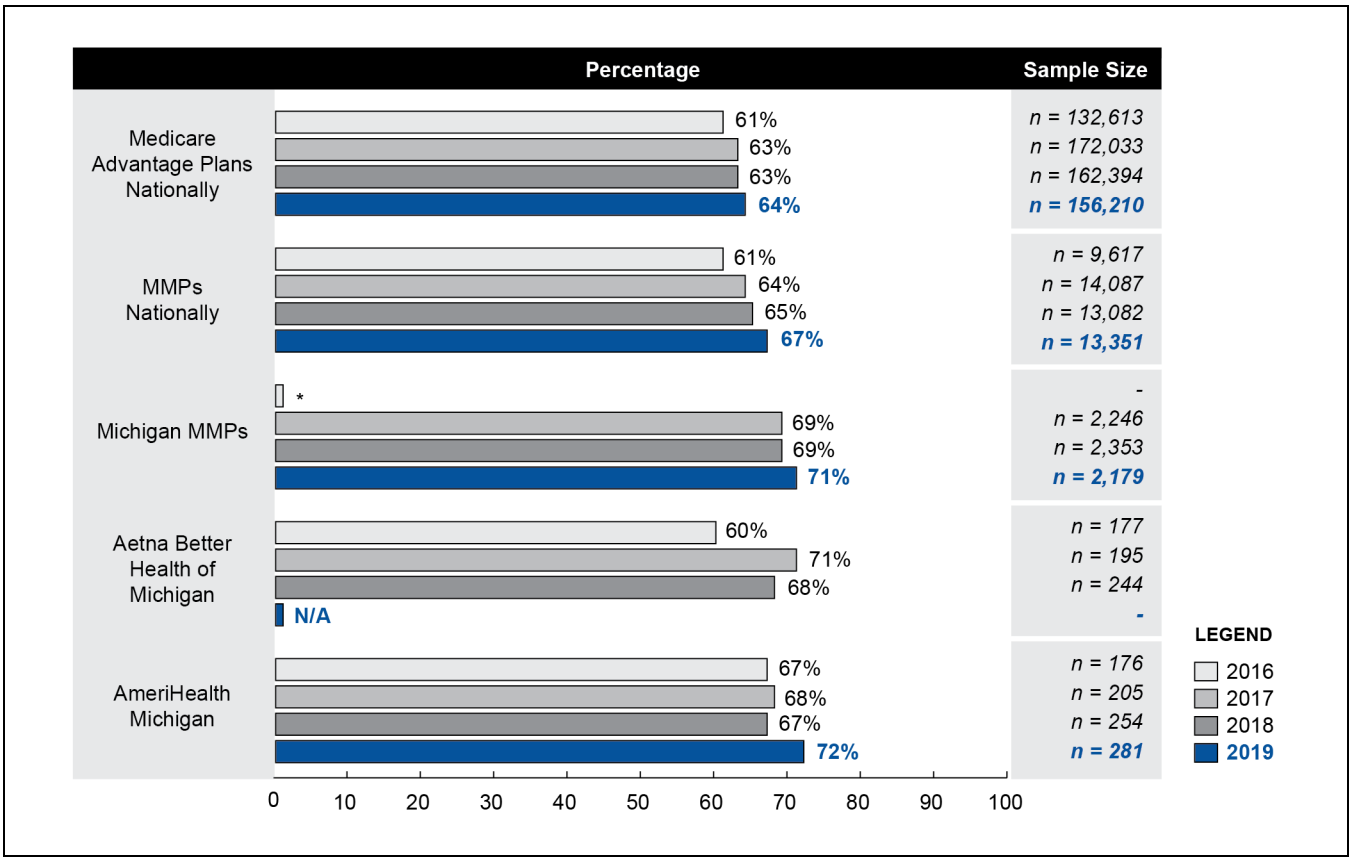


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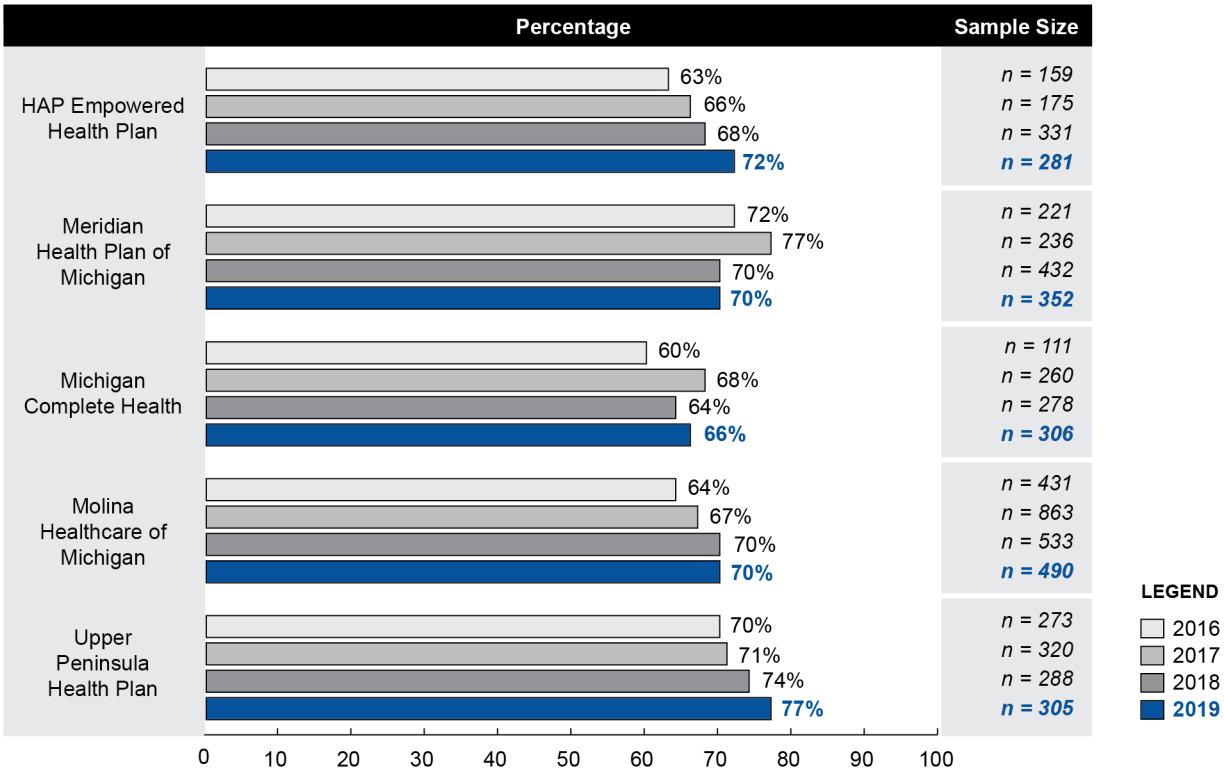
Figure 8 (continued)
Beneficiary overall satisfaction, 2016–2019:
Percentage of beneficiaries rating their prescription drug plan as a 9 or 10



* = data not available; - = sample size data not available; CAHPS = Consumer Assessment of Healthcare Providers and Systems; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; N/A = "Suppressed," i.e., when too few members provided responses (new as of 2019), or when the results have very low statistical reliability.
NOTE: The MMP Fidelis SecureCare of Michigan changed its name to Michigan Complete Health in 2018.
SOURCE: CAHPS data for 2016–2019. This item was case mix adjusted. The CAHPS question used for this item was: "Using any number from 0 to 10, where 0 is the worst prescription drug plan possible and 10 is the best prescription drug plan possible, what number would you use to rate your prescription drug plan?"

As shown in ***Figure 9***, the percentage of CAHPS respondents reporting that their health plan "usually" or "always" gave them information they needed was consistently greater than or equal to 81 percent for 2016 through 2019 for all the MMPs for which data are reported. Some MMPs' results were closer to or in the 90 percent range. The State obtained more detailed feedback on care coordination from the 2020 HCBS CAHPS survey and two other beneficiary surveys, discussed below.

Figure 9
Beneficiary experience with care coordination, 2016–2019:
Percentage of beneficiaries reporting that their health plan usually or always gave them information they needed

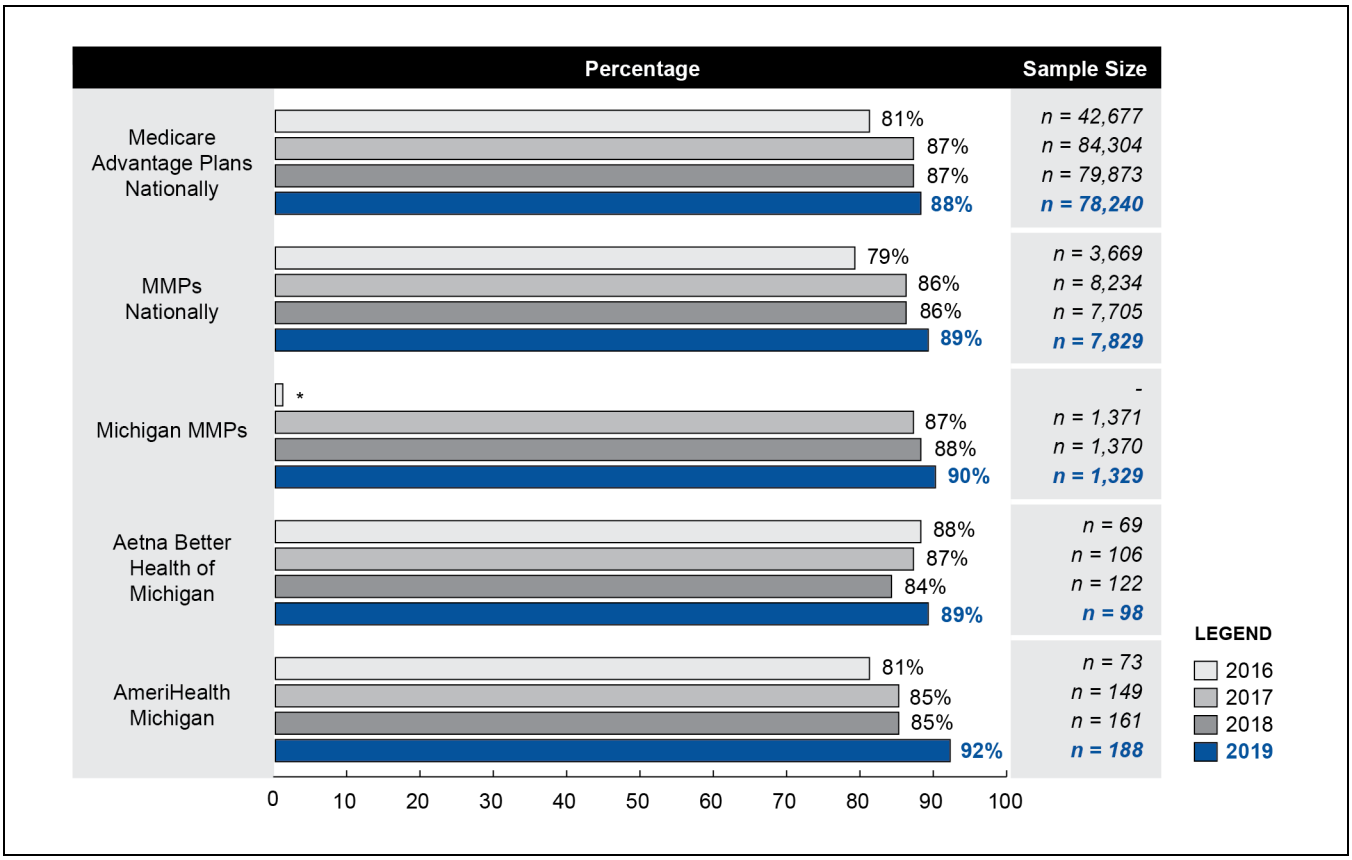


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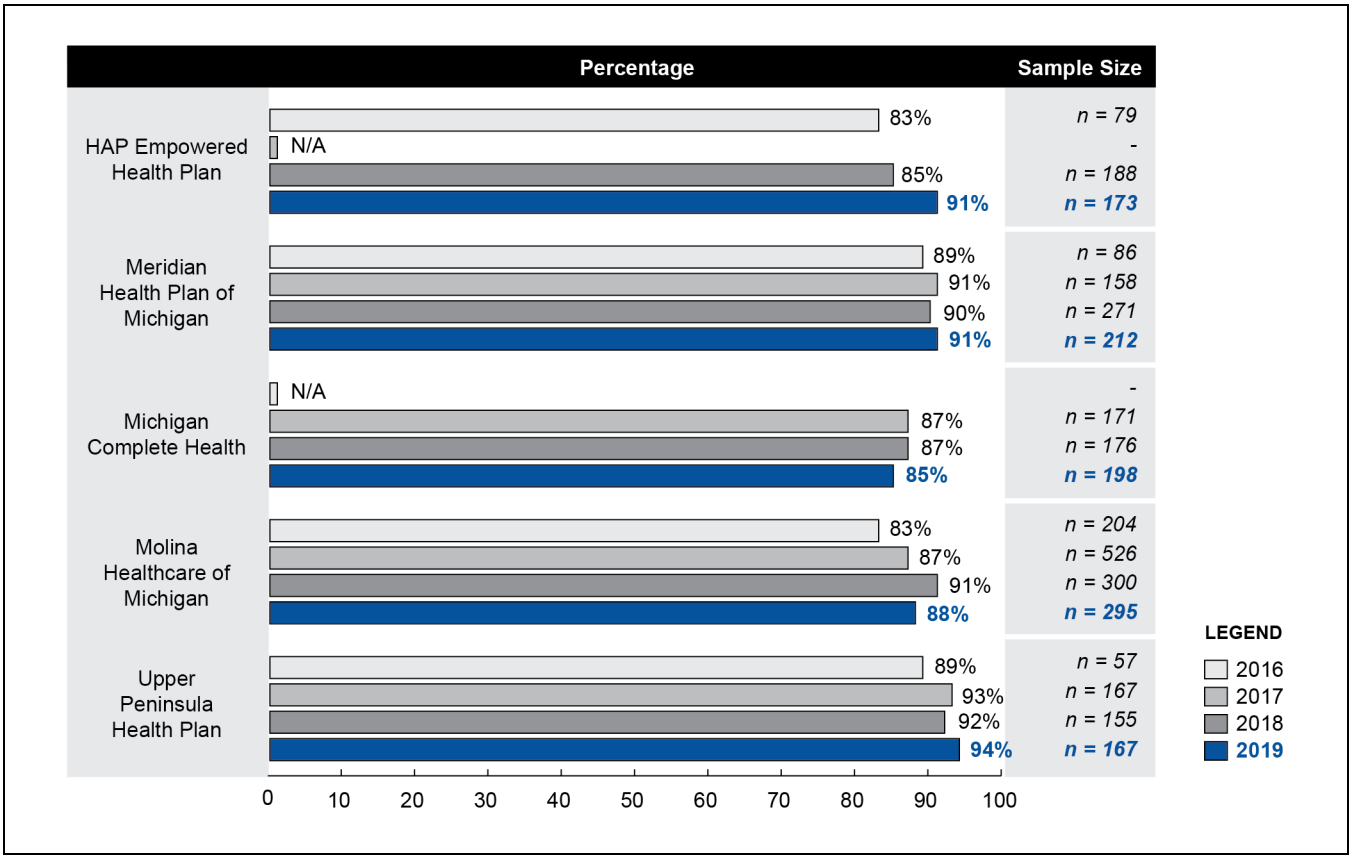
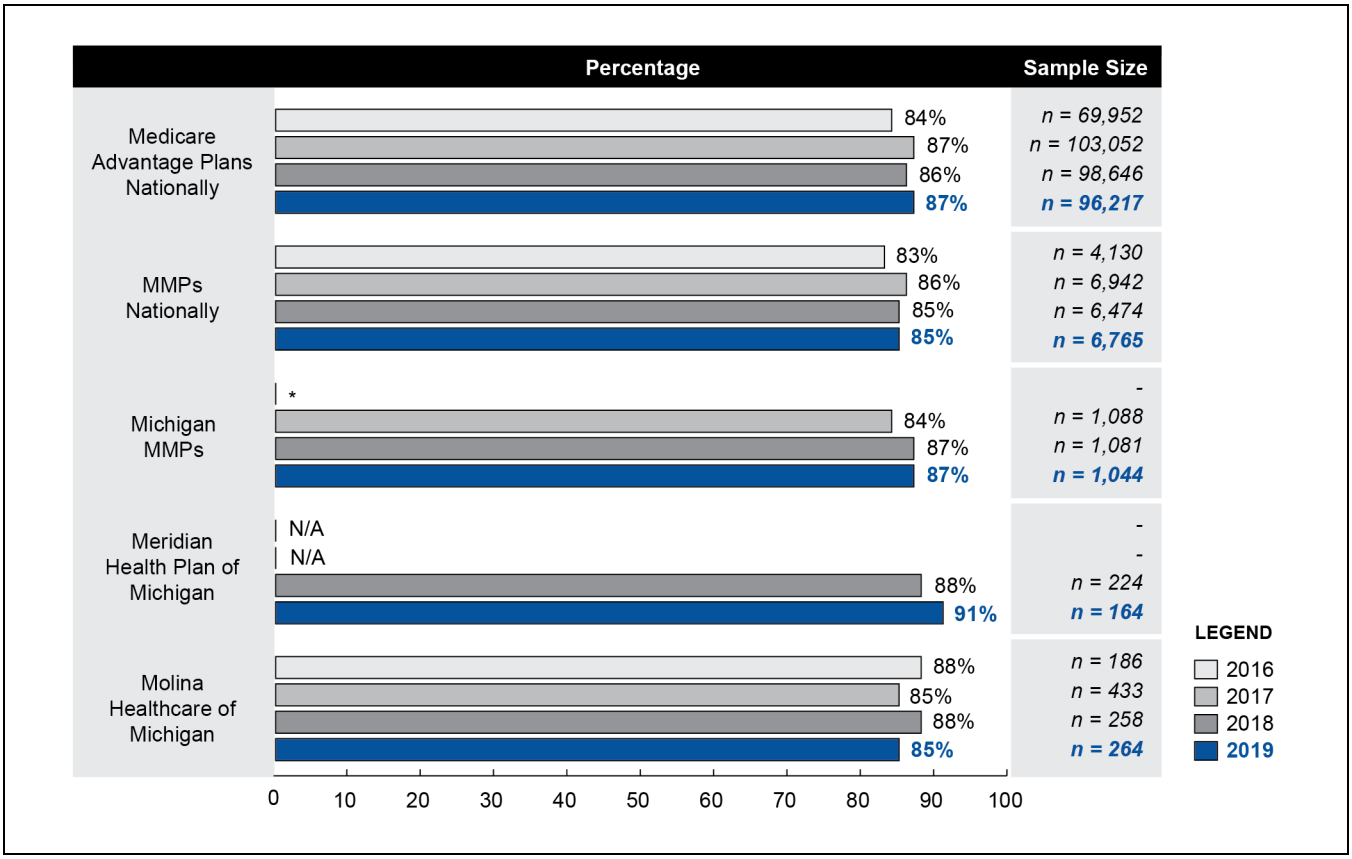
Figure 9 (continued)
Beneficiary experience with care coordination, 2016–2019:
Percentage of beneficiaries reporting that their health plan usually or always gave them information they needed



* = data not available; - = sample size data not available; CAHPS = Consumer Assessment of Healthcare Providers and Systems; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; N/A = "Suppressed," i.e., when too few members provided responses (new as of 2019), or when the results have very low statistical reliability.
NOTE: The MMP Fidelis SecureCare of Michigan changed its name to Michigan Complete Health in 2018.
SOURCE: CAHPS data for 2016–2019. The CAHPS question used for this item was: "In the last 6 months, how often did your health plan's customer service give you the information or help you needed?"

Figure 10 shows that for the two MMPs for which data were reported, the percentage of beneficiaries reporting that their personal doctors were "usually" or "always" informed about care received from specialists was similar, overall, in all the years for which data were reported. All percentages were greater than or equal to 85 percent.

Figure 10
Beneficiary experience with care coordination, 2016–2019:
Percentage of beneficiaries reporting that in the past 6 months their personal doctors were usually or always informed about care from specialists



* = data not available; - = sample size data not available; CAHPS = Consumer Assessment of Healthcare Providers and Systems; MA = Medicare Advantage; MMP = Medicare-Medicaid Plan; N/A = "Suppressed," i.e., when too few members provided responses (new as of 2019), or when the results have very low statistical reliability.
NOTES: Aetna Better Health of Michigan, AmeriHealth Michigan, HAP Empowered Health Plan, Michigan Complete Health, and Upper Peninsula Health Plan do not appear in the chart because these plans did not provide any data for any of the years for this item. The MMP Fidelis SecureCare of Michigan changed its name to Michigan Complete health in 2018.
SOURCE: CAHPS data for 2016–2019. The CAHPS question used for this item was: "In the last 6 months, how often did your personal doctor seem informed and up-to-date about the care you got from specialists?"

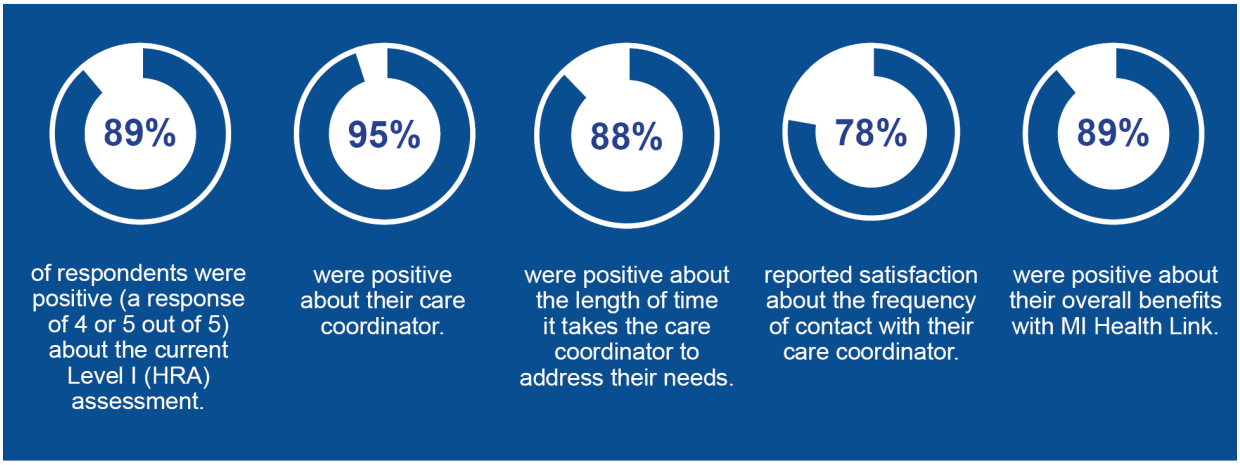
Results from the state-sponsored 2020 Adult Medicaid survey conducted by HSAG with demonstration enrollees were consistent with the Medicare CAHPS findings. Respondents were pleased with their MI Health Link plans, with 69 percent rating their ICO as a 9 or 10.

The HCBS CAHPS provided an in-depth look at the experiences of HCBS users in MI Health Link. HSAG called a sample of enrollees who received a qualifying personal care service or were currently enrolled in the MI Health Link Waiver. Respondents gave high ratings to their care coordinators (96.1 percent), personal assistance/behavioral health staff[24] (95.9 percent), and homemakers (95.5 percent). More specifically, nearly 97 percent reported their care coordinators helped them get or fix durable medical equipment, and over 98 percent reported that their care coordinators helped in getting other changes to services, such as more personal assistance or behavioral health services (HSAG, 2020b). HCBS CAHPS respondents indicated that improvements could be made in informing enrollees if personal assistance/behavioral health staff were unable to come as expected/scheduled. Respondents also reported challenges with access to transportation to medical appointments and planning their time and activities, including daily activities and having opportunities to engage with family, friends, and the community (HSAG, 2020b).

In 2020, as discussed in ***Section 3.4, Stakeholder Engagement***, the State and a partner conducted two other surveys to collect enrollee feedback, as part of the State's stakeholder engagement process for the demonstration extension. The first survey, conducted by Michigan State University for the State, obtained feedback from 471 MI Health Link enrollees on extension proposals. Key results included:

[24] These are in-home behavioral health staff such as peer supports or recovery assistants.

The second survey, soliciting feedback on satisfaction with MI Health Link, including care coordination, was conducted by State staff and was less formal. A total of 678 enrollees provided feedback through an online survey or by calling in during "office hours." This survey found that:



4.1.2 Access to Services

As described in the First Evaluation Report, MI Health Link enrollees have access to a wide range of services, including the MI Health Link waiver, and supplemental HCBS benefits. Not only are these benefits available, but enrollees participating in the 2020 MI Adult CAHPS survey overwhelmingly agreed that they were getting needed care and getting it quickly. The average score across all seven MI Health Link ICOs was over 87 percent for both of these composite measures.

Data compiled by the State and shared with the RTI evaluation team in 2021 also shows that use of HCBS has increased. In December 2020, 2,308 enrollees participated in the MI Health Link waiver, a 94 percent increase from 1,191 enrollees in December 2017. The State indicated the ICOs felt a success during the PHE had been the continued growth in waiver enrollment. In response to the PHE, the State made temporary changes to the waiver with CMS approval, such as expanding home delivered meals and meal support services.

ICOs also offer supplemental HCBS benefits, including adaptive medical equipment and supplies, personal emergency response system, and respite, to enrollees with documented needs, regardless of level of care, including enrollees whose HCBS waiver applications are pending (CMS, 2018). State-compiled data show that the number of enrollees receiving personal emergency response systems increased from 751 in December 2017 to 1,184 in December 2020. The number of enrollees receiving adaptive medical equipment and supplies also increased, from 442 in December 2017 to 532 in December 2020. The State said in 2021 that respite, the other supplemental HCBS benefit, remained a seldom-used benefit.

As described in the First Evaluation Report, Michigan Medicaid has a large personal care program financed through the Medicaid State Plan option. During the fourth quarter of 2020, 7,583 enrollees used State Plan personal care services, 11 percent more than during the first

quarter of 2019 (MDHHS, 2020). ICOs reported challenges in arranging personal care services in rural areas of the state in 2020, due to staffing shortages. A PHE-specific challenge mentioned by a beneficiary advocate was ensuring personal care providers going into beneficiaries' homes could do so safely, with personal protective equipment (PPE). To offset some of these unique challenges resulting from the PHE, between April and December 2020, a State policy increased direct care worker wages by $2 per hour. Additionally, a stakeholder and two ICOs reported sharing PPE with providers to ensure adequate supply and safety and to offset associated costs.

Interviewees continued to express mixed reviews of transportation services, which are considered better than before the demonstration but not as reliable as needed. One ICO said in 2019 that they improved their transportation services by renegotiating their vendor contract; other ICOs made similar improvements earlier in the demonstration (see ***Section 3.1.2, Integrated Delivery System***, and the First Evaluation Report for details). One advocate in 2020 listed improved access to transportation as one of the biggest impacts of the demonstration. Another advocate agreed in 2020 that access has improved but said it remains a challenge. Focus group participants also expressed mixed views on transportation.

Similarly, although the ICOs had contracted with more dental providers and in some cases began offering additional dental benefits (see the First Evaluation Report for additional details), access to dental care remained a challenge, especially among beneficiaries residing in the Upper Peninsula. In 2020, according to data shared by the State with RTI in 2021, 6,236 enrollees received dental care.

There was little change in the number of enrollees using behavioral health services during this reporting period, although State officials said that the ICOs have done a good job of identifying enrollees with unmet needs and referring them to the PIHPs. As discussed in ***Section 3.1, Integration of Medicare and Medicaid***, Michigan retained the existing carve-out for the PIHPs to manage behavioral health services and the Habilitation Supports waiver (HSW), which serves enrollees with an I/DD who meet the ICF/IDD level of care. Despite challenges in coordination between the ICOs and PIHPs, in 2021 State officials said the demonstration has increased access to behavioral services by identifying new enrollees with unmet needs and referring them to the PIHPs within 12 months of enrollment.

The State monitors enrollment of HSW participants in MI Health Link. Early in the demonstration, most HSW participants opted out of the demonstration, but several hundred remained in MI Health Link and others have opted in. State utilization data showed that enrollment of HSW participants remained steady between 2018 and 2020, with approximately 280 individuals enrolled in MI Health Link. One-half of those participants were enrolled in one ICO. The State said that ICO works well with its provider partners, and has been effective in identifying enrollees' needs, coordinating care, and honoring person-centered wishes. As a result, HSW participants enrolled in this ICO were more likely to remain in the ICO and MI Health Link.

In 2020, one ICO reported that a few enrollees had been switched from HSW to the MI Health Link Waiver. As the State explained, in rare instances such as these, enrollees were switched because they no longer met functional eligibility for the HSW but did meet the criteria for the MI Health Link waiver. The ICO expressed concern that the MI Health Link Waiver rate

development did not account for enrollees with the high level of needs that are associated with this population.

4.2 Beneficiary Protections

In this section we describe the beneficiary protections available to demonstration enrollees and enrollees' awareness and use of those protections. We also include a summary of grievance (complaint) and appeals data received from the sources outlined in ***Table 9*** and qualitative information collected by the RTI evaluation team.

Table 9
Beneficiary protections measures

Measure	Explanation	Data source(s)	Reporting period
Grievance or complaint	Enrollees have the right to file a grievance with their Medicare-Medicaid Plan (MMP) at any time. A grievance is a complaint or a dispute expressing dissatisfaction with the MMP or a provider, regardless of whether the enrollee is requesting a remedial action. Grievances are resolved at the MMP level.	Data reported by MMPs to CMS' Financial Alignment Initiative (FAI) implementation contractor, NORC	2015–2020
		CMS Complaint Tracking Module (CTM) for complaints received by the Michigan Department of Health and Human Services and 1-800-Medicare[1]	2015–2020
Appeal	Enrollees have the right to appeal an MMP's decision to deny, terminate, suspend, or reduce services. Appeals are resolved at the MMP or Independent Review Entity (IRE) level.	Data reported by MMPs to CMS' FAI implementation contractor, NORC	2015–2020
		IRE, a second-level review of Medicare appeals[2]	2015–2020
Critical incidents and abuse reports	Critical incidents refer to any actual or alleged event or situation that creates a significant risk of substantial harm to the physical or mental health, safety or well-being of a member. Abuse refers to: Willful use of offensive, abusive, or demeaning language by a caretaker that causes mental anguish; knowing, reckless, or intentional acts or failures to act which cause injury or death to an individual or which places that individual at risk of injury or death.[3]	Data reported by MMPs to CMS' FAI implementation contractor, NORC	2015–2020

[1] Data obtained from the Complaints Tracking Module (CTM) within CMS's Health Plan Management System by RTI.
[2] Data provided to RTI by CMS.
[3] For a full definition, please see https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/MMPInformationandGuidance/Downloads/CoreReportingReqsCY2020.pdf

State officials said in 2020 that grievance and appeal volumes have been fairly low throughout the demonstration. They said that the EQRO paid close attention to grievances and appeals during the compliance review in 2019 (see ***Section 3.6, Quality of Care***). The EQRO identified opportunities for improvement related to providing notices when services had been terminated, suspended, or reduced, and when there had been a denial of payment (HSAG, 2020c, pp. 6-10–6-11).

Advocates also noted the low volume of grievances and appeals, although they identified some issues which may have impacted enrollees' ability to exercise their right to file grievances and appeal decisions. They said some ICOs did not understand that they needed to send a notice when an enrollee's personal care hours were reduced; some ICOs and vendors were using outdated denial notices; and one plan's denial notice did not explain how to appeal. Once aware of these issues, the CMT addressed these concerns with ICOs during both monthly CMT calls with individual ICOs and in an operations meeting with all of the ICOs. Additionally, the State invited MHLO (see ***Section 3.4, Stakeholder Engagement***) to help conduct training on denial notices for the ICOs during 2020, and MHLO compiled a toolkit on timeliness of denial notices. The training was postponed due to the PHE; State officials said in 2021 that it will be scheduled when normal operations resume. In 2021, the State began sending outreach letters to new enrollees, informing them about MHLO and its role in assisting MI Health Link enrollees.

Over the course of the demonstration, the analysis method for plan-reported grievances has changed.[25] From 2015 through 2017, the total number of grievances per 1,000 enrollees varied across quarters. In 2015, the beginning of the demonstration, they varied more than in other years, ranging from 4.3 to 32.6 per 1,000 enrollees. In 2016 and 2017, grievances were more consistent, ranging from 12.1 to 19.2 per 1,000 enrollees. From 2018 through 2020, the number of grievances per 10,000 enrollee months increased overall, from 62.7 in quarter 1 of 2018 to 113.6 in quarter 4 of 2020.

Data reported to the CTM for the period 2015–2020 show that the number of complaints initially decreased and then increased slightly. The highest number of complaints (157) were reported in 2015 and the lowest number (9) were reported in 2017. The highest number of complaints in 2015, 2016, 2018, 2019, and 2020—113, 36, 41, 29, and 36 complaints, respectively—were in the enrollment and disenrollment category.[26] In 2017, there were seven complaints in the benefits, access, and quality of care[27] category, the highest number of complaints for any category in that year.

As with grievance data, the analysis method for appeals data changed during the demonstration.[28] From 2015 through 2017, the number of MMP-reported appeals per 1,000 enrollees remained low, ranging from 0.1 to 10.9 per 1,000 enrollees. From 2018 through 2020,

[25] From 2015 through 2017, grievance data were analyzed per 1,000 enrollees. Effective January 2018, the method changed to analyze grievances per 10,000 enrollee months.
[26] This category is defined as "Beneficiary is experiencing an enrollment issue that may require reinstatement or enrollment change, beneficiary has not received enrollment card or other membership materials."
[27] This category is defined as "Beneficiary has difficulty securing Part D prescriptions, beneficiary has concerns about a denied claim."
[28] From 2015 through 2017, appeals data were analyzed per 1,000 enrollees. Effective January 2018, the method changed to analyzed appeals per 10,000 enrollee months.

the number of appeals per 10,000 enrollee months increased from 74.3 in quarter 1 of 2018 to 114.4 in quarter 3 of 2019 and then decreased to 28.2 by quarter 4 of 2020.

A total of 1,809 appeals were reported to the IRE from 2015 through 2020. Of those, 1,236 (68.3 percent) were upheld, 194 (10.7 percent) were overturned, 10 (0.6 percent) were partially overturned, 363 (20.1 percent) were dismissed, 4 (0.2 percent) were withdrawn, and 2 (0.1 percent) were pending. The most common category of appeals referred to the IRE was for practitioner services.[29]

MMPs are required to report to CMS' implementation contractor, NORC, on the number of critical incidents and abuse reports for members receiving LTSS. For the Michigan demonstration, from 2015 to 2020, the number of critical incidents[30] and abuse reports per 1,000 members receiving LTSS increased from 0.0 in quarter 1 of 2015 to 8.4. in quarter 1 of 2019 and then decreased to 2.7 by quarter 4 of 2020.

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

SECTION 5

Demonstration Impact on Service Utilization and Quality of Care

5.1 Methods Overview

The FAI demonstrations are intended to shift utilization from inpatient to ambulatory care, from NF care to HCBS, and to improve quality of care through care coordination activities and the demonstrations' financial incentives. The analyses in this section evaluate the effects of the Michigan demonstration in demonstration years 1–3 (March 1, 2015–December 31, 2018) on service utilization and quality of care outcomes among Michigan demonstration eligible beneficiaries. Additionally, a number of modifications were made to the methodology that resulted in differences from the First Evaluation Report. First, the service utilization analyses in this section include FFS Medicare-Medicaid demonstration eligible beneficiaries only, whereas the previous analyses included eligible beneficiaries in both FFS and Medicare Advantage. Second, corrections were made to impact estimates from the First Evaluation Report that resulted in differences in our current impact estimates for demonstration year 1 (see ***Appendix D*** for additional details).

For this analysis, we used an intent-to-treat (ITT) approach that included all beneficiaries eligible for the demonstration, not just those who actually enrolled in the MMPs, to alleviate concerns of selection bias and to support generalizability of the results among the demonstration eligible population. Enrolled beneficiaries account for approximately 25 percent of all eligible beneficiaries (including FFS beneficiaries and MMP enrollees) in demonstration year 3. An ITT analysis mimics the real-world implementation of the demonstration.

We used a quasi-experimental DinD regression analysis with inverse propensity weighting to estimate the impact of the demonstration on the change in the probability or frequency of service utilization and quality of care outcomes, relative to the comparison group. Our analyses were conducted using Medicare enrollment and FFS claims data, MMP encounter data (although encounter data for Molina and HAP Empowered were not included because those data were deemed incomplete), Area Health and Resource Files, and the American Community Survey. Please see ***Appendix D*** for more detail on our analytic methodology.

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 average outcome value in the comparison group during the demonstration period. Thus, a positive DinD value may correspond to a greater increase or a smaller decrease in the outcome in the demonstration group relative to the comparison group, depending on the estimated trend in the outcome. For example, if the DinD estimate is positive and the trend is a decline in both the demonstration and comparison groups, then the interpretation of the DinD estimate is that the demonstration 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.

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). The interest is in understanding whether the demonstration might have impacted LTSS users differently than non-LTSS users. We present the demonstration effects separately for LTSS users and for non-LTSS users, and also discuss any interaction effect (the difference between the two effects). 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 E***.

5.2 Demonstration Impact on Service Utilization Among Eligible Beneficiaries

Overall, the demonstration increased the number of physician visits by 8.9 percent, relative to the comparison group. However, the demonstration also increased the annual probability of having any long-stay NF use by 15.4 percent, relative to the comparison group.

5.2.1 Cumulative Impact Over Demonstration Years 1–3

The goal of the Michigan demonstration is to develop person-centered care delivery models integrating the full range of medical services, behavioral health services, and LTSS for Medicare-Medicaid enrollees ages 21 and older. The expectation is that this integrated delivery model will help improve access to care, reduce hospitalizations and long-stay NF stays, and improve quality of care.

Table 10 shows the cumulative impacts of the demonstration on service utilization. Monthly physician evaluation and management (E&M) visits increased more in the demonstration group, relative to the comparison group, a favorable finding for the demonstration. However, counter to the goals of the demonstration, there also was an increase in the probability of any long-stay NF use, relative to the comparison group. There was no demonstration effect on the monthly probability of any emergency department (ED) visit, inpatient admission, or skilled nursing facility (SNF) admission.

- The cumulative demonstration effect on the monthly number of physician E&M visits was an increase of 0.0833 visits, relative to the comparison group. This monthly increase represents a relative difference of 8.9 percent of the predicted count of physician visits in the comparison group during the demonstration period. The annualized increase in the count of physician visits was 0.9996 visits (not shown) per year per beneficiary (derived by 0.0833*12), relative to the comparison group.

  - These findings are consistent with what the expected effect of the demonstration would be on access to physician E&M services. The First Evaluation Report highlighted improvements in care plan completion rates from 2015 through 2017, which may have helped facilitate more frequent visits to a primary care provider. Indeed, the percent of enrollee months with any physician E&M visit increased from 43.7 to 45 percent from demonstration year 1 to 3 (see ***Appendix Table E-7***), suggesting modest improvements in access to care. By contrast, the predicted count of monthly physician E&M visits in the comparison population declined from 0.9633 to 0.9391 visits from the baseline period through the demonstration period (***Table 10***).

- Although the probability of any long-stay NF admissions decreased over the course of the demonstration, the decrease in the comparison group was greater, suggesting that the demonstration did not have the anticipated impact on reducing NF use. The relative difference is a 15.4 percent increase relative to the average predicated probability of any long-stay use in the comparison group during the demonstration period (***Table 10***).
  - The decrease in NF use in both the demonstration and comparison groups is consistent with broader national trends of moving toward community-based LTSS (Degenholtz et al., 2016; Toth et al., 2021).
  - The limited progress relative to the comparison group on reducing long-stay NF use corresponds to LTSS advocate feedback on MI Health Link:
    - As discussed in ***Section 3.3.4, LTSS Coordination***, a review by the MHLO was unable to document any advantages for MI Health Link enrollees residing in NFs; one LTSS advocate indicated that ICOs were not facilitating the NF transitions as was hoped.
    - Moreover, as discussed in the First Evaluation Report, ensuring access to HCBS services was a challenge early in the demonstration due to enrollment and eligibility determination delays. These delays may have made it more difficult to ensure that members would receive needed HCBS services after transitioning from an NF.

Table 10
Cumulative demonstration impact on select service utilization measures for eligible beneficiaries in Michigan, demonstration years 1–3, March 1, 2015–December 31, 2018

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	0.0372	0.0331	NS	–0.0012 (–0.0028, 0.0004)	0.1374
	Comparison	0.0404	0.0371			
Probability of ED visit	Demonstration	0.0668	0.0682	NS	0.0001 (–0.0037, 0.0038)	0.9764
	Comparison	0.0659	0.0673			

continued)

Table 10 (continued)
Cumulative demonstration impact on select service utilization measures for eligible beneficiaries in Michigan, demonstration years 1–3, March 1, 2015–December 31, 2018

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 physician E&M visits	Demonstration	1.0459	1.0943	8.9	0.0833* (0.0173, 0.1493)	0.0134
	Comparison	0.9633	0.9391			
Probability of SNF admission	Demonstration	0.0088	0.0079	NS	0.0003 (–0.0004, 0.0011)	0.3580
	Comparison	0.0100	0.0087			
Probability of any long-stay NF use	Demonstration	0.1190	0.1072	15.4	0.0142*** (0.0079, 0.0204)	<0.0001
	Comparison	0.1181	0.0923			

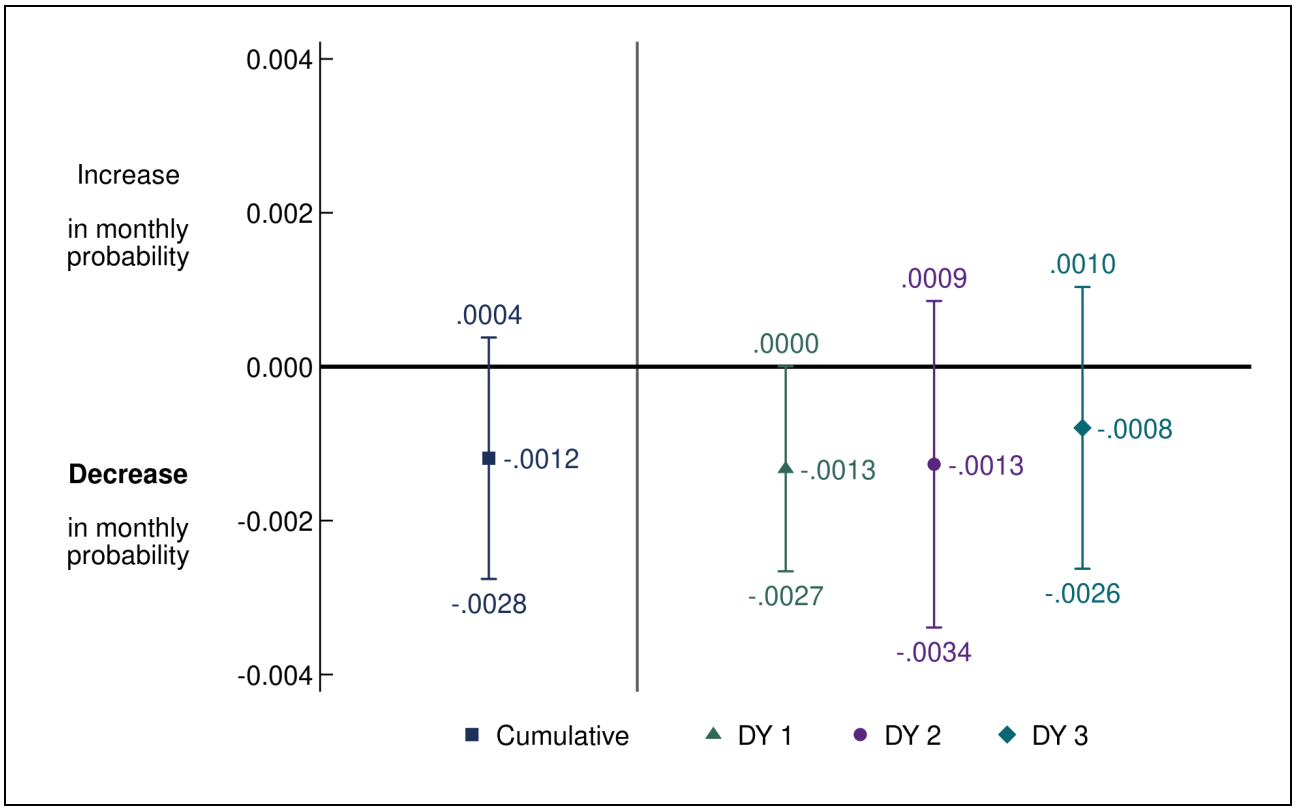
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$
DinD = difference-in-differences; ED = emergency department; E&M = evaluation and management; NF = nursing facility; NS = not statistically significant; SNF = skilled nursing facility.
NOTES: The adjusted mean is the regression-adjusted predicted probability or number of events for the predemonstration and demonstration periods for the demonstration and comparison groups. The *relative difference* is calculated by dividing the DinD estimate (column heading *Regression-adjusted DinD estimate*) by the predicted average for the comparison group in the demonstration period (column heading *Adjusted mean for demonstration period).* The magnitude of a relative difference could be large when the underlying denominator is small. In such cases, the relative difference should be interpreted with caution.
SOURCE: RTI International analysis of Medicare fee-for-service claims and encounter data, and Minimum Data Set data.

5.2.2 Demonstration Impact in Each Demonstration Year

Figures 11–15 show annual effects of the demonstration on all-cause inpatient admissions, ED visits, physician visits, SNF admissions, and long-stay NF use, respectively, with the cumulative effects also included as points of comparison. These annual impact estimates indicate that the Michigan demonstration increased the monthly count of physician visits in each of the demonstration years, as well as the probability of any long-stay NF use in demonstration years 1–3, but had no impact on the other measures.

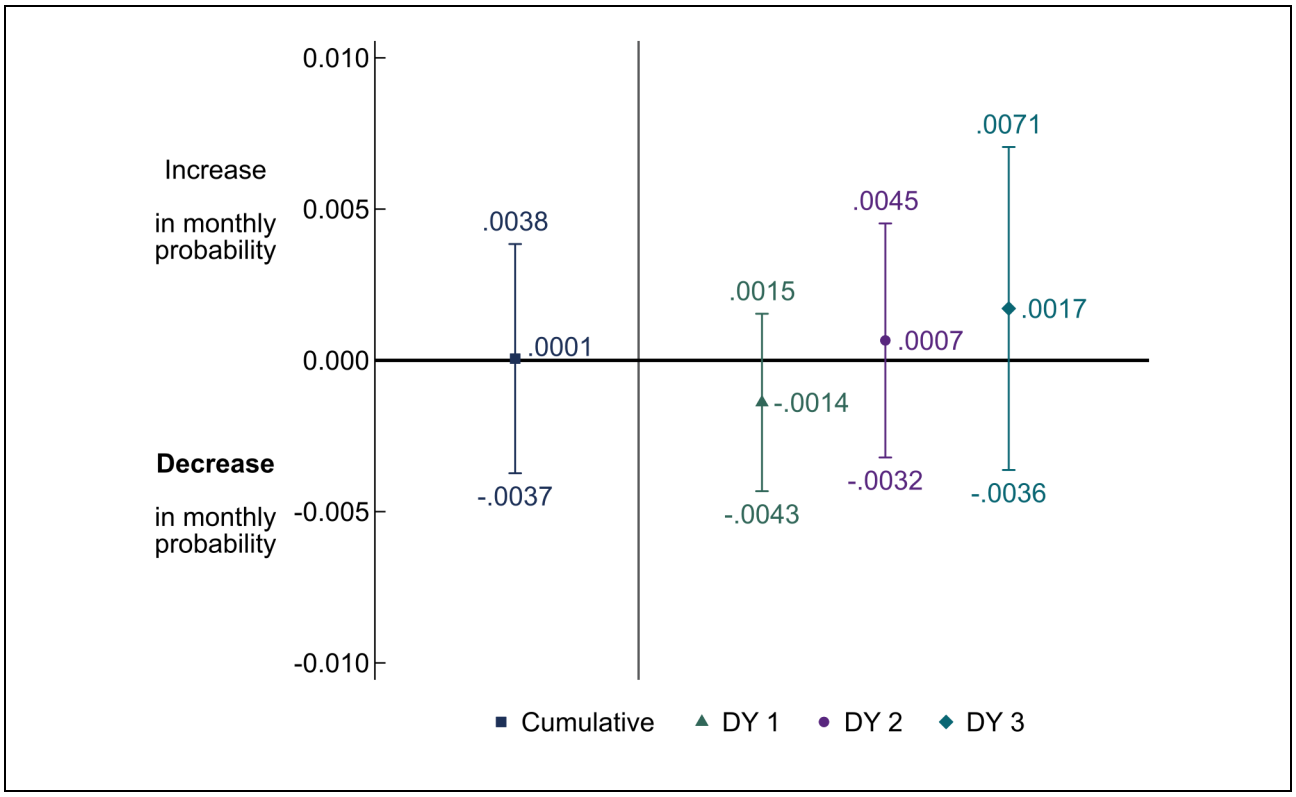
- The Michigan demonstration increased the count of physician E&M visits in demonstration years 1 through 3 by 0.0843, 0.0895, and 0.0765 visits per month per beneficiary, respectively, relative to the comparison group (***Figure 13***). These favorable annual findings are consistent with the cumulative findings.
- The demonstration increased the annual probability of any long-stay NF use in demonstration years 1 through 3, relative to the comparison group, by 1.71, 1.33, and 1.26 percentage points, respectively (***Figure 15***).
  - Despite a favorable impact on monthly physician visits, there were no effects on any acute or post-acute service utilization. The probability of any long-stay NF visit increased during each of the demonstration years. Similar to the cumulative impact estimates, these findings highlight the challenges in ICOs faced in improving access to community-based LTSS and facilitating discharges among members in an NF.

Figure 11
Cumulative and annual demonstration effects on inpatient admissions, demonstration years 1–3, March 1, 2015–December 31, 2018



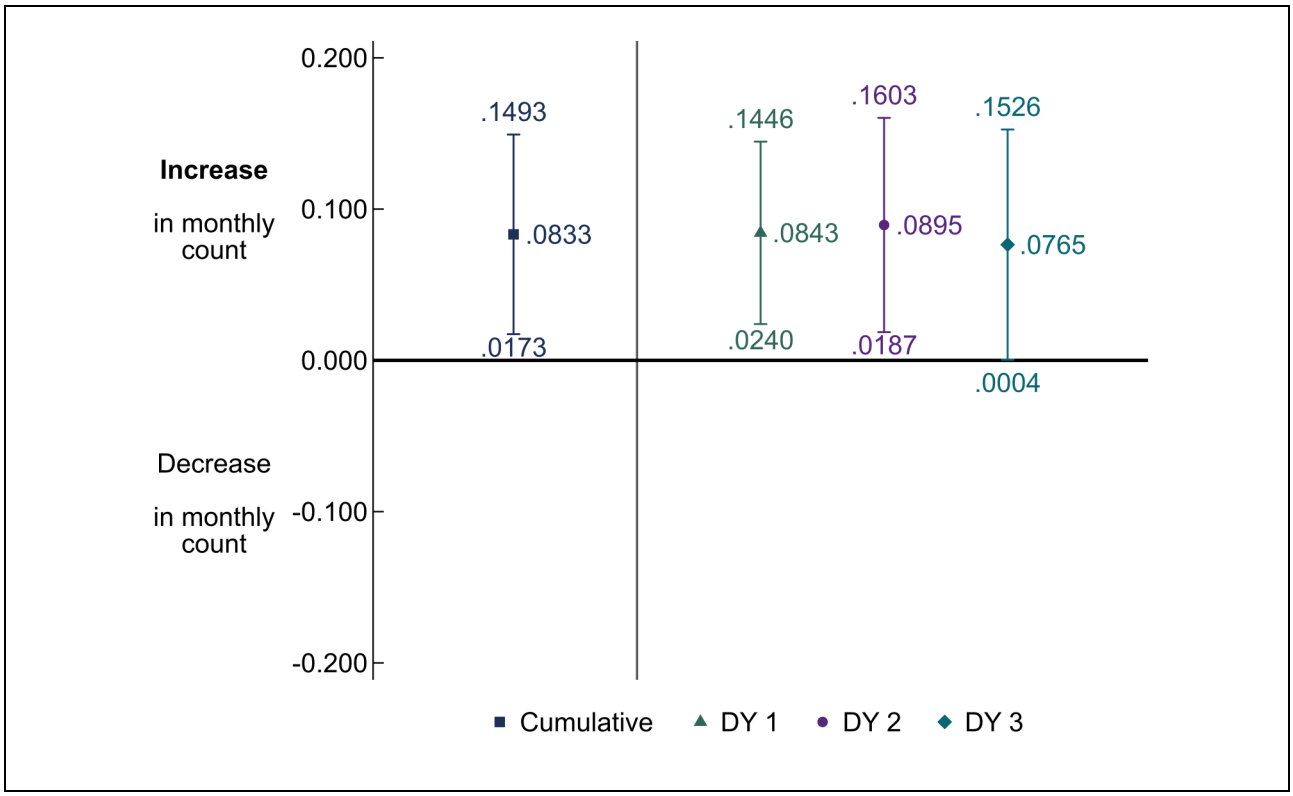
DY = demonstration year.
NOTE: 95 percent confidence intervals are shown. The expected direction of the effect (Increase or Decrease) is in **bold**.
SOURCE: RTI International analysis of Medicare fee-for-service claims and encounter data.

Figure 12
Cumulative and annual demonstration effects on ED visits, demonstration years 1–3, March 1, 2015–December 31, 2018



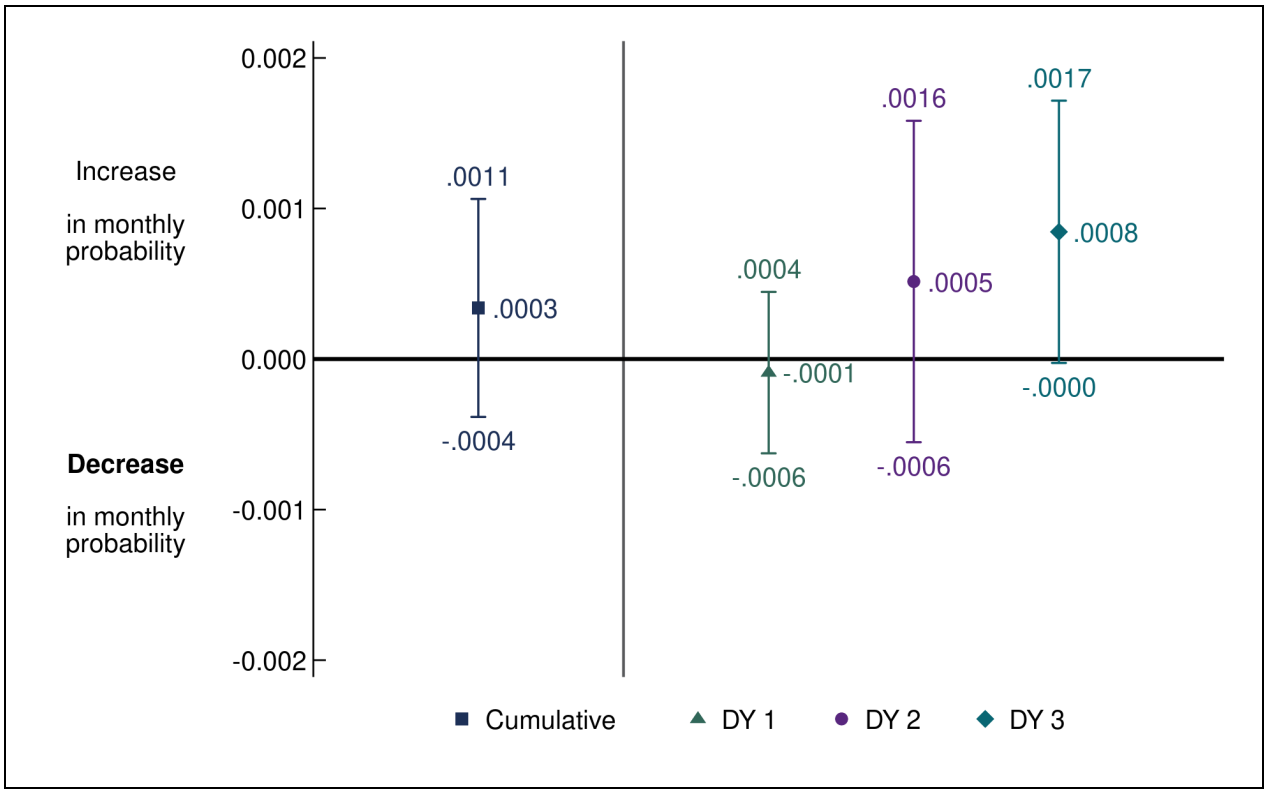
DY = demonstration year; ED = emergency department.
NOTE: 95 percent confidence intervals are shown. The expected direction of the effect (Increase or Decrease) is in **bold**.
SOURCE: RTI International analysis of Medicare fee-for-service claims and encounter data.

Figure 13
Cumulative and annual demonstration effects on physician E&M visits, demonstration years 1–3, March 1, 2015–December 31, 2018



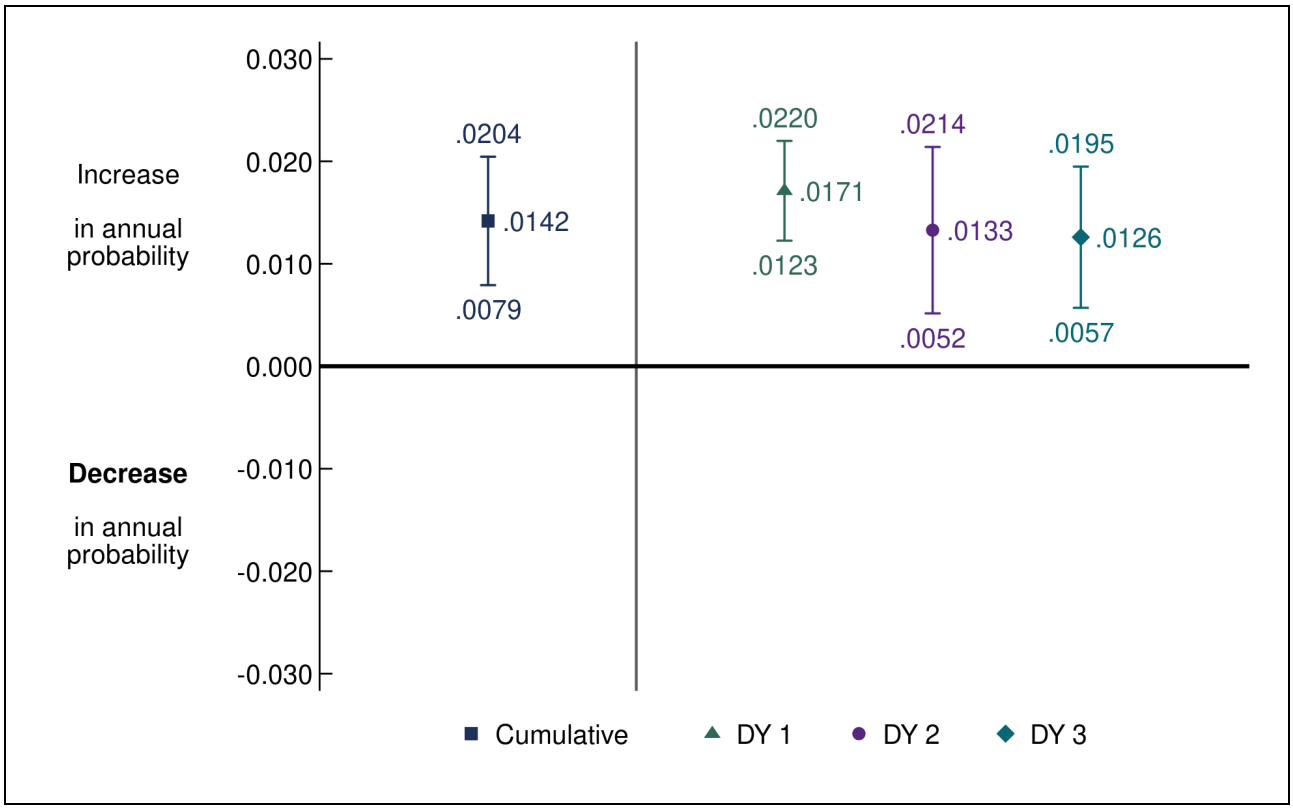
DY = demonstration year; E&M = evaluation and management.
NOTE: 95 percent confidence intervals are shown. The expected direction of the effect (Increase or Decrease) is in **bold**.
SOURCE: RTI International analysis of Medicare fee-for-service claims and encounter data.

Figure 14
Cumulative and annual demonstration effects on SNF admissions, demonstration years 1–3, March 1, 2015–December 31, 2018



DY = demonstration year; NF = nursing facility.
NOTE: 95 percent confidence intervals are shown. The expected direction of the effect (Increase or Decrease) is in **bold**.
SOURCE: RTI International analysis of Minimum Data Set data.

Figure 15
Cumulative and annual demonstration effects on long-stay NF use, demonstration years 1–3, March 1, 2015–December 31, 2018



DY = demonstration year; NF = nursing facility.
NOTE: 95 percent confidence intervals are shown. The expected direction of the effect (Increase or Decrease) is in **bold**.
SOURCE: RTI International analysis of Minimum Data Set data.

5.3 Demonstration Impact on Quality of Care Among Eligible Beneficiaries

There was no cumulative impact of the demonstration on quality of care measures in the first three years of the demonstration.

5.3.1 Cumulative Impact Over Demonstration Years 1–3

The Michigan demonstration is expected to increase quality of care, as a result of care coordination and increased access to physician services. However, there was no cumulative impact consistent with these goals over the first 3 years of the demonstration, as evaluated by several common measures of medical quality of care. ***Table 11*** illustrates the cumulative impact and adjusted means for these measures.

As described in the First Evaluation Report, the ICOs faced challenges early in the demonstration in completing health risk assessments and care plans within 90 days. Care coordination has remained a challenge, in part due to staffing turnover (see ***Section 3.3 Care Coordination***), perhaps limiting any potential favorable impact on any quality of care measures.

Table 11
Cumulative demonstration impact on select quality of care measures for eligible beneficiaries in Michigan, demonstration years 1–3, March 1, 2015–December 31, 2018

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	0.0412	0.0433	NS	0.0010 (–0.0016, 0.0036)	0.4409
	Comparison	0.0403	0.0414			
Probability of ACSC admission, overall	Demonstration	0.0060	0.0060	NS	0.0001 (–0.0006, 0.0008)	0.7179
	Comparison	0.0069	0.0069			
Probability of ACSC admission, chronic	Demonstration	0.0041	0.0045	NS	0.0001 (–0.0004, 0.0006)	0.7683
	Comparison	0.0047	0.0050			
Probability of 30-day follow-up after mental health discharge	Demonstration	0.4532	0.3947	NS	0.0076 (–0.0153, 0.0304)	0.5174
	Comparison	0.4238	0.3593			
Count of all-cause 30-day readmissions	Demonstration	0.2583	0.2461	NS	0.0016 (–0.0088, 0.0121)	0.7586
	Comparison	0.2654	0.2513			

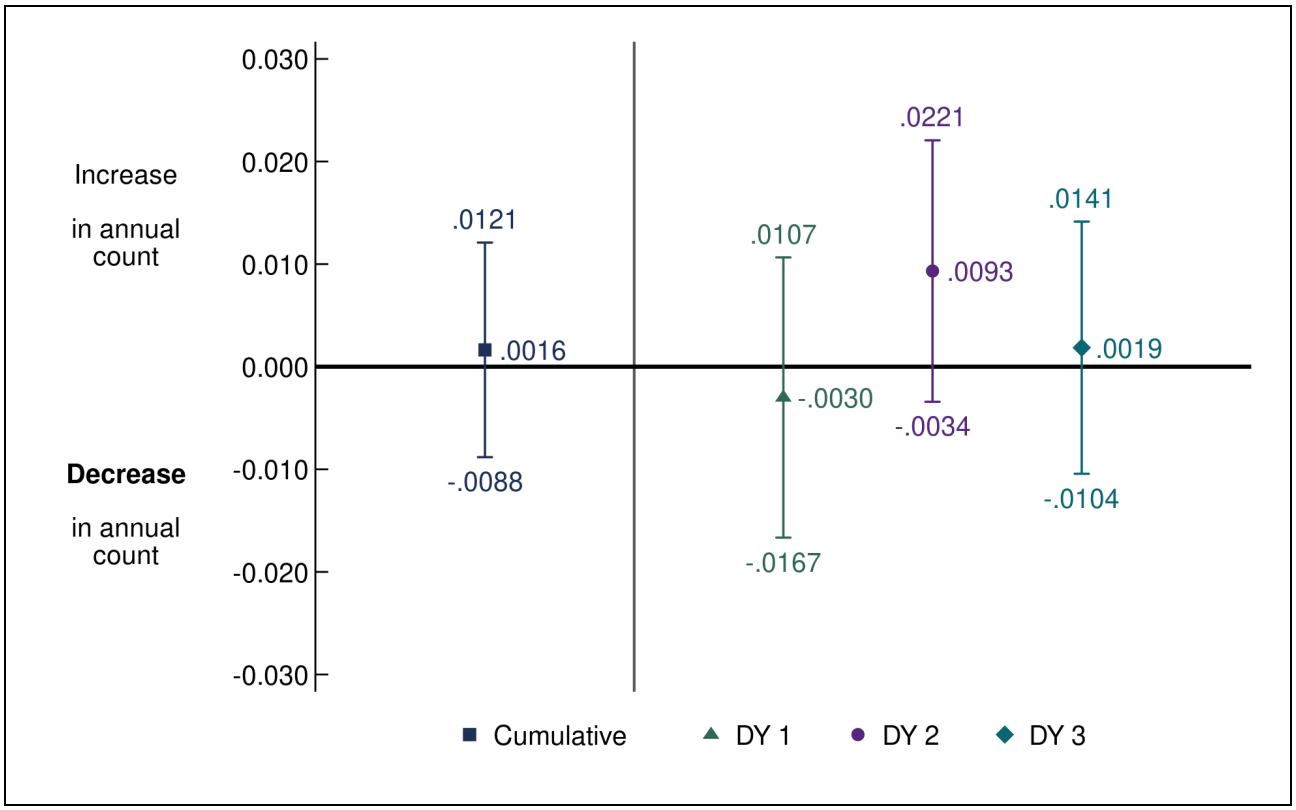
ACSC = ambulatory care sensitive condition; DinD = difference-in-differences; ED = emergency department; NS = not statistically significant.
NOTES: The adjusted mean is the regression-adjusted predicted probability or number of events for the predemonstration and demonstration periods for the demonstration 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 and encounter data.

5.3.2 Demonstration Impact in Each Demonstration Year

Figures 16–20 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, with the cumulative impact also shown as points of comparison. These annual impact estimates indicate that the Michigan demonstration increased the probability of 30-day follow-up after mental health discharge in demonstration year 2 by 3.1 percentage points, relative to the comparison group (***Figure 20***).

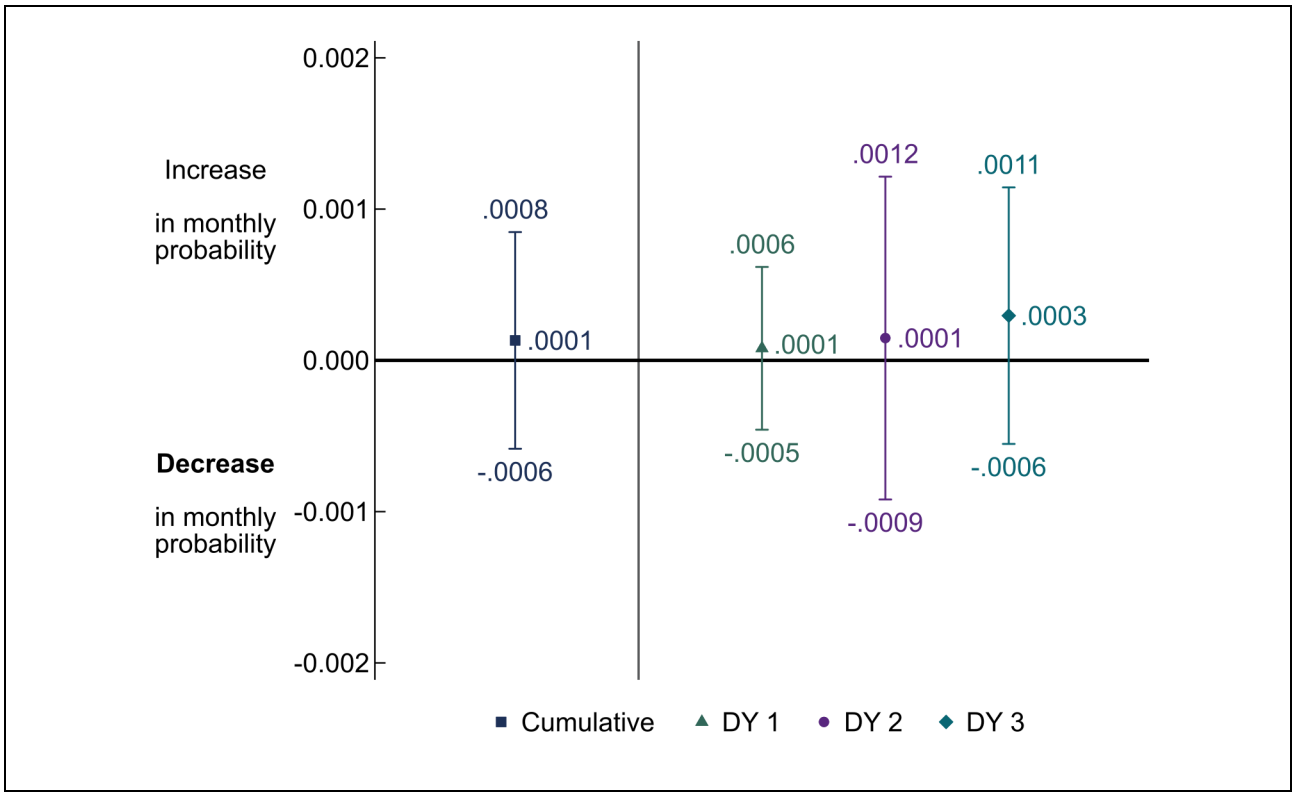
- Despite challenges in integration of behavioral health services, specifically coordination between the ICOs and the PIHPs, the demonstration increased the probability of any 30-day follow-up after a mental health discharge in demonstration year 2. However, this favorable impact did not continue onto demonstration year 3.

Figure 16
Cumulative and annual demonstration effects on 30-day readmissions, demonstration years 1–3, March 1, 2015–December 31, 2018



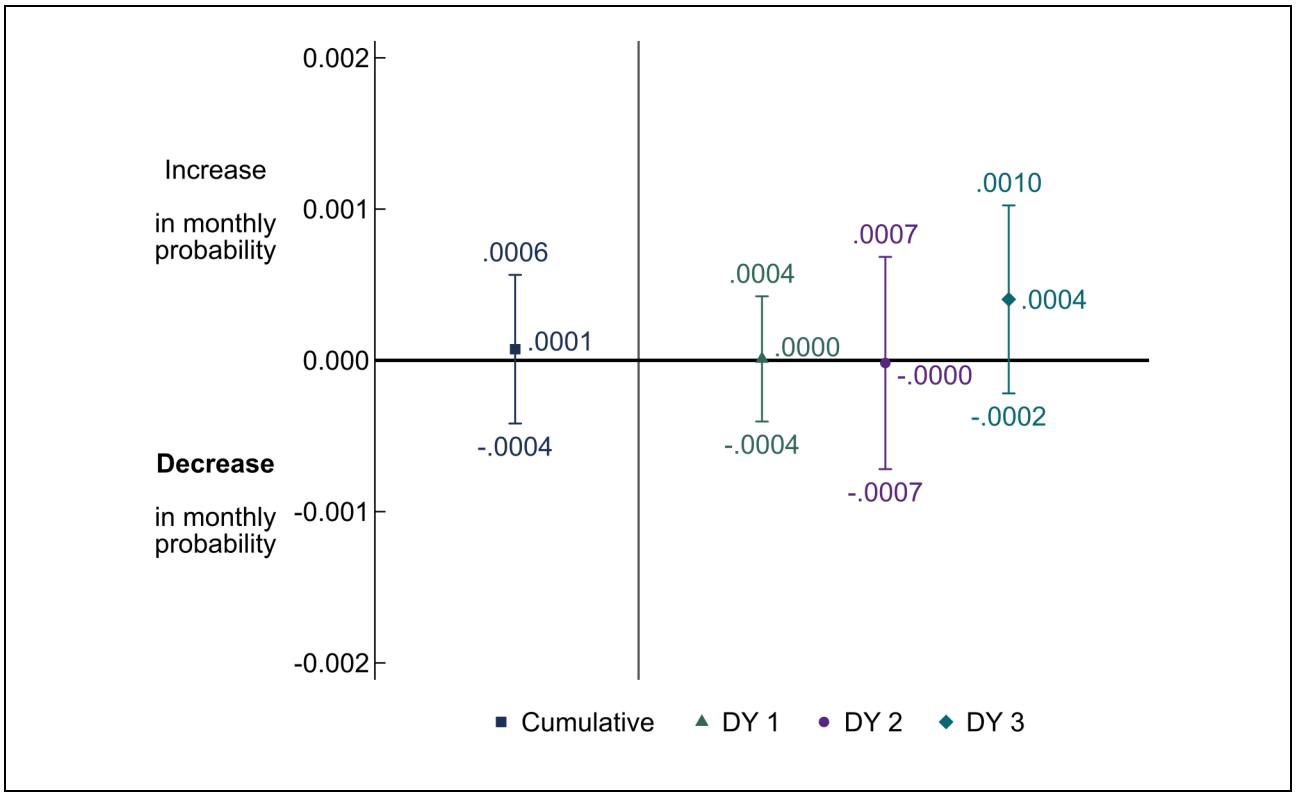
DY = demonstration year.
NOTE: 95 percent confidence intervals are shown. The expected direction of the effect (Increase or Decrease) is in **bold**.
SOURCE: RTI International analysis of Medicare fee-for-service claims and encounter data

Figure 17
Cumulative and annual demonstration effects on ACSC admissions (overall), demonstration years 1–3, March 1, 2015–December 31, 2018



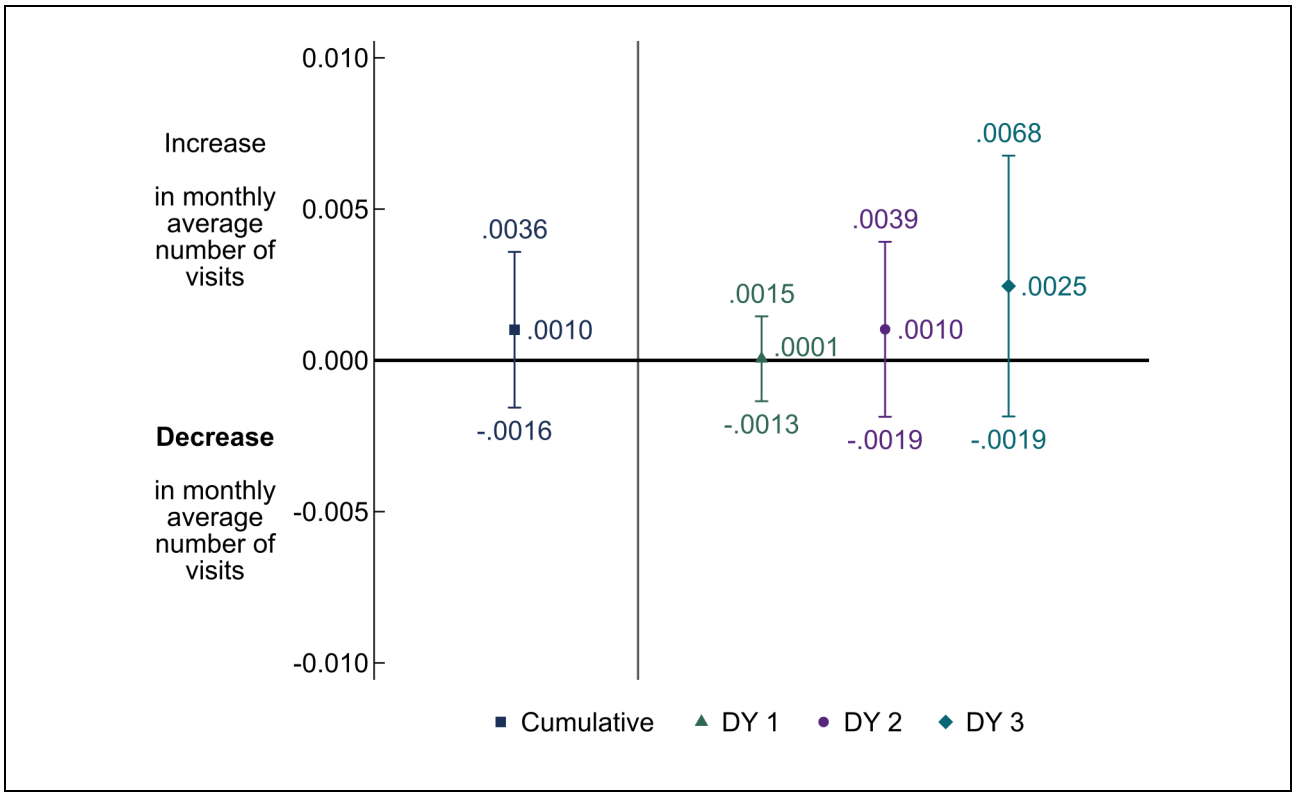
ACSC = ambulatory care sensitive condition; DY = demonstration year.
NOTE: 95 percent confidence intervals are shown. The expected direction of the effect (Increase or Decrease) is in **bold**.
SOURCE: RTI International analysis of Medicare fee-for-service claims and encounter data.

Figure 18
Cumulative and annual demonstration effects on ACSC admissions (chronic), demonstration years 1–3, March 1, 2015–December 31, 2018



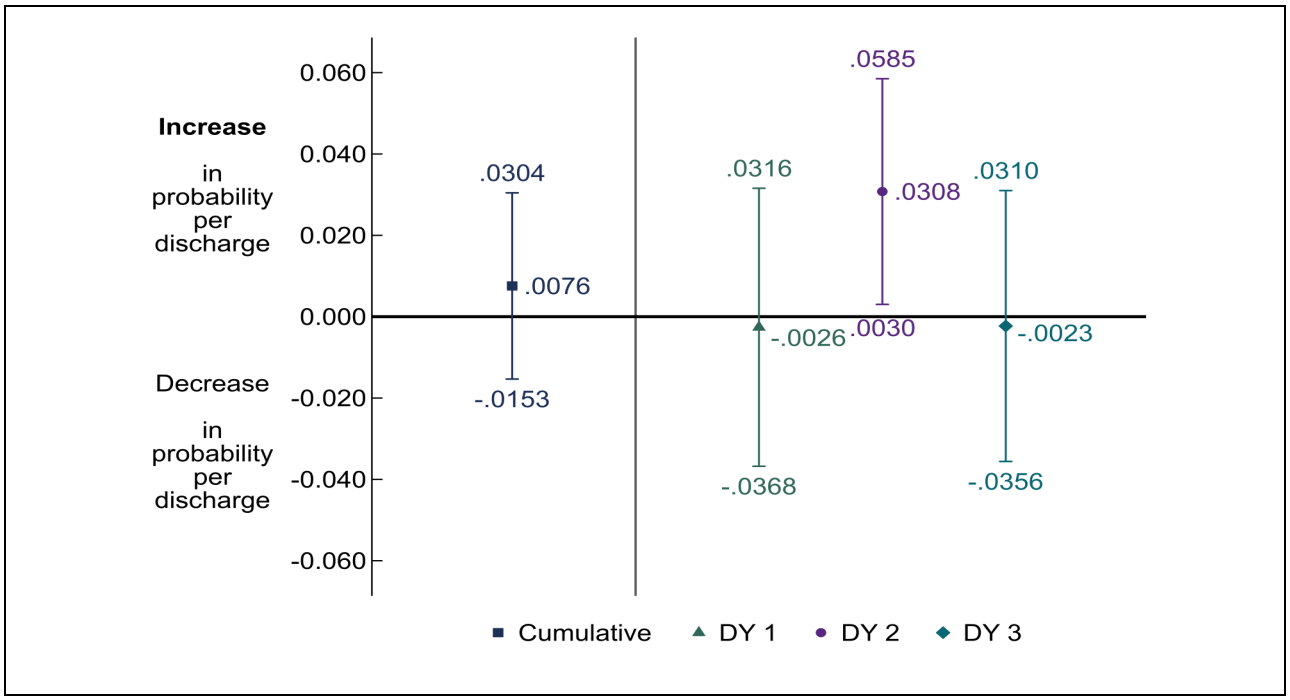
ACSC = ambulatory care sensitive condition; DY = demonstration year.
NOTE: 95 percent confidence intervals are shown. The expected direction of the effect (Increase or Decrease) is in **bold**.
SOURCE: RTI International analysis of Medicare fee-for-service claims and encounter data.

Figure 19
Cumulative and annual demonstration effects on preventable ED visits, demonstration years 1–3, March 1, 2015–December 31, 2018



DY = demonstration year; ED = emergency department.
NOTE: 95 percent confidence intervals are shown. The expected direction of the effect (Increase or Decrease) is in **bold**.
SOURCE: RTI International analysis of Medicare fee-for-service claims and encounter data.

Figure 20
Cumulative and annual demonstration effects on 30-day follow-up post mental health discharge, demonstration years 1–3, March 1, 2015–December 31, 2018



DY = demonstration year.
NOTE: 95 percent confidence intervals are shown. The expected direction of the effect (Increase or Decrease) is in **bold**.
SOURCE: RTI International analysis of Medicare fee-for-service claims and encounter data.

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

5.4 Demonstration Impact on Special Populations

During demonstration years 1 through 3, the demonstration impacted the LTSS population differently than the non-LTSS population. The demonstration effect for LTSS users was a decrease in the monthly probability of any inpatient admission, ED visit, and the monthly physician visits, relative to the demonstration effect for non-LTSS users. The demonstration also decreased the monthly number of preventable ED visits, and the probability of ACSC admissions (overall and chronic) among LTSS users, relative to demonstration effect among non-LTSS users.

The only differential demonstration effect for eligible beneficiaries with SPMI was a decrease in the monthly probability of any inpatient admission, relative to the demonstration effect for those without SPMI.

Among the key goals of the demonstration are to improve quality of care and lower spending for those with LTSS use and those with SPMI. The ICOs coordinate integrated medical care and LTSS, and work with PIHPs to provide behavioral health services. The demonstration is expected to particularly impact service utilization and quality of care among eligible beneficiaries with LTSS needs or who have an SPMI, compared to those not in these special populations (see group definitions in ***Appendix D***). The special population analyses indicate that the demonstration impacts were generally favorable for LTSS users and beneficiaries with SPMI, relative to the demonstration impact among non-LTSS users and those without SPMI (see ***Tables E-2*** and ***E-3*** in ***Appendix E***).

See ***Tables E-7*** and ***E-8*** in ***Appendix E*** for descriptive (unadjusted) statistics for demonstration enrollees and non-enrollees.

Additionally, further analyses were conducted to examine unadjusted service utilization results by racial and ethnic groups among the eligible population for select utilization measures: inpatient admissions, ED (non-admit), primary care E&M visits, outpatient therapy (physical therapy, occupational therapy, and speech therapy), and hospice use (see ***Appendix Figures E-1, E-2,*** and ***E-3*** in ***Appendix E***).

5.4.1 Beneficiaries Receiving Long-Term Services and Supports

As indicated in ***Table D-1*** in ***Appendix D***, about 5.5 percent of the demonstration eligible population in demonstration year 3 had any LTSS use. The demonstration impacted service utilization measures for those with LTSS use differently than for those with no LTSS use (see ***Table 12*** below). For example, the difference in the cumulative demonstration effect on the monthly probability of any inpatient admission or ED visit for beneficiaries with LTSS use was a 0.81 and 1.2 percentage point decrease, respectively, relative to the demonstration effect for beneficiaries without LTSS use. By contrast, the demonstration effect among LTSS users resulted in a decrease in the monthly count of physician visits, relative to the demonstration effect among non-LTSS users.

These results correspond with some favorable demonstration effects on quality of care measures for those with LTSS use. The demonstration effect for beneficiaries with LTSS use was a relative decrease of 0.0117 monthly preventable ED visits, and a decrease in the probability of ACSC admissions (both overall and chronic), relative to the demonstration effect among beneficiaries with no LTSS use.

The Michigan demonstration excluded individuals in 1915(c) waiver programs, an exclusion that at the time of this analysis RTI did not have the data available to make. Therefore, the composition of the Michigan LTSS population may have differences between the comparison group and within the demonstration group from the baseline to demonstration period, that may bias results. We also present estimates of the demonstration effect for LTSS users and non-LTSS users in each demonstration year, in ***Table E-2*** in ***Appendix E***.

Table 12
Cumulative demonstration effect on service utilization and quality of care measures, beneficiaries with LTSS use versus those without LTSS use in Michigan, demonstration years 1–3, March 1, 2015–December 31, 2018

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 users	–0.0082	–15.5	0.0017	–0.0133, –0.0031	–0.0081**
	Non-LTSS users	–0.0001	NS	0.8823	–0.0015, 0.0013	
Probability of ED visit	LTSS users	–0.0111	–18.6	<0.0001	–0.0142, –0.0080	–0.0122***
	Non-LTSS users	0.0011	NS	0.5360	–0.0024, 0.0047	
Count of physician E&M visits	LTSS users	–0.0141	NS	0.8614	–0.1725, 0.1443	–0.1424*
	Non-LTSS users	0.1283	17.8	<0.0001	0.0775, 0.1791	
Probability of SNF admission	LTSS users	0.0015	NS	0.4593	–0.0025, 0.0055	0.0007
	Non-LTSS users	0.0008	39.5	<0.0001	0.0006, 0.0009	
Quality of Care Measures						
Count of preventable ED visits	LTSS users	–0.0096	–27.4	<0.0001	–0.0127, –0.0064	–0.0117***
	Non-LTSS users	0.0021	NS	0.0598	–0.0001, 0.0043	
Probability of ACSC admission, overall	LTSS users	–0.0036	–35.1	<0.0001	–0.0054, –0.0018	–0.0040***
	Non-LTSS users	0.0005	10.3	0.0336	0.0000, 0.0009	
Probability of ACSC admission, chronic	LTSS users	–0.0027	–41.3	<0.0001	–0.0041, –0.0014	–0.0030***
	Non-LTSS users	0.0003	NS	0.0888	–0.0000, 0.0007	
Probability of 30-day follow-up after mental health discharge	LTSS users	0.0320	NS	0.2734	–0.0252, 0.0892	0.0328
	Non-LTSS users	–0.0008	NS	0.9500	–0.0268, 0.0251	
Count of all-cause 30-day readmissions	LTSS users	–0.0096	NS	0.4097	–0.0323, 0.0132	–0.0102
	Non-LTSS users	0.0006	NS	0.9186	–0.0106, 0.0118	

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$
— = data not available; 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 and encounter data.

5.4.2 Beneficiaries with Serious and Persistent Mental Illness

As indicated in ***Table D-1*** in ***Appendix D***, about 46.3 percent of the demonstration eligible population in demonstration year 3 had an SPMI. On only one measure was there a difference in the demonstration impact on those with SPMI than those without SPMI (see ***Table 13***). The demonstration effect for those with SPMI was a 0.24 percentage point monthly decrease in the probability of any inpatient admission, relative to the demonstration effect for

those without SPMI. Despite these findings, there was no evidence of improvements in the quality of care measures among beneficiaries with SPMI.

Table 13
Cumulative demonstration effect on service utilization and quality of care measures, beneficiaries with SPMI versus those without SPMI in Michigan, demonstration years 1–3, March 1, 2015–December 31, 2018

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	–0.0022	–4.2	0.0329	–0.0042, –0.0002	–0.0024**
	Non-SPMI	0.0002	NS	0.8137	–0.0016, 0.0020	
Probability of ED visit	SPMI	–0.0009	NS	0.7618	–0.0068, 0.0050	–0.0023
	Non-SPMI	0.0014	NS	0.4971	–0.0026, 0.0053	
Count of physician E&M visits	SPMI	0.0897	7.3	0.0013	0.0349, 0.1445	0.0181
	Non-SPMI	0.0716	10.3	0.0034	0.0237, 0.1195	
Probability of SNF admission	SPMI	0.0008	NS	0.3630	–0.0009, 0.0024	0.0005
	Non-SPMI	0.0003	NS	0.2221	–0.0002, 0.0008	
Quality of Care Measures						
Count of preventable ED visits	SPMI	0.0009	NS	0.7431	–0.0046, 0.0065	–0.0007
	Non-SPMI	0.0017	NS	0.0919	–0.0003, 0.0036	
Probability of ACSC admission, overall	SPMI	0.0001	NS	0.8719	–0.0008, 0.0009	–0.0001
	Non-SPMI	0.0002	NS	0.6234	–0.0006, 0.0010	
Probability of ACSC admission, chronic	SPMI	–0.0001	NS	0.7692	–0.0010, 0.0007	–0.0003
	Non-SPMI	0.0002	NS	0.5662	–0.0004, 0.0007	
Count of all-cause 30-day readmissions	SPMI	0.0001	NS	0.9865	–0.0119, 0.0121	–0.0079
	Non-SPMI	0.0080	NS	0.2373	–0.0052, 0.0212	

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$
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 and encounter data.

The cumulative differential effect of the demonstration on inpatient admissions among the SPMI population appears to be driven by demonstration impacts in years 1 and 2 (see ***Appendix Table E-3***). The First Evaluation Report described the early challenges of behavioral health integration between the ICOs and the PIHPs. These challenges, however, appear to be related to timeliness of communication and coordination of care after the beneficiary had been hospitalized. In the outpatient setting, as a payer of Medicare behavioral health services, PIHPs may have been better able to connect enrollees with Medicaid community services. If so, this may have helped prevent hospitalizations among the SPMI population in demonstration years 1 and 2 (see ***Appendix Table E-3).***

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

SECTION 6

Demonstration Impact on Cost Savings

RTI evaluated the Michigan demonstration's impact on Medicare Parts A and B costs using a difference-in-differences (DinD) analysis of beneficiaries eligible for the demonstration, relative to the comparison group. Our results show a statistically significant increase in Medicare Parts A and B costs during the overall demonstration period ($118.05, PMPM).

6.1 Methods Overview

As part of the capitated financial alignment model, Michigan, CMS, and MMPs entered into a three-way contract to provide services to Medicare-Medicaid enrollees (Michigan three-way contract, 2018). MMPs receive three separate, blended, risk-adjusted prospective capitated payments for Medicare Parts A and B, Medicare Part D, and Medicaid services.[31] The first two payments are from CMS, the third come from the state. CMS and Michigan developed the capitation payment that accounts for the services provided and adjusts the Medicare component for each enrollee using CMS's hierarchical risk adjustment model to account for differences in the characteristics of enrollees. For further information on the rate development and risk adjustment process, see the Memorandum of Understanding and the three-way contract on the FAI website[32].

This section presents the Medicare Parts A and B cost savings analysis for demonstration years 1 to 3 (calendar years 2015 to 2017). Additionally, corrections were made to impact estimates from earlier reports that resulted in differences in our current demonstration year 1 cost savings impact estimates (see ***Appendix F*** for additional details). A descriptive analysis of the Medicaid costs among those eligible for the FAI demonstration in Michigan is included in ***Appendix F*** (see ***Table F-10***).

We used an ITT analytic framework that includes beneficiaries eligible for the demonstration rather than only those who enrolled. For this analysis, enrolled beneficiaries account for approximately 37 percent of all eligible beneficiaries (including FFS beneficiaries, MMP enrollees, and MA enrollees) in demonstration year 3. The ITT framework alleviates concerns of selection bias, supports generalizability of the results among the demonstration eligible population, and mimics the real-world implementation of the demonstration. Results from a separate analysis, using a more restricted group of MMP enrollees and their comparison group counterparts, are included in ***Appendix F*** (see ***Table F-9***).

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

[31] The state of Michigan contracts directly with Prepaid Inpatient Health Plans for carved-out Medicaid behavioral health services. These costs are included in the Medicaid total cost of care for all beneficiaries.
[32] For the MOU, please see https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/Downloads/MIMOU.pdf
For the three-way contract (original), please see https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/Downloads/MIContract01012018.pdf

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 Michigan. Comparison group beneficiaries were identified through a two-step process. First, we identified comparison areas based on market characteristics. Second, we applied all available eligibility criteria to beneficiaries in the identified comparison areas. This process is further described in ***Appendix C***. Once the two groups were finalized, we applied propensity score (PS) weighting in DinD analysis to balance key characteristics between the two groups.

RTI gathered predemonstration and demonstration monthly Medicare expenditure data for both the demonstration and comparison groups from two data sources, as summarized in ***Table 14***. We obtained capitation payments paid to participating plans during the demonstration period, and payments to MA plans in the predemonstration and demonstration periods from the CMS Medicare Advantage and Part D Inquiry system (MARx). Part D payments were not included in this analysis. The capitation payments were the final reconciled payments paid by the Medicare program after taking into account risk score reconciliation and any associated retroactive adjustments in the system at the time of the data pull (January 2021). We also used Medicare FFS claims to calculate expenditures for beneficiaries who were not enrolled in an MMP or MA plan. These FFS claims included all Medicare Parts A and B services.

Table 14
Data sources for monthly Medicare expenditures

Group	Predemonstration period March 1, 2013–February 28, 2015	Demonstration period March 1, 2015–December 31, 2018
Demonstration	Medicare FFS MA capitation	Capitation rate for enrollees MA capitation for non-enrollees Medicare FFS for non-enrollees
Comparison	Medicare FFS MA capitation	Medicare FFS MA capitation

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

We made several adjustments to the monthly Medicare expenditures to ensure that observed expenditure variations are not due to differences in Medicare payment policies in different areas of the country or the construction of the capitation rates (see ***Appendix F***). ***Table F-1*** in ***Appendix F*** summarizes each adjustment and the application of the adjustments to FFS expenditures or to the capitation rate.

To estimate the effect of the demonstration on Medicare expenditures, we ran a generalized linear model with gamma distribution and log link. This is a commonly used approach in analysis of health care expenditure data. The model controlled for individual demographic and area-level characteristics (see ***Appendix F***), 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 demonstrations effect on Medicare expenditures.

6.2 Demonstration Impact on Medicare Parts A and B Costs

Table 15 shows the magnitude of the DinD estimate of the cumulative demonstration impact on Medicare Parts A and B cost, both in absolute dollar amount and relative to the adjusted mean expenditure level in the comparison group during the demonstration period. The adjusted mean monthly expenditure increased from the predemonstration period to the demonstration period for the demonstration group while decreasing for the comparison group. As such, the cumulative DinD estimate of $118.05 per member per month (PMPM), which amounts to a relative difference of 9.81 percent of the adjusted mean expenditure for the comparison group during the demonstration period, is statistically significant ($p < 0.001$). This suggests that overall, the Michigan demonstration was associated with statistically significant increased Medicare costs relative to the comparison group.

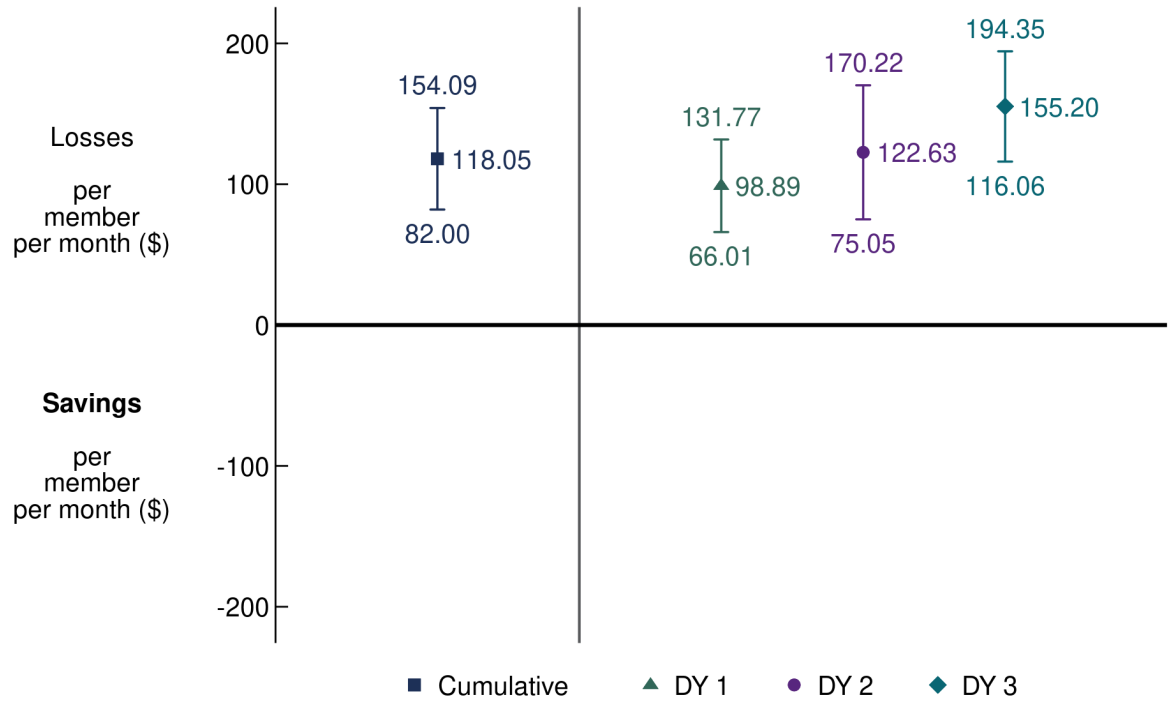
Table 15
Cumulative demonstration effect on monthly Medicare Parts A and B costs for eligible beneficiaries in Michigan, demonstration years 1–3, March 1, 2015–December 31, 2018

Group	Adjusted mean for predemonstration period ($)	Adjusted mean for demonstration period ($)	Relative difference (%)	Adjusted coefficient DinD ($)	*p*-value
Demonstration	$1,124.51	$1,163.19	9.81	118.05	<0.001
Comparison	$1,292.29	$1,203.24			

DinD = difference-in-differences.
SOURCE: RTI analysis of Medicare claims (program: mi_dy3_cs1492_percents.log)

In addition, we estimated the effect of the demonstration in each demonstration year. As shown in ***Figure 21***, the demonstration had a statistically significant effect in all demonstration years (as shown by the confidence intervals not crossing $0). These results indicate an increased Medicare cost of $118.05 PMPM as a result of the demonstration relative to the comparison group throughout the demonstration period. Note that these estimates rely on the ITT analytic framework, only account for Medicare Parts A and B cost, and use the capitation rate for the participating health plans rather than the actual amount the plan paid for services.

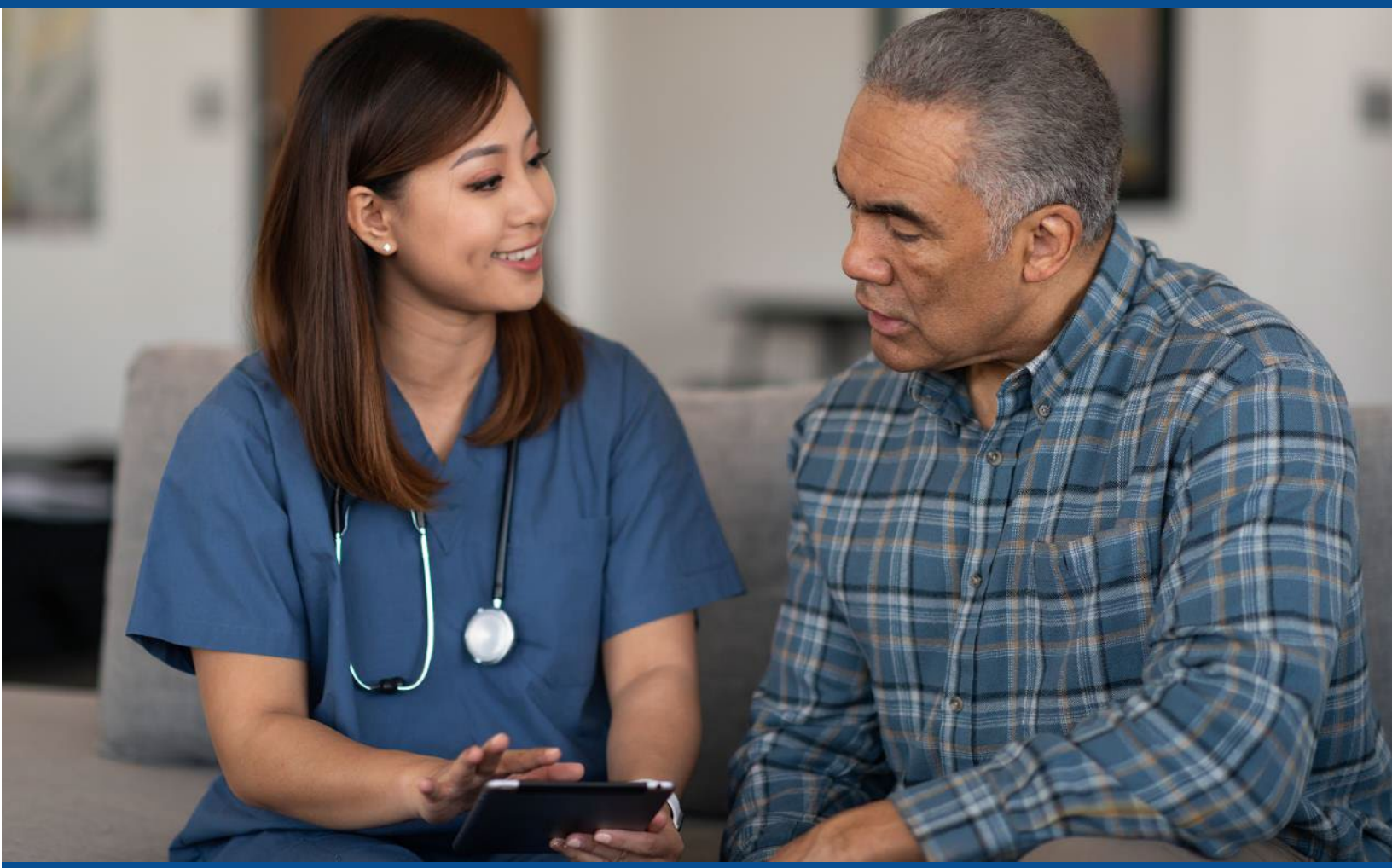
Figure 21
Cumulative and annual demonstration effects on monthly Medicare Parts A and B costs, demonstration years 1–3, March 1, 2015–December 31, 2018[1]



DY = demonstration year.
[1] The demonstration year 1 effect differs from the results shown in the First Evaluation Report. This difference is due to changes in our methodology. See ***Appendix E*** for more details.
NOTE: 95 percent confidence intervals are shown. "Losses"/"**Savings**" indicate increased/decreased costs for eligible beneficiaries in the demonstration group, relative to the comparison group.
SOURCE: RTI analysis of Medicare claims (program: mi_dY3_cs1482_glm.log)

SECTION 7

Conclusions



7.1 Implementation Successes, Challenges, and Lessons Learned

After robust stakeholder engagement, the State requested a 5-year extension beyond 2021, indicating strong support for MI Health Link.[33] Interviews with stakeholders confirmed broad support for the demonstration, despite challenges during the 2018–2020 period related to enrollment discrepancies, financial uncertainty for the ICOs, and the PHE. While addressing the challenges, the State and ICOs made considerable progress on access to HCBS, quality management, and stakeholder engagement.

Advocates continued to report that enrollees appreciated care coordination, additional benefits, lack of co-pays, and improved access to some services. The State and CMS provided multiple opportunities during 2018–2020 for enrollees to express their views, including focus groups sponsored by CMS, CAHPS surveys for CMS and the State, and two additional State-sponsored surveys to collect input on the demonstration extension. Overall, beneficiaries indicated satisfaction with their ICOs and care coordination, and provided feedback on a few opportunities to enhance care coordination.

MI Health Link has expanded access to HCBS, after experiencing initial challenges during the early years of the demonstration. The ICOs lacked HCBS experience because LTSS had been carved out of Medicaid managed care in the State. After starting from scratch with a new HCBS waiver and no enrollees, and experiencing challenges with waiver enrollment in 2017–2018, MI Health Link achieved balance between HCBS waiver enrollees and NF residents in mid-2020. Thousands of other non-waiver enrollees received personal care services that helped keep enrollees in the community. Use of personal care appears to be greater in MI Health Link than outside the demonstration, according to ICOs. Some enrollees also received supplemental HCBS, a special feature of MI Health Link.

Care coordination for NF residents emerged as an issue during this report period. Although some ICOs have created care coordination teams specializing in NF residents, advocates voiced concerns that residents were not receiving enough attention, and that the demonstration had not improved their lives. In late 2020, advocates expressed alarm about the plight of residents during the PHE, and asked the State to take steps to increase ICO engagement with residents. The CMT discussed the issue with ICOs, explored safe practices for engaging residents, such as window visits, and provided the ICOs with lists of residents who were interested in transitioning from facilities to the community.

Behavioral health integration remained a challenge for Michigan due to the carve-out, although there was some progress on improving communications between the ICOs and PIHPs. Data shared by the State suggest that the ICOs and PIHPs have helped connect enrollees with behavioral health services, and that most enrollees who used behavioral health services previously have continued to use behavioral health services. During this reporting period, the State included the PIHPs in the Quality Sub-Workgroup along with the ICOs, and selected a QIP topic that required collaboration between ICOs and PIHPs. The State also continued working to increase the functionality of communications through the MiHIN health information exchange.

[33] Although the State expressed interest in this longer extension, CMS currently has the authority to extend the demonstration through December 31, 2023.

Some challenges with behavioral health integration remained, particularly in Southeast Michigan where each PIHP works with five ICOs.

Challenges related to enrollment processes proliferated during 2018, and stakeholders described multiple ways that enrollment discrepancies and Medicaid redeterminations impacted other aspects of the demonstration. ICOs and PIHPs were impacted by uncertainty about beneficiaries' enrollment status and who should pay for their services, and challenges of reconciling capitation payments. Some providers also experienced challenges due to uncertainty about enrollment status and whether they would be paid for services provided. Enrollees were undoubtedly impacted, although the impact may have been mitigated by the ICOs through deemed enrollment and assistance with redeterminations.

Our evaluation findings suggest a lesson for other states related to enrollment. Throughout the demonstration, the ICOs have expressed frustration with the lack of a single source of truth for enrollment status, which increased the volume of enrollment discrepancies. ICOs were expected to provide services to enrollees whose status was in doubt; that policy appears to have resulted in subsequent enrollment reconciliations by the State, resulting in financial challenges for the State and ICOs. Using a single source of truth for enrollment might have reduced challenges and ICO costs.

Moving forward, the evaluation team will monitor the impact of changes in the demonstration in the three-way contract extension, as well as several new issues that emerged during 2020—the growth of D-SNPs and their impact on ICO enrollment, care coordination for NF residents, and transitions from nursing facilities to the community. We will continue to follow the financial status of the ICOs, and progress on improving behavioral health integration.

7.2 Demonstration Impact on Service Utilization and Costs

The goal of the Michigan demonstration is to develop person-centered care delivery models integrating the full range of medical, behavioral health, and LTSS for Medicare-Medicaid enrollees ages 21 and older. The expectation is that this integrated delivery model will help improve access to care, reduce hospitalizations and long-stay NF stays, and improve quality of care.

Our evaluation findings on the Michigan demonstration's impact on service utilization and quality of care measures from demonstration years 1 through 3 show mixed results. The demonstration appears to have increased access to care, as evidenced by increases in physician visits, but also had an unfavorable increase in long-stay NF visits. Moreover, the demonstration had no other impact on any quality of care measures.

Early in the demonstration, as described in the First Evaluation Report, ICOs improved their rates of care plan completions among those enrolled, which may have helped facilitate needed access to primary care services. Even so, this increased access did not translate to reductions in hospitalizations, emergency department use, or improvements in quality of care as hypothesized. Staff turnover and other early challenges related to care coordination may help explain why there were no demonstration effects on these measures. Additionally, the Michigan demonstration had greater NF use, relative to the comparison group, reflecting the ongoing

challenges ICOs face with care coordination among nursing facility residents, and ensuring access to HCBS services among their enrollees.

The demonstration did have some modest differential effects on the LTSS and SPMI special populations. Our analysis indicates that the demonstration was associated with a decrease in inpatient admissions, ED visit, and physician visits, as well as decreases in preventable ED visits and ACSC admissions, relative to the demonstration effect for non-LTSS users. In light of the implementation and care coordination challenges discussed in this report and in the First Evaluation Report, these findings should be interpreted with caution. Moreover, the Michigan demonstration excludes individuals in the MI Choice 1915(c) waivers, an exclusion RTI is not able to make in the comparison population or in any group during the baseline period due to data limitations. Therefore, composition of the LTSS population in Michigan during the demonstration period is different than LTSS users in the comparison group, which may have led to a downward bias in the DinD estimates for the LTSS only population.

Despite the integration challenges ICOs and PIHPs faced for those with behavioral health needs, the demonstration decreased inpatient admissions in demonstration years 1 and 2 among those with SPMI, relative to the demonstration effect for those without SPMI. Evidence from site visit interviews suggests PIHPs may have benefited from the integration of Medicare payments for behavioral health services by helping to improve access to needed community-based services, and perhaps helping to decrease the probability of having an inpatient admission.

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

Lastly, in this report, we only provide descriptive analyses of Medicaid costs; hence, no conclusion can be drawn about the impact of the demonstration on Medicaid.

7.3 Next Steps

As noted previously, State and Federal officials said in early 2021 that an extension of the Michigan demonstration through December 31, 2023, was planned. 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 Michigan officials through the online State Data Reporting System. We will continue to conduct annual virtual site visit calls with the State and demonstration stakeholders, and quarterly calls with MI Health Link State and CMS staff. RTI will review the results of any evaluation activities conducted by CMS or its contractors. We will also review any written reports or materials from the State summarizing State-sponsored evaluations, if applicable.

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Appendix A

Data Sources

We used the following data sources to prepare this report.

Key informant interviews. The RTI International evaluation team conducted site visits in Michigan in 2018, 2019, and 2020. The team interviewed the following individuals: representatives from Integrated Care Organizations (ICOs), Prepaid Inpatient Health Plans (PIHPs), and Area Agencies on Aging; State and CMS officials; and beneficiary advocates.

Focus groups and individual beneficiary interviews. The Centers for Medicare & Medicaid Services (CMS) contracted with Alan Newman Research (ANR) (Alan Newman Research, 2019) to conduct qualitative research on beneficiary experience in Michigan in 2019. ANR conducted a total of eight focus groups in Detroit and Kalamazoo, and 12 in-depth telephone interviews in the Upper Peninsula. A total of 66 enrollees participated. Of the 66 enrollees who participated, 14 were receiving long-term services and supports (LTSS), 10 were receiving behavioral health services, and 42 were a diverse mix of enrollees who did not use LTSS or behavioral health services.

Surveys. Medicare requires all Medicare Advantage (MA) plans, including MI Health Link plans, to conduct an annual assessment of beneficiary experiences using the Medicare Advantage and Prescription Drug Plan Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey instrument. This report includes survey results for a subset of the 2016, 2017, and 2018 survey questions. Findings are available at the Medicare-Medicaid Plan (MMP) level. Some CAHPS items are case mix-adjusted. Case mix refers to the respondent's health status and sociodemographic characteristics, such as age or educational level, that may affect the ratings that the respondent provides. Without an adjustment, differences between entities could be due to case-mix differences rather than true differences in quality. The frequency count for some survey questions is suppressed because too few enrollees responded to the question. Comparisons with findings from all Medicare Advantage plans are available for core CAHPS survey questions.

We also discuss findings from CAHPS surveys conducted by the Michigan External Quality Review Organization (EQRO). During the report timeframe, the Medicaid Adult CAHPS was conducted each year, 2018–2020. In 2020, the home and community-based services (HCBS) CAHPS was also conducted. The Medicare CAHPS survey was not conducted in 2020 because of the PHE.

In addition to the CAHPS surveys, the State conducted two enrollee surveys in 2020 to collect feedback on changes proposed for the demonstration extension. Michigan State University administered a formal survey to a sample of enrollees, and the Michigan Department of Health and Human Services (MDHHS) invited other enrollees to participate in a separate survey, either by responding to an online survey or by calling MDHHS during 3 days of "office hours" and responding to the same set of questions.

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

This report also uses data for quality measures reported by MI Health Link plans and submitted to CMS' implementation contractor, NORC.[34,35] Data reported to NORC include core quality measures that all MMPs are required to report, as well as State-specific measures that ICOs are required to report. Due to reporting inconsistencies, plans occasionally resubmit data for prior demonstration years; therefore, the data included in this report are considered preliminary.

Demonstration policies, contracts, and other materials. The RTI evaluation team reviewed a wide range of demonstration documents, including demonstration and State-specific information on the CMS website[36]; and other publicly available materials on the MDHHS MI Health Link website.[37] The RTI evaluation team also reviewed additional documents provided to us by MDHHS.

Conversations with CMS and MDHHS officials. To monitor demonstration progress, the RTI evaluation team engages in periodic phone conversations with MDHHS and CMS. Topics discussed might include new policy clarifications designed to improve plan performance, quality improvement work group discussions, and contract management team activities.

Complaints and appeals data. Complaint (also referred to as grievance) data come from two sources: (1) complaints from beneficiaries reported by MI Health Link plans to MDHHS, and reported separately to CMS' implementation contractor, NORC,[38] through Core Measure 4.2; and (2) complaints received by MDHHS or 1-800-Medicare and entered into the CMS electronic Complaint Tracking Module (CTM). The RTI evaluation team also obtains qualitative data on complaints during their site visits. Appeals data are generated by MMPs and reported to MDHHS and NORC, for Core Measure 4.2, and to the Medicare Independent Review Entity (IRE), a second-level review of Medicare appeals. This report also includes critical incidents and abuse data reported by ICOs to MDHHS and CMS' implementation contractor, NORC.

HEDIS measures. We report on a subset of Medicare Healthcare Effectiveness Data and Information Set (HEDIS) measures, a standard measurement set used extensively by managed care plans, that are required of all MA plans. In response to the COVID-19 PHE, CMS did not require Medicare plans (including MMPs) to submit HEDIS 2020 data covering the 2019 measurement year. Medicare plans (including MMPs) resumed normal reporting for measurement year 2020, with those data becoming available later in 2021.

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

[34] Data are reported for 2015–2020.
[35] The technical specifications for reporting requirements are in the Medicare-Medicaid Capitated Financial Alignment Model Core Reporting Requirements.
[36] https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/FinancialModelstoSupportStatesEffortsinCareCoordination.html
[37] https://www.michigan.gov/mdhhs/
[38] The technical specifications for reporting requirements are in the Medicare-Medicaid Capitated Financial Alignment Model Core Reporting Requirements document.

merged with Medicare claims and encounter data, as well as the Minimum Data Set. Medicaid encounter data for beneficiaries enrolled in MMPs are also used to assess select service use, such as personal care and behavioral health care.

Cost savings data. Two primary data sources were used to support the savings analyses, capitation payments and fee-for-service (FFS) Medicare claims. Medicare capitation payments paid to MI Health Link plans during the demonstration period were obtained for all MMP enrollees and eligible but not enrolled Medicare Advantage beneficiaries from the CMS Medicare Advantage and Part D Inquiry System (MARx) data. The capitation payments were the final reconciled payments paid by the Medicare program after taking into account risk score reconciliation and any associated retroactive adjustments in the system at the time of the data pull (January 2021). Quality withholds were applied to the capitation payments (quality withholds are not reflected in the MARx data), as well as quality withhold repayments based on data provided by CMS. FFS Medicare claims were used to calculate expenditures for all comparison group beneficiaries, demonstration group 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.

Risk corridors payments for ICOs established during the first demonstration year were included in the cost savings analysis. For a comprehensive list of adjustments, please refer to ***Appendix F, Table F-1***.

Medicaid research identifiable files were used to calculate total Medicaid FFS and Medicaid Managed Care payments among demonstration eligible beneficiaries. The source of Medicaid claims data for calendars years 2013–2015 (which includes the baseline period and the first 10 months of the first demonstration period) was the Medicaid Statistical Information Statistics (MSIS) Medicaid Analytic eXtract (MAX). The source for the Medicaid claims data for calendar years 2016-2018 (which includes the latter 12 months of the first demonstration period, the second demonstration period, and the third demonstration period) was the Transformed-Medicaid Statistical Information Statistics (T-MSIS) Analytic Files (TAF).

Appendix B

Michigan ICO Performance on Select HEDIS Quality Measures, 2016–2018

Tables B-1a and ***B-1b*** provide 2016 through 2018 HEDIS performance data for Michigan ICOs. Using correlation coefficients that were 0.9 and above, or −0.9 and below, we have applied green and red shading to indicate where ICO performance over time for a given measure was steadily improving or worsening; green indicates a favorable trend, and red indicates an unfavorable one. We did not perform any testing for statistical significance for differences across years because of the limited data available. For measures without green or red shading, year-over-year ICO performance remained relatively stable between 2016 and 2018.

Aetna Better Health improved performance over time on measures for advanced care planning (within Care for Older Adults submeasures), good control of HbA1c levels (< 8.0%) and blood pressure control (both within Comprehensive Diabetes Care submeasures), initiation and engagement of alcohol and other drug (AOD) dependence treatment, plan all-cause readmissions (age 18–64 and 65+), and outpatient visits (per 1,000 members).

AmeriHealth improved over time on measures for adults' access to preventive or ambulatory health services, blood pressure control (standalone measure), medication review and functional status assessment (both within Care for Older Adults submeasures), receiving HbA1c testing and retinal eye exams (both within Comprehensive Diabetes Care submeasures), initiation of AOD dependence treatment, plan all-cause readmissions (age 18–64), and outpatient visits (per 1,000 members). AmeriHealth worsened performance over time on only one measure—pain assessments (within Care for Older Adults submeasures).

HAP Empowered improved performance over time on measures for effective acute phase treatment for antidepressant medication management, advanced care planning and functional status assessments (within Care for Older Adults submeasures), and outpatient and emergency department visits (per 1,000 members). HAP Empowered worsened performance over time on measures for disease modifying anti-rheumatic drug therapy in rheumatoid arthritis and HbA1c testing (within Comprehensive Diabetes Care submeasures).

Meridian improved performance over time on measures for adults' access to preventive or ambulatory health services, disease-modifying anti-rheumatic drug therapy in rheumatoid arthritis, all Care for Older Adults submeasures, HbA1c testing and retinal eye exams (within Comprehensive Diabetes Care submeasures, plan all-cause readmissions (age 65+), and outpatient and emergency department visits (per 1,000 members). Meridian worsened performance over time on measures for blood pressure control (standalone measure) and effective continuation phase treatment for antidepressant medication management.

Michigan Complete Health improved performance over time on measures for adults' access to preventive or ambulatory health services, adult BMI assessment, breast cancer screening, effective acute phase treatment for antidepressant medication management, medication review (within Care for Older Adults submeasures), plan all-cause readmissions (age 65+), and outpatient visits (per 1,000 members). Michigan Complete Health worsened performance over time on one measure—engagement of AOD treatment.

Molina improved performance over time on measures for adults' access to preventive or ambulatory health services, disease-modifying anti-rheumatic drug therapy in rheumatoid arthritis, effective continuation phase treatment for antidepressant medication management,

engagement of AOD treatment, plan all-cause readmissions (age 65+), and outpatient and emergency department visits (per 1,000 members). Molina worsened over time on measures for breast cancer and colorectal cancer screenings.

Upper Peninsula Health Plan improved performance over time on measures for adults' access to preventive/ambulatory health services, disease modifying anti-rheumatic drug therapy in rheumatoid arthritis, follow-up after hospitalization for mental illness (30 days), pain assessment (within Care for Older Adults submeasures), blood pressure control (within Comprehensive Diabetes Care submeasures), and emergency department visits (per 1,000 members). Upper Peninsula Health Plan worsened performance over time on measures for good control of HbA1c levels (< 8.0%), initiation of AOD treatment, and outpatient visits (per 1,000 members).

Table B-1a
Michigan ICO performance on select HEDIS quality measures for 2016–2018 by ICO

Measure	National MA Plan Mean	Aetna Better Health			AmeriHealth			HAP Empowered			Meridian		
	(2018)	(2016)	(2017)	(2018)	(2016)	(2017)	(2018)	(2016)	(2017)	(2018)	(2016)	(2017)	(2018)
Adults' access to preventive/ambulatory health services	95.0	87.9	90.1	89.6	82.7 G	84.1 G	86.3 G	85.6	88.4	88.5	92.5 G	93.7 G	94.3 G
Adult BMI assessment	96.0	N/A	95.9	99.0	N/A	87.4	89.1	87.4	65.2	66.5	91.2	96.1	94.4
Blood pressure control[1]	69.5	63.5	59.4	67.4	46.9 G	49.4 G	52.3 G	57.9	48.4	52.3	76.5 R	70.1 R	67.6 R
Breast cancer screening	72.7	N/A	53.1	54.8	N/A	47.1	47.5	58.6	55.5	57.6	61.8	61.8	64.4
Colorectal cancer screening	70.5	N/A	43.1	41.1	N/A	31.9	37.2	56.9	48.4	50.1	55.6	64.0	60.9
Disease-modifying anti-rheumatic drug therapy in rheumatoid arthritis	77.8	71.4	78.1	72.3	N/A	N/A	63.3	65.9 R	64.4 R	59.5 R	74.3 G	78.3 G	80.4 G
Follow-up after hospitalization for mental illness (30 days)[2]	47.9	N/A	56.5	47.1	N/A	N/A	35.1	40.8	57.3	53.8	65.5	55.9	N/A
Antidepressant medication management													
Effective acute phase treatment[3]	72.1	80.3	59.2	60.0	52.6	48.2	56.0	47.4 G	51.4 G	52.4 G	78.7	64.5	65.3
Effective continuation phase treatment[4]	56.1	74.8	41.3	43.1	39.5	35.2	44.0	32.0	32.4	40.0	70.7 R	51.2 R	48.0 R
Care for older adults													
Advance care planning	N/A	27.9 G	49.6 G	55.0 G	22.5	14.1	19.0	9.0 G	11.0 G	25.1 G	20.5 G	32.4 G	39.7 G
Medication review	N/A	70.7	76.6	59.1	43.4 G	44.0 G	47.9 G	52.6	52.1	61.3	74.6 G	80.1 G	83.5 G
Functional status assessment	N/A	25.4	61.8	61.8	29.7 G	34.1 G	39.9 G	12.7 G	17.0 G	45.3 G	40.2 G	58.4 G	64.2 G
Pain assessment	N/A	62.8	73.0	65.7	50.8 R	47.9 R	43.1 R	29.9	27.3	55.2	57.7 G	69.1 G	81.8 G
Comprehensive diabetes care													
Received Hemoglobin A1c (HbA1c) testing	94.3	88.1	88.3	87.1	83.1 G	85.4 G	85.9 G	87.4 R	79.8 R	78.3 R	88.4 G	90.5 G	92.5 G
Poor control of HbA1c level (> 9.0%) (higher is worse)	23.1	39.1	28.5	28.7	48.4	42.1	51.8	39.2	79.2	80.2	35.3	41.6	35.0
Good control of HbA1c level (< 8.0%)	65.6	51.0 G	60.3 G	63.3 G	45.1	48.4	38.9	51.3	16.2	15.8	56.3	50.4	56.9
Received eye exam (retinal)	73.7	49.5	48.9	50.1	43.7 G	58.2 G	62.0 G	56.5	52.1	52.5	72.9 G	76.9 G	79.3 G

(continued)

Table B-1a (continued)
Michigan ICO performance on select HEDIS quality measures for 2016–2018 by ICO

Measure	National MA Plan Mean	Aetna Better Health			AmeriHealth			HAP Empowered			Meridian		
	(2018)	(2016)	(2017)	(2018)	(2016)	(2017)	(2018)	(2016)	(2017)	(2018)	(2016)	(2017)	(2018)
Received medical attention for nephropathy	95.5	92.1	94.9	93.2	92.4	90.5	90.5	94.2	91.7	91.6	94.8	95.9	93.3
Blood pressure control (< 140/90 mm Hg)	69.1	58.5 G	62.3 G	64.7 G	42.1	53.3	48.2	57.9	17.5	19.4	70.8	68.4	70.1
Initiation and engagement of alcohol and other drug (AOD) dependence treatment													
Initiation of AOD treatment [5]	33.6	33.7 G	36.1 G	36.9 G	36.8 G	42.0 G	42.9 G	45.4	26.4	30.4	30.3	28.6	33.8
Engagement of AOD treatment [6]	4.5	3.0 G	4.3 G	4.9 G	4.0	5.6	5.3	5.4	2.6	3.9	4.0	3.4	4.5
Plan all-cause readmissions (Observed-to-expected ratio [7])													
Age 18–64	0.75	0.87 G	0.76 G	0.69 G	0.90 G	0.86 G	0.82 G	0.57	0.65	0.53	0.89	0.62	0.68
Age 65+	0.71	1.18 G	0.75 G	0.65 G	0.76	0.98	0.69	0.91	0.57	0.74	1.04 G	0.67 G	0.47 G
Ambulatory care (per 1,000 members)													
Outpatient visits	9,606.0	8,463.3 G	9,077.4 G	9,176.2 G	8,215.3 G	8,491.9 G	9,611.8 G	8,081.2 G	8,243.3 G	8,589.7 G	8,703.3 G	9,268.2 G	9,634.1 G
Emergency department visits (higher is worse)	600.8	1,063.4	1,062.4	994.3	956.4	975.4	853.6	931.0 G	900.8 G	822.4 G	1,251.6 G	1,207.0 G	1,184.6 G

BMI = body mass index; HAP = Health Alliance Plan; HEDIS = Healthcare Effectiveness Data and Information Set; MA = Medicare Advantage; ICO = Integrated Care Organization; N/A = not applicable, where MA plans do not report such data, or where the number of enrollees in the MMP's HEDIS data available for inclusion in the measure was less than 30, and therefore not reported per RTI's decision rule for addressing low sample size.

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

[2] NCQA implemented a significant specification change with HEDIS 2018 (CY 2017), disallowing same-day follow-up visits. National benchmarks fell from HEDIS 2018 to HEDIS 2019 (CY 2017 to CY 2018).

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

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

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

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

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

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

SOURCE: RTI analysis of 2016 through 2018 HEDIS measures.

Table B-1b
Michigan ICO performance on select HEDIS quality measures for 2016–2018 by ICO

Measure	National MA Plan Mean	Michigan Complete Health			Molina			UPHP		
	(2018)	(2016)	(2017)	(2018)	(2016)	(2017)	(2018)	(2016)	(2017)	(2018)
Adults' access to preventive/ ambulatory health services	95.0	80.2 G	82.5 G	83.7 G	92.2 G	93.1 G	93.8 G	93.7 G	94.3 G	94.5 G
Adult BMI assessment	96.0	76.4 G	93.2 G	95.9 G	97.6	96.8	97.3	97.1	96.1	97.6
Blood pressure control[1]	69.5	44.1	57.7	57.4	54.5	52.3	63.3	79.1	79.8	79.3
Breast cancer screening	72.7	40.9 G	50.2 G	53.8 G	68.1 R	61.5 R	60.4 R	61.7	66.1	66.1
Colorectal cancer screening	70.5	—	36.0	39.7	67.6 R	64.2 R	56.2 R	54.3	59.1	57.4
Disease modifying anti-rheumatic drug therapy in rheumatoid arthritis	77.8	N/A	N/A	N/A	52.3 G	57.7 G	67.8 G	64.3 G	68.0 G	82.1 G
Follow-up after hospitalization for mental illness (30 days)[2]	47.9	31.8	18.0	41.5	55.4	60.0	55.6	45.3 G	55.1 G	74.2 G
Antidepressant medication management										
Effective acute phase treatment[3]	72.1	67.2 G	73.1 G	83.5 G	57.5	55.0	60.9	72.3	53.2	62.2
Effective continuation phase treatment[4]	56.1	50.8	50.8	58.2	44.5 G	44.8 G	46.8 G	59.0	49.2	49.6
Care of older adults										
Advance care planning	N/A	36.5	44.0	33.8	54.9	37.7	57.7	53.8	54.5	68.6
Medication review	N/A	36.9 G	68.4 G	96.4 G	78.1	75.2	79.1	87.1	91.7	90.5
Functional status assessment	N/A	67.1	57.9	67.4	65.7	57.9	70.6	86.4	78.6	87.8
Pain assessment	N/A	68.5	61.1	67.9	80.3	80.3	84.9	88.3 G	92.2 G	92.7 G
Comprehensive diabetes care										
Received Hemoglobin A1c (HbA1c) testing	94.3	85.0	93.0	91.3	92.9	91.0	91.2	93.3	92.2	92.2
Poor control of HbA1c level (> 9.0%) (higher is worse)	23.1	40.4	34.5	46.7	29.2	29.0	33.1	16.4	20.1	19.0
Good control of HbA1c level (< 8.0%)	65.6	49.7	56.1	45.1	58.9	61.3	54.7	69.7 R	68.6 R	67.2 R
Received eye exam (retinal)	73.7	46.1	64.3	59.0	62.0	68.4	67.9	76.8	72.1	76.4
Received medical attention for nephropathy	95.5	94.6	96.0	91.8	94.5	95.4	94.9	93.1	91.8	93.2

(continued)

Table B-1b (continued)
Michigan ICO performance on select HEDIS quality measures for 2016–2018 by ICO

Measure	National MA Plan Mean	Michigan Complete Health			Molina			UPHP		
	(2018)	(2016)	(2017)	(2018)	(2016)	(2017)	(2018)	(2016)	(2017)	(2018)
Blood pressure control (< 140/90 mm Hg)	69.1	43.2	60.7	60.4	63.3	55.5	65.0	79.6 G	80.1 G	82.7 G
Initiation and engagement of alcohol and other drug (AOD) dependence treatment										
Initiation of AOD treatment [5]	33.6	30.4	18.2	29.5	42.2	32.6	38.2	20.7 R	19.8 R	17.0 R
Engagement of AOD treatment[6]	4.5	4.1 R	3.7 R	1.6 R	3.0 G	4.1 G	4.9 G	2.4	2.5	2.4
Plan all-cause readmissions (Observed-to-expected ratio[7])										
Age 18–64	0.75	0.38	0.70	0.50	0.79	0.80	0.72	0.68	0.70	0.56
Age 65+	0.71	1.08 G	0.96 G	0.52 G	0.89 G	0.87 G	0.81 G	0.69	0.74	0.67
Ambulatory care (per 1,000 members)										
Outpatient visits	9,606.0	7,323.0 G	7,700.5 G	8,077.6 G	13,078.4 G	13,445.1 G	13,563.3 G	8,120.9 R	7,983.8 R	7,970.9 R
Emergency department visits (higher is worse)	600.8	843.1	842.2	847.5	1,027.0 G	1,021.1 G	975.0 G	960.7 G	928.5 G	807.5 G

— = not available, where the plan did not provide HEDIS data for this measure; BMI = body mass index; HAP = Health Alliance Plan; HEDIS = Health Effectiveness Information and Data Set; MA = Medicare Advantage; ICO = Integrated Care Organization; N/A = not applicable, where MA plans do not report such data, or where the number of enrollees in the MMP's HEDIS data available for inclusion in the measure was less than 30, and therefore not reported per RTI's decision rule for addressing low sample size; UPHP = Upper Peninsula Health Plan.

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

[2] NCQA implemented a significant specification change with HEDIS 2018 (CY 2017), disallowing same-day follow-up visits. National benchmarks fell from HEDIS 2018 to HEDIS 2019 (CY 2017 to CY 2018).

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

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

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

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

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

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

SOURCE: RTI analysis of 2016 through 2018 HEDIS measures.

Appendix C

Comparison Group Methodology for Michigan, Demonstration Years 2 & 3

This appendix presents the comparison group selection and assessment results for the Financial Alignment Initiative (FAI) demonstration in the state of Michigan.

Results for comparison group selection and assessment analyses are prepared for each demonstration year. The annual report for the first demonstration year and two prior predemonstration years for the Michigan demonstration was publicly released in September 2019. This report provides the comparison group results for the second and third performance years for the Michigan MI Health Link demonstration (January 1, 2017–December 31, 2018) and notes any major changes in the results since the First Evaluation Report.

C.1 Demonstration and Comparison Group Characteristics

The MI Health Link demonstration area consists of 25 counties that are part of six Metropolitan Statistical Areas (MSAs) (Battle Creek; Detroit-Warren-Dearborn; Grand Rapids-Wyoming; Kalamazoo-Portage; Niles-Benton Harbor; and South Bend-Mishawaka) and 17 non-metropolitan counties in Michigan. Using a distance score methodology, the comparison area is drawn from 18 counties in nine MSAs from four other States, as well as 40 non-metropolitan counties in Michigan. The pool of States was limited to those with timely submission of Medicaid data to CMS as of 2013. These geographic areas have not changed since the Michigan First Evaluation Report.

Beneficiaries who are ineligible for the demonstration include those who are not enrolled in Medicare Part A and Part B, those under age 21, those enrolled in any other shared savings program or PACE, those in state psychiatric hospitals, and those in hospice when initial eligibility is determined. 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. We apply these exclusion criteria to the State's finder file in the demonstration period to ensure comparability with the comparison group and the demonstration group during the predemonstration period. Additional exclusion criteria are applied by the State, but due to data limitations we are unable to implement in the comparison population or in the demonstration group in the baseline period. These criteria include beneficiaries enrolled in 1915(c) Medicaid waivers, participation in Money Follows the Person, and beneficiaries who meet Medicaid Medically Needy eligibility criteria.

MA enrollees are eligible and may opt-in to the Michigan demonstration. Like the prior evaluation report, this report includes the MA population in the cost savings analysis, described in ***Appendix F***. However, due to concerns on the completeness and accuracy of MA encounter data for years prior to 2016, RTI excluded demonstration eligible beneficiaries with any MA enrollment from the service utilization analysis, described in ***Appendix E***. The population analyzed for the service utilization outcomes includes only demonstration eligible full-benefit Medicare and Medicaid beneficiaries enrolled in Medicare FFS or in MMPs. ***Table C-1*** displays the number and percentage of beneficiaries who were in Medicare Advantage during the study period and included in the cost-savings analysis but excluded from the service utilization analysis. The prevalence of beneficiaries enrolled in MA per year ranges from 13 to 21 percent in the demonstration group, and from 24 to 27 percent in the comparison group across the study period.

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

Group	Predemonstration year 1	Predemonstration year 2	DY 1	DY 2	DY 3
Demonstration					
Initial count of beneficiaries	120,889	125,015	124,269	117,775	117,154
Count of beneficiaries in Medicare Advantage	20,624	24,607	26,724	15,402	19,797
Percent of beneficiaries in Medicare Advantage (denominator is final count of beneficiaries per period)	17%	19%	21%	13%	17%
Comparison					
Initial count of beneficiaries	318,994	328,663	376,722	355,169	358,925
Count of beneficiaries in Medicare Advantage	82,597	89,095	105,831	96,842	104,798
Percent of beneficiaries in Medicare Advantage (denominator is final count of beneficiaries per period)	24%	26%	27%	26%	27%

DY = demonstration year.

Further analytic exclusions were performed, such as (1) removing beneficiaries with missing geographic information, (2) removing beneficiaries with zero months of eligibility during each analytic period, (3) removing beneficiaries who moved between the demonstration area and the comparison area any time during the entire study period, and (4) removing beneficiaries who died before the beginning of each analytic period. After applying these exclusions, the number of demonstration group beneficiaries has largely remained stable over the 2 predemonstration years and 3 demonstration years, ranging between 117,154 and 125,015 beneficiaries per year. The comparison group contained roughly three times as many beneficiaries as the demonstration group, and its count of beneficiaries per year fluctuated between 318,994 and 376,722.

C.2 Propensity Score Estimates

RTI's methodology uses propensity scores to examine initial differences between the demonstration and comparison groups in each analysis. Weights are calculated based on these scores and are applied to the data to improve comparability between the two groups, which is evaluated in terms of individual beneficiary characteristics and the overall distributions of propensity scores.

A PS 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. Compared with the analysis for the previous evaluation report, an

additional explanatory variable was added to the propensity score model for the share of months during the year for which a beneficiary was enrolled in an MA plan.

The logistic regression coefficients and z-values for the covariates included in the propensity model for MI Health Link demonstration year 3 are shown in ***Table C-2***. The largest relative differences were that demonstration participants were more likely to be Black, were less likely to be Asian, and tended to have fewer months of non-MMP MA plan enrollment in demonstration year 3 than the beneficiaries in the comparison group. In addition, ZIP code-level group differences associated with rates of marriage, college education rates, and adults with self-care limitation, as well as differences associated with distances to the nearest hospital and the nearest nursing facility (NF), were observed between the demonstration and comparison groups. The magnitude of the group differences for all variables prior to propensity score weighting may also be seen in ***Table C-3***.

C.3 Propensity Score Overlap

The distributions of propensity scores by group for demonstration year 3 are shown in ***Figure C-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 0.15. Inverse probability of treatment weighting pulls the distribution of weighted comparison group propensity scores (dotted line) very close to that of the demonstration group (solid line).

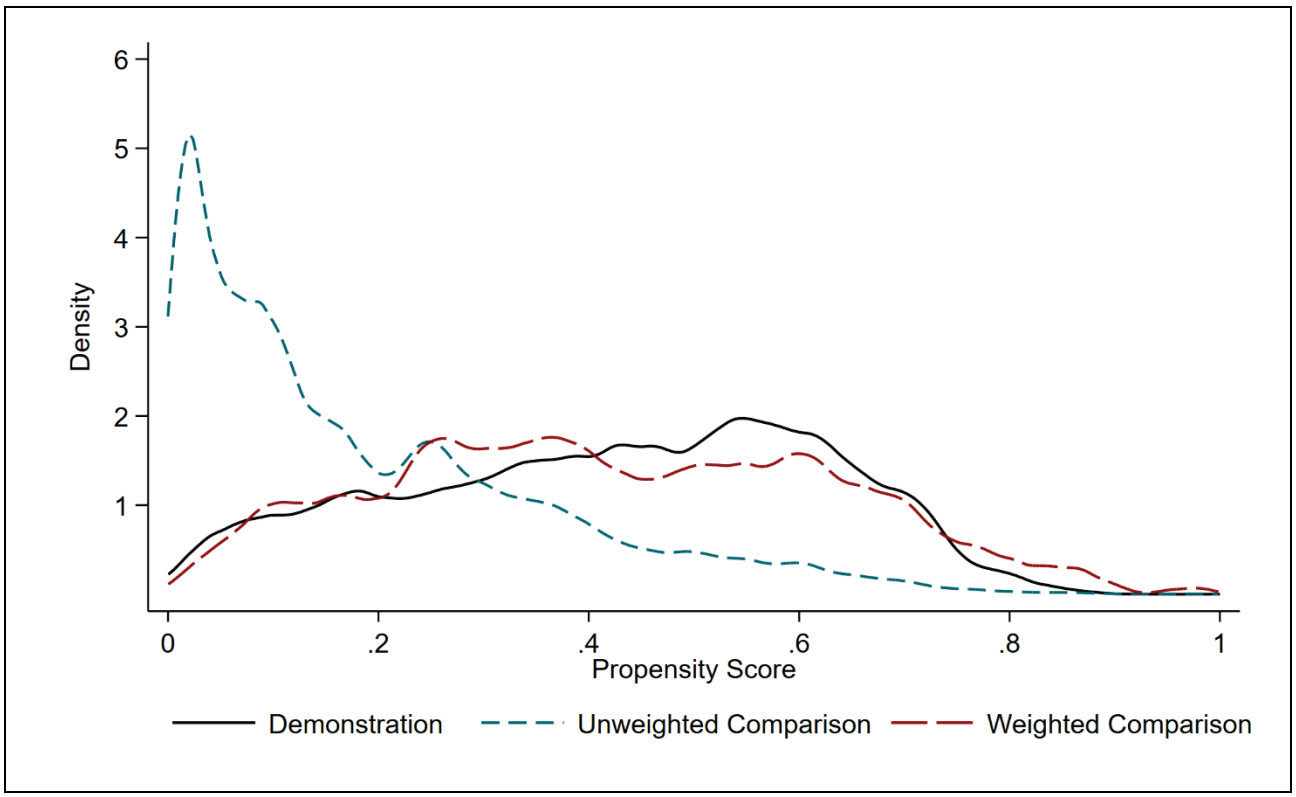
Any beneficiaries who have estimated propensity scores below the smallest estimated value in the demonstration group are removed from the comparison group. Because of the very broad range of propensity scores found in the Michigan demonstration data, only 124 beneficiaries were removed from the comparison group in demonstration year 3.

Table C-2
Logistic regression estimates for Michigan propensity score models in demonstration year 3, January 1, 2018–December 31, 2018

Characteristic	Demonstration Year 3		
	Coef.	Standard error	z-score
Age (years)	−0.004	0.000	−11.21
Died during year	−0.023	0.018	−1.29
Female (0/1)	0.124	0.008	15.05
Black (0/1)	0.616	0.010	59.91
Asian (0/1)	−1.074	0.021	−51.91
Disability as original reason for entitlement (0/1)	−0.097	0.011	−8.69
ESRD (0/1)	−0.217	0.025	−8.80
Share mos. Medicare Advantage plan enrolled during year (prop.)	−1.514	0.013	−120.22
HCC risk score	0.035	0.004	8.05
Other MDM	−0.159	0.009	−17.47
MSA (0/1)	2.547	0.020	128.73
% of pop. living in married household	0.040	0.000	100.35
% of households w/member ≥ 60 yrs.	−0.012	0.001	−18.27
% of households w/member < 18 yrs.	−0.060	0.001	−93.74
% of adults under 65 with college education	−0.092	0.001	−176.08
% of adults under 65 with self-care limitation	0.201	0.003	78.07
Distance to nearest hospital (mi.)	0.039	0.001	33.77
Distance to nearest nursing facility (mi.)	0.016	0.002	9.81
Intercept	−2.192	0.054	−40.39

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

Figure C-1
Distribution of beneficiary-level propensity scores in the Michigan demonstration and comparison groups, weighted and unweighted, demonstration year 3, January 1, 2018–December 31, 2018



C.4 Group Comparability

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

Table C-3
Michigan dually eligible beneficiary covariate means by group before and after weighting by propensity score—demonstration year 3: January 1, 2018–December 31, 2018

Characteristic	Demonstration group mean	Comparison group mean	PS-weighted comparison group mean	Unweighted standardized difference	Weighted standardized difference
Age	62.480	66.261	62.246	−0.235	0.014
Died	0.054	0.051	0.056	0.014	−0.009
Female	0.598	0.583	0.590	0.032	0.016
Black	0.410	0.249	0.361	0.347	0.101
Asian	0.026	0.146	0.024	−0.441	0.011
Disability as original reason for entitlement	0.543	0.441	0.554	0.205	−0.021
ESRD	0.026	0.022	0.024	0.027	0.010
Share mos. Medicare Advantage plan enrolled during year	0.101	0.257	0.101	−0.439	0.000
HCC score	1.242	1.207	1.234	0.039	0.009
Other MDM	0.259	0.209	0.277	0.119	−0.042
MSA	0.900	0.872	0.874	0.088	0.084
% of pop. living in married household	57.835	64.706	60.298	−0.364	−0.128
% of households w/member ≥ 60	39.613	38.928	40.290	0.094	−0.090
% of households w/member < 18	29.860	29.277	29.413	0.071	0.058
% of adults under 65 with college education	18.497	30.512	18.654	−0.821	−0.015
% of adults under 65 with self-care limitation	5.073	3.880	4.978	0.555	0.039
Distance to nearest hospital	5.635	4.753	6.461	0.141	−0.109
Distance to nearest nursing facility	4.246	3.703	4.674	0.115	−0.084

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 3 in ***Table C-3***. The column of unweighted standardized differences indicates that several of these variables were not balanced prior to weighting. Eleven variables (age, percentage Black, percentage Asian, percentage with disability as original reason for entitlement, share of months enrolled in a non-MMP MA plan during the year, percentage participating in other Medicare shared savings programs [other MDM], percentage of population living in a married household, percentage of adults with a college education, percentage of adults with self-care limitation, and the distances [in miles] to the nearest hospital and NF) all had unweighted standardized differences exceeding 0.10 in absolute value.

The results of propensity score weighting for Michigan demonstration year 3 are illustrated in the far-right column (weighted standardized differences) in ***Table C-3***. Propensity weighting reduced the standardized differences below the threshold level of 0.10 in absolute value for all but three (percentage Black, percentage of population living in a married household, and distance to the nearest hospital) covariates in our model.

C.5 Enrollee Results

We also applied our weighting methodology to the demonstration enrollees (approximately 34 percent of the eligible demonstration population). We define the enrollee group, along with its comparison group, as follows: (1) the demonstration enrollees are those with at least 3 months of enrollment during the 3-year demonstration period and 3 months of eligibility during the 2-year predemonstration period, and (2) the corresponding comparison group beneficiaries are those with at least 3 months of eligibility in both the 3-year demonstration period and the 2-year predemonstration period.

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

C.6 Weights for Service Utilization Analyses

A third set of weights was produced specifically for the analyses of service utilization with two adaptations to the methodology used to produce weights for all eligible beneficiaries. The first is the explicit exclusion of beneficiaries who were ever enrolled in an MA plan. Due to concerns on the completeness and accuracy of MA encounter data for years prior to 2016, and at the request and approval of CMS, RTI made a key methodological change from previous reports by excluding the MA population from the service utilization analysis. The second methodological adaptation was to exclude beneficiaries ever enrolled in either of the two Michigan MMPs that submitted encounter data, which were deemed incomplete for evaluation purposes.

These exclusions reduced the number of beneficiaries by roughly 50,000 in the demonstration group and by roughly 125,000 in the comparison group. The resulting demonstration group sample ranged between 65,231 and 73,750 beneficiaries each year; the comparison group sample ranged between 206,530 and 240,238 beneficiaries each year.

Despite difference in sample sizes, the results of the propensity score weighting analysis were similar to that for all eligible beneficiaries. While the unweighted values of several covariates differed substantially between the demonstration and comparison group in each baseline and demonstration year, the standardized differences of all covariates were reduced to less than 0.10 in absolute value after propensity score weighting.

C.7 Summary

The Michigan demonstration and comparison groups were initially distinguished by differences in six individual-level covariates and five area-level variables. However, propensity

score weighting successfully reduced all but three of these covariate differences below the generally accepted threshold for standardized differences. As a result, the weighted Michigan groups are adequately balanced with respect to 15 of the 18 variables we consider for comparability. Further analyses of the enrollee group and the service utilization group yielded very similar results to the main analysis on the all-eligible population presented in this appendix.

Appendix D

Service Utilization Methodology

D.1 Methodology

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

D.1.1 Evaluation Design

RTI uses an intent-to-treat (ITT) approach for the quantitative analyses conducted for the evaluation, comparing the eligible population under each State demonstration with a similar population that is not affected by the demonstration (i.e., a comparison group). We use a quasi-experimental 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 outcomes, relative to the 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. This approach alleviates concerns of selection bias and supports generalizability of the results among the demonstration eligible population. Without mandatory participation, some eligible beneficiaries enroll in the demonstration to receive the interventions whereas others do not, even though they are eligible and have the opportunity to do so. The relative proportion of the enrolled versus the eligible but not enrolled beneficiaries varies across the demonstration states. An ITT analysis—which includes the entire eligible population in the demonstration group and its comparison group counterpart—is most appropriate by yielding impact estimates that would best mimic the real-world implementation of the demonstration accounting for the variability in voluntary enrollment across different states.

D.1.2 Sample Selection

The study population includes all full-benefit Medicare-Medicaid eligible beneficiaries residing in the demonstration and comparison areas who meet the demonstration eligibility criteria. For details on applying the demonstration eligibility criteria and the comparison group identification strategy, see ***Appendix B***.

MA enrollees are eligible and may opt-in to the Michigan demonstration. This report includes the MA population in the cost savings analysis, described in ***Appendix F***. However, due to concerns on the completeness and accuracy of MA encounter data for years prior to 2016, RTI excluded demonstration eligible beneficiaries with any MA enrollment from the service utilization analysis. Therefore, the service utilization analysis includes only beneficiaries enrolled in Medicare FFS or in an MMP throughout the study period. The prevalence of beneficiaries with any month of MA during a year, prior to exclusion, ranges from 12 to 20 percent in the demonstration group, and 25 to 27 percent in the comparison group during the predemonstration and demonstration periods (see ***Appendix C, Table C-1***).

D.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, MMP Medicare and Medicaid encounter data, as well as the Minimum Data Set (MDS).

D.1.4 Populations and Services Analyzed

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

- ***Demonstration eligible beneficiaries.*** A full-benefit Medicare-Medicaid eligible beneficiary in a quarter who met any other specific demonstration eligibility criteria.
  - Beneficiaries in the demonstration period are identified from quarterly State finder files.
  - Beneficiaries in the 2-year predemonstration period are identified by applying the eligibility criteria in each separate predemonstration quarter.
- ***LTSS.*** A demonstration eligible beneficiary with any use of institutional or HCBS during the observation year.
- ***SPMI.*** A demonstration-eligible beneficiary with at least one inpatient or outpatient mental health visit for schizophrenia or episodic mood disorder within 2 years prior to the observation year.
- ***Enrollees.*** A demonstration eligible beneficiary with any month of enrollment in the demonstration during the demonstration year.

The analyses were conducted for each year in the 2-year predemonstration period (March 1, 2013, to February 28, 2015) and for the 3 demonstration years (March 1, 2015, to December 31, 2018) for both the demonstration and comparison groups in each of the five analytic periods. Additionally, corrections were made to impact estimates from earlier reports that resulted in differences in our current impact estimates for demonstration year 1. Specifically, we made the following corrections: (1) confirmed dual status for State-identified FAI-eligible beneficiaries against IDR data, removing erroneous zeros in the dependent variable, and (2) applied IDR-based exclusion criteria for all monthly observations in the comparison and demonstration groups during the predemonstration period and demonstration period. These updates, coupled with restricting the service utilization analysis sample to only FFS demonstration eligible beneficiaries and MMP enrollees, result in differences between our current estimates for demonstration year 1 and the estimates reported in the First Evaluation Report.

Table D-1 presents descriptive statistics on the independent variables used in multivariate DinD regressions for impact analyses. Independent variables include demographic and health characteristics and market- and area-level characteristics. Results are presented for six groups: all demonstration eligible beneficiaries in the FAI State, its comparison group, all MMP enrollees,

all non–MMP enrollees, demonstration-eligible beneficiaries with any LTSS use, and demonstration-eligible beneficiaries with an SPMI.

The most prevalent age group among LTSS users was over age 75, with 49.9 percent; otherwise, 21 to 64 years was the most prevalent age group, ranging from 46.9 to 57.8 percent. Among the LTSS user demonstration population, disability was not the primary reason for Medicare entitlement; otherwise, disability was the primary reason for entitlement, ranging from 51.2 to 63.3 percent.

Across all groups, most beneficiaries were White (51.5 to 71.8 percent), female (56.7 to 64.7 percent), did not have end-stage renal disease, and were more likely to be reside in a metropolitan area.

The Hierarchical Condition Category (HCC) score is a measure of the predicted relative annual cost of a Medicare beneficiary based on the diagnosis codes present in recent Medicare claims. Beneficiaries with a score of 1 are predicted to have average cost in terms of annual Medicare expenditures. Beneficiaries with HCC scores less than 1 are predicted to have below-average costs, whereas beneficiaries with scores of 2 are predicted to have twice the average annual cost. HCC scores ranged between 1.0 and 1.4 among all groups except LTSS users in the demonstration group, for which the average HCC score was 2.1.

Table D-1
Characteristics of eligible beneficiaries in demonstration year 3 by group

Characteristics	Demonstration group	Comparison group	Demonstration group enrollees	Demonstration group eligible, non-enrollees	Demonstration group, LTSS users	Demonstration group, SPMI diagnosis
Weighted number of eligible beneficiaries	66,701	231,929	16,894	49,807	3,647	30,896
Demographic characteristics						
Age						
21 to 64	48.5	49.5	53.2	46.9	29.0	57.8
65 to 74	29.7	29.5	29.4	29.9	21.1	23.2
75 and older	21.8	21.0	17.3	23.3	49.9	19.0
Female						
No	40.2	40.9	43.3	39.2	36.7	35.3
Yes	59.8	59.1	56.7	60.8	63.3	64.7
Race/ethnicity						
White	54.0	56.4	61.4	51.5	71.8	61.0
African American	35.7	32.0	29.8	37.6	25.8	32.6
Hispanic	0.9	3.7	1.0	0.8	0.2	0.7
Asian	2.5	2.3	1.8	2.7	0.4	1.1
Other	1.9	3.1	1.3	2.0	0.8	1.2
Disability as reason for original Medicare entitlement						
No	47.1	46.4	42.2	48.8	58.6	36.7
Yes	52.9	53.6	57.8	51.2	41.4	63.3
ESRD status						
No	97.2	97.3	98.2	96.8	97.0	97.3
Yes	2.8	2.7	1.8	3.2	3.0	2.7
MSA						
No	13.8	16.0	26.1	9.6	21.3	15.6
Yes	86.2	84.0	73.9	90.4	78.7	84.4

(continued)

Table D-1 (continued)
Characteristics of eligible beneficiaries in demonstration year 3 by group

Characteristics	Demonstration group	Comparison group	Demonstration group enrollees	Demonstration group eligible, non-enrollees	Demonstration group, LTSS users	Demonstration group, SPMI diagnosis
Participating in Shared Savings Program						
No	67.8	66.7	94.0	59.0	75.3	67.7
Yes	32.2	33.3	6.0	41.0	24.7	32.3
HCC score	1.2	1.2	1.0	1.3	2.1	1.4
Market characteristics						
Medicare spending per dual, age 19+ ($)	18,660.8	16,961.8	17,156.6	19,171.0	18,031.4	18,381.1
MA penetration rate	0.3	0.3	0.2	0.3	0.3	0.3
Medicaid-to-Medicare fee index (FFS)	0.5	0.6	0.5	0.5	0.5	0.5
Medicaid spending per dual, age 19+ ($)	10,965.3	14,726.5	11,992.4	10,616.9	11,501.0	11,147.2
Fraction of dually elig. beneficiaries using NF, age 65+	0.2	0.2	0.3	0.2	0.2	0.2
Fraction of dually elig. beneficiaries using HCBS, age 65+	0.1	0.1	0.1	0.0	0.1	0.1
Fraction of dual elig. beneficiaries using personal care, age 19+	0.3	0.2	0.2	0.3	0.3	0.3
Fraction of dual elig, beneficiaries with Medicaid managed care, age 19+	0.0	0.0	0.0	0.0	0.0	0.0
Population per square mile, all ages	1,651.2	1,112.9	1,052.9	1,854.1	1,398.6	1,536.9
Patient care physicians per 1,000 population	0.7	0.9	0.7	0.6	0.7	0.7

(continued)

Table D-1 (continued)
Characteristics of eligible beneficiaries in demonstration year 3 by group

Characteristics	Demonstration group	Comparison group	Demonstration group enrollees	Demonstration group eligible, non-enrollees	Demonstration group, LTSS users	Demonstration group, SPMI diagnosis
Area characteristics						
% of pop. living in married households	60.4	62.0	63.7	59.2	66.4	61.2
% of adults with college education	19.1	19.0	19.1	19.0	21.5	19.3
% of adults with self-care limitations	4.8	4.8	4.5	5.0	4.3	4.7
% of adults unemployed	9.5	8.6	8.8	9.8	7.5	9.1
% of household with individuals younger than age 18	29.6	29.3	28.8	29.9	27.5	29.1
% of household with individuals older than age 60	40.1	40.6	41.0	39.8	41.8	40.2
Distance to nearest hospital	6.5	7.0	9.0	5.6	8.0	7.0
Distance to nearest nursing facility	4.9	5.2	7.0	4.2	5.9	5.3

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; MA = Medicare Advantage; MSA = metropolitan statistical area; NF = nursing facility; SPMI = serious and persistent mental illness.
NOTE: Analysis conducted on demonstration-eligible FFS population and Medicare-Medicaid Plan enrollees.

There were limited differences in area- and market-level characteristics. Those who were in the comparison group resided in counties with higher Medicaid spending per dually eligible beneficiary ($14,727 versus $10,965 in the demonstration group) and lower population density (1,113 people per sq. mi. vs 1,651 people per sq. mi. in the demonstration group). Other area- and market-level characteristics were comparable.

D.1.5 Descriptive and Regression Outcomes

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

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

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

Nursing Facility-Related Measures

Two measures of annual NF-related utilization are derived from the MDS. Characteristics of new long-stay NF residents at admission are also included to monitor NF case mix and acuity levels.

- NF admission rate
- Percentage of long-stay NF users
- Functional status of new long-stay NF residents
- Percentage of new long-stay NF residents with severe cognitive impairment
- Percentage of new long-stay NF residents with a low level of care need

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

The percentage of long-stay NF users is calculated as the number of individuals who have stayed in an NF for 101 days or more and 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.

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

Outcome Measure	Definition	Detailed Specifications
Monthly 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.	• The following were identified using the last 4 digits of provider number: – inpatient rehabilitation facilities = 3025–3099 OR the 3rd position of provider number equals 'R' or 'T' – long-term care hospitalizations = 2000–2299 – inpatient hospitalizations = 0001–0979 OR 1300–1399; observational stays are excluded (revenue center code = 0760, 0762 AND HCPCS = G0378, G0379) • Created a 0–1 indicator for the presence of at least one admission in the month.
Monthly ED use	The monthly probability of having any ED visit that occurred during the month that did not result in an inpatient admission.	• Identified any claim with a revenue center code = 0450, 0451, 0452, 0456, 0459, or 0981 AND not followed by an inpatient admission. • Created a 0–1 indicator for the presence of at least one ER claim in the month.
Monthly physician visits	The count of any 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.	• Identified physician office visits on either any physician claim line, federally qualified health center claim line, or rural health center claim line: – Office or Other Outpatient = 99201–99205 or 99211-99215 – Nursing Facility Services = 99304–99310, 99315, 99316, or 99318 – Domiciliary, Rest Home, or Custodial Care Services = 99324–99328, 99334–99337 or 99339-99340 – Home Services = 99341-99345 or 99347–99350 – Initial Medicare Visit = G0402 – Annual Wellness Visit = G0438, G0439 • Calculated the total number of physician office visits that occurred in the month.
Monthly SNF admissions	The monthly probability of having any SNF admission within the month.	• Identified any SNF claims with a clam type code = 4018, 4021, or 4028. • Created a 0-1 indicator for the presence of at least one *admission* in the month using CLM_ACTV_CARE_FROM_DT.
Any long-stay NF use	The annual probability of residing in an NF for 101 days or more during the year.	• Long-stay use is defined as a stay in an NF for 101 days or more as of a beneficiary's last quarter of demonstration eligibility and is derived from the Minimum Data Set (MDS).

(continued)

Table D-2 (continued)
Detailed Definitions and Measure Specifications for the Utilization, Quality of Care, and Nursing Facility (NF)–Related Outcome Measures

Outcome Measure	Definition	Detailed Specifications
30-day all-cause risk-standardized readmission	The rate of risk-standardized readmission, defined as the percentage of enrollees who were readmitted within 30 days following a hospital discharge, and the number of risk-standardized readmissions that occur during the year.	For both the numerator and denominator, identified all acute inpatient stays with a discharge date during the measurement period. Beneficiaries are included only if eligible during the month(s) of admission and discharge and during the 30-day follow-up period. $\frac{\left(\frac{\sum_{ig} x_{ig}}{\sum_{ig} n_{ig}} * C\right)}{Prob_g} * 100$ Numerator: • C = the national average of 30-day readmission rate, 0.238. • x_{ig} = the total number of readmissions for individual *i* in group *g*. • n_{ig} = the total number of hospital admissions for individual i in group g. Denominator: $Prob_g$ = the annual average adjusted probability of readmission for individuals in group *g*. Multiply by 100 to get the final measure score.
Annual count of 30-day all-cause readmissions	The annual count of the number of readmissions per beneficiary period.	Among beneficiaries with any index inpatient admission, defined above, a readmission is defined as the having any inpatient admission within 30-days of the index discharge date
Monthly preventable ED visits	A continuous variable of weighted ED visits that occur during the month.	Numerator: Sum of the relative percentage of ED visits per diagnosis (see 1–4 below) for conditions that are either preventable/avoidable or treatable in a primary care setting.[1] The algorithm uses four categories for ED utilization, 1–3 are included in the numerator for this measure, and 4 is excluded: (1) Non-emergent (2) Emergent / primary care treatable (3) Emergent / ED care needed – preventable/avoidable (4) – *Excluded* – Emergent / ED care needed – not preventable/avoidable Denominator: All demonstration-eligible Medicare-Medicaid beneficiaries.

(continued)

Table D-2 (continued)
Detailed Definitions and Measure Specifications for the Utilization, Quality of Care, and Nursing Facility-Related Outcome Measures

Outcome Measure	Definition	Detailed Specifications
30-day follow-up after hospitalization for mental illness (NQF #576)	The monthly probability of any follow-up visits within 30-days post-hospitalization for a mental illness.	Numerator: Outpatient or carrier visit with a mental health provider within 30 days from the inpatient discharge. One of the following must be met to be included: • Visit with a mental health practitioner AND SPMI diagnosis • Visit to a behavioral health care facility • Visit to a non-behavioral health care facility with a diagnosis of mental illness Denominator: Discharges for an acute inpatient setting (including acute-care psychiatric facilities) for treatment of SPMI AND no readmission within 30 days. Beneficiaries are included only if eligible during both the month of the discharge and the 30-day follow-up period.
ACSC admissions—overall composite (AHRQ PQI #90)	The monthly probability of any acute discharge that meet the AHRQ PQI #90 (Prevention Quality Overall Composite) criteria within the month.	Numerator: Total number of discharges that meet the inclusion and exclusion criteria for 12 PQIs for ambulatory care–sensitive conditions, including diabetes—short-term complications (PQI #1); diabetes—long-term complications (PQI #3); COPD or asthma (PQI #5); hypertension (PQI #7); heart failure (PQI #8); dehydration (PQI #10); bacterial pneumonia (PQI #11); UTI (PQI #12); angina without procedure (PQI #13); uncontrolled diabetes (PQI #14); asthma in younger adults (PQI #15); lower-extremity amputations among diabetics (PQI #16) Denominator: All demonstration-eligible Medicare-Medicaid beneficiaries.
ACSC admissions—chronic composite (AHRQ PQI #92)	The monthly probability of any acute discharge that meet the AHRQ PQI #92 criteria within the month.	Numerator: Total number of discharges that meet the inclusion and exclusion criteria for eight PQIs for ambulatory care-sensitive chronic conditions including diabetes—short-term complications (PQI #1); diabetes—long-term complications (PQI #3); COPD or asthma (PQI #5); hypertension (PQI #7); heart failure (PQI #8); uncontrolled diabetes (PQI #14); asthma in younger adults (PQI #15); lower-extremity amputations among diabetics (PQI #16) Denominator: All demonstration-eligible Medicare-Medicaid beneficiaries.

(continued)

Table D-2 (continued)
Detailed Definitions and Measure Specifications for the Utilization, Quality of Care, and Nursing Facility-Related Outcome Measures

Outcome Measure	Definition	Detailed Specifications
Depression screening and follow-up	Number of depression screenings and positive tests, and per eligible beneficiary per month.	Numerator: Demonstration-eligible Medicare-Medicaid enrollees whose screening for clinical depression using an age-appropriate standardized tool: • Received a depression screening, tested positive and had a follow-up plan is identified by CLM_LINE_HCPCS_CD = 'G8431'. • Received a depression screening, tested positive and follow-up plan not required is identified by CLM_LINE_HCPCS_CD = 'G8510'. • Received a depression screening, tested positive and not eligible for follow-up plan is identified by CLM_LINE_HCPCS_CD = 'G8940'. • Received a depression screening, tested positive, no follow-up plan and reason not documented is identified by CLM_LINE_HCPCS_CD = 'G8511'. Denominator: All demonstration-eligible Medicare-Medicaid beneficiaries.

AHRQ = Agency for Healthcare Research and Quality; PQI = Prevention Quality Indicator; SPMI = serious and persistent mental illness.
[1] The lists of diagnoses preventable/avoidable or treatable were developed by researchers at the New York University Center for Health and Public Service Research. https://wagner.nyu.edu/faculty/billings/nyued-background

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 Group 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 Resource Utilization Group categories. Severe cognitive impairment is assessed by the Brief Interview for Mental Status, poor short-term memory, or severely impaired decision-making skills.

D.1.6 Descriptive Statistics and Regression Methodology for Determining Demonstration Impact

Descriptive statistics. For any health care service type, we calculate average monthly utilization per 1,000 eligible months, the average monthly utilization per 1,000 user months (i.e., a user month is month in which there was any use of the service), and the average monthly percentage with any use of the service. Because full-benefit dual eligibility status for the demonstration can vary by month over time for any individual, the analytic observations are at the monthly level. We calculate monthly averages by predemonstration and demonstration year, which account for the variation in demonstration eligibility that any one beneficiary may have.

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

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

Table D-3 shows the average adjusted probabilities used in that calculation for the overall eligible population.

Table D-3
Average adjusted probability of readmission by demonstration group

Demonstration group	Average adjusted probability of readmission
Predemonstration year 1	
Michigan	0.2251
Comparison	0.2040
Predemonstration year 2	
Michigan	0.2228
Comparison	0.2064
Demonstration year 1	
Michigan	0.2226
Comparison	0.2064
Demonstration year 2	
Michigan	0.2161
Comparison	0.1993
Demonstration year 3	
Michigan	0.2144
Comparison	0.1980

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

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

where *PostYear* is an indicator of whether the observation is from the predemonstration or demonstration 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 and is the primary policy variable of interest. In all regression models, postregression predictions of demonstration impact are performed to obtain the marginal effects of demonstration impact.

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

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

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

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

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

Impact estimates across the entire demonstration period are determined using the DinD methodology and presented in figures for all demonstration eligible beneficiaries. We present a table displaying the cumulative estimate along with the adjusted means for each group and time period for the eligible population. We also display figures showing the annual effects of the demonstration among the overall eligible population. In each figure, the point estimate is displayed for each measure, as well as the 95 percent confidence interval. If the confidence interval includes the value of zero, it is not statistically significant at that confidence level.

To determine whether the demonstration had an effect on the SPMI and LTSS populations, a triple interaction term is used to estimate the interaction effect of each special population (i.e., Demonstration * Post * LTSS). In ***Section 5,*** we report the cumulative DinD estimates for both the special population of interest and the rest of the eligible population, and

we test the difference in the demonstration effect for each estimate. Annual triple-DinD results are shown in ***Appendix E, Tables E-2,*** and ***E-3.***

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

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

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 that all four groups have the same population characteristics.
4. *Predict* the regression-adjusted mean for each of the four groups using the regression coefficients stored from Step 1.

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

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

Table D-4
Logistic regression results on monthly inpatient admissions
(n = 16,997,688 person months)

Independent variables	Coefficient	Standard error	z-value	*p*-value
Post period	−0.0922	0.0185	−4.98	< 0.001
Demonstration group	−0.0881	0.0271	−3.25	0.001
Interaction of post period x demonstration group	−0.0327	0.0235	−1.39	0.164
Age (continuous)	0.0035	0.0006	5.55	< 0.001
Female	−0.0148	0.0151	−0.98	0.329

(continued)

Table D-4 (continued)
Logistic regression results on monthly inpatient admissions
(n = 16,997,688 person months)

Independent variables	Coefficient	Standard error	z-value	*p*-value
Black	0.0482	0.0126	3.83	< 0.001
Hispanic	−0.1878	0.0310	−6.06	< 0.001
Asian	−0.4335	0.0414	−10.48	< 0.001
Other race/ethnicity	−0.3074	0.0357	−8.62	< 0.001
Disability as reason for Medicare entitlement	0.0291	0.0184	1.58	0.113
End-stage renal disease	1.5405	0.0285	54.00	< 0.001
Participation in other Shared Savings Program	0.1824	0.0284	6.42	< 0.001
Hierarchical Condition Category score	0.3635	0.0059	61.34	< 0.001
Metropolitan statistical area residence	0.0330	0.0398	0.83	0.407
Medicare spending per dual, age 19+	0.0000	0.0000	5.92	< 0.001
Percent of population married	−0.0041	0.0012	−3.26	0.001
Medicare Advantage penetration rate	−0.4885	0.4201	−1.16	0.245
Fraction of dually eligible beneficiaries using nursing facility, age 65+	0.1289	0.2934	0.44	0.660
Fraction of dual eligible beneficiaries using personal care, age 65+	0.4216	0.1111	3.80	< 0.001
Patient care physicians per 1,000 population	−0.0981	0.0769	−1.28	0.202
Percentage of adults with college education	−0.0027	0.0011	−2.44	0.015
Percentage of adults who are unemployed	−0.0054	0.0016	−3.40	0.001
Percentage of adults with self-care limitation	−0.0051	0.0052	−0.97	0.331
Distance to nearest hospital	−0.0019	0.0016	−1.18	0.238
Distance to nearest nursing facility	0.0039	0.0031	1.25	0.210
Percentage of households with individuals younger than 18	−0.0017	0.0012	−1.35	0.178
Percentage of households with individuals older than 60	−0.0034	0.0010	−3.41	0.001
Intercept	−4.2317	0.3233	−13.09	< 0.001

HCBS = home and community-based services.

Appendix E

Descriptive and Special Population Supplemental Analysis

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

Table E-1
Cumulative and annual demonstration effects on service utilization and quality of care measures for eligible beneficiaries in Michigan, March 1, 2015–December 31, 2018

Measure	Adjusted DinD estimate	Relative difference (%)	p-value	95% confidence interval	90% confidence interval
Probability of inpatient admission					
Cumulative	–0.0012	NS	0.1374	–0.0028, 0.0004	–0.0025, 0.0001
Demonstration year 1	–0.0013	NS	0.0509	–0.0027, 0.0000	–0.0024, –0.0002
Demonstration year 2	–0.0013	NS	0.2415	–0.0034, 0.0009	–0.0030, 0.0005
Demonstration year 3	–0.0008	NS	0.3951	–0.0026, 0.0010	–0.0023, 0.0007
Count of all-cause 30-day readmissions					
Cumulative	0.0016	NS	0.7586	–0.0088, 0.0121	–0.0071, 0.0104
Demonstration year 1	–0.0030	NS	0.6667	–0.0167, 0.0107	–0.0145, 0.0085
Demonstration year 2	0.0093	NS	0.1514	–0.0034, 0.0221	–0.0014, 0.0200
Demonstration year 3	0.0019	NS	0.7672	–0.0104, 0.0141	–0.0085, 0.0122
Probability of ACSC admission, overall					
Cumulative	0.0001	NS	0.7179	–0.0006, 0.0008	–0.0005, 0.0007
Demonstration year 1	0.0001	NS	0.7714	–0.0005, 0.0006	–0.0004, 0.0005
Demonstration year 2	0.0001	NS	0.7865	–0.0009, 0.0012	–0.0007, 0.0010
Demonstration year 3	0.0003	NS	0.4944	–0.0006, 0.0011	–0.0004, 0.0010
Probability of ACSC admission, chronic					
Cumulative	0.0001	NS	0.7683	–0.0004, 0.0006	–0.0003, 0.0005
Demonstration year 1	0.0000	NS	0.9631	–0.0004, 0.0004	–0.0003, 0.0004
Demonstration year 2	–0.0000	NS	0.9611	–0.0007, 0.0007	–0.0006, 0.0006
Demonstration year 3	0.0004	NS	0.2035	–0.0002, 0.0010	–0.0001, 0.0009
Probability of ED visit					
Cumulative	0.0001	NS	0.9764	–0.0037, 0.0038	–0.0031, 0.0032
Demonstration year 1	–0.0014	NS	0.3525	–0.0043, 0.0015	–0.0039, 0.0011
Demonstration year 2	0.0007	NS	0.7385	–0.0032, 0.0045	–0.0026, 0.0039
Demonstration year 3	0.0017	NS	0.5290	–0.0036, 0.0071	–0.0028, 0.0062

(continued)

Table E-1 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures for eligible beneficiaries in Michigan, March 1, 2015–December 31, 2018

Measure	Adjusted DinD estimate	Relative difference (%)	p-value	95% confidence interval	90% confidence interval
Count of preventable ED visits					
Cumulative	0.0010	NS	0.4409	–0.0016, 0.0036	–0.0011, 0.0032
Demonstration year 1	0.0001	NS	0.9421	–0.0013, 0.0015	–0.0011, 0.0012
Demonstration year 2	0.0010	NS	0.4863	–0.0019, 0.0039	–0.0014, 0.0035
Demonstration year 3	0.0025	NS	0.2640	–0.0019, 0.0068	–0.0012, 0.0061
Probability of SNF admission					
Cumulative	0.0003	NS	0.3580	–0.0004, 0.0011	–0.0003, 0.0009
Demonstration year 1	–0.0001	NS	0.7418	–0.0006, 0.0004	–0.0005, 0.0004
Demonstration year 2	0.0005	NS	0.3443	–0.0006, 0.0016	–0.0004, 0.0014
Demonstration year 3	0.0008	NS	0.0572	–0.0000, 0.0017	–0.0001, 0.0016
Probability of any long-stay NF use					
Cumulative	0.0142	15.4	<0.0001	0.0079, 0.0204	0.0089, 0.0194
Demonstration year 1	0.0171	16.2	<0.0001	0.0123, 0.0220	0.0130, 0.0212
Demonstration year 2	0.0133	15.0	0.0014	0.0052, 0.0214	0.0065, 0.0201
Demonstration year 3	0.0126	15.3	0.0003	0.0057, 0.0195	0.0068, 0.0184
Probability of 30-day follow-up after mental health discharge					
Cumulative	0.0076	NS	0.5174	–0.0153, 0.0304	–0.0116, 0.0268
Demonstration year 1	–0.0026	NS	0.8817	–0.0368, 0.0316	–0.0313, 0.0261
Demonstration year 2	0.0308	9.1	0.0298	0.0030, 0.0585	0.0075, 0.0540
Demonstration year 3	–0.0023	NS	0.8926	–0.0356, 0.0310	–0.0302, 0.0256
Count of physician E&M visits					
Cumulative	0.0833	8.9	0.0134	0.0173, 0.1493	0.0279, 0.1387
Demonstration year 1	0.0843	8.8	0.0061	0.0240, 0.1446	0.0337, 0.1349
Demonstration year 2	0.0895	9.7	0.0132	0.0187, 0.1603	0.0301, 0.1489
Demonstration year 3	0.0765	8.3	0.0488	0.0004, 0.1526	0.0126, 0.1404

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

Table E-2
Cumulative and annual demonstration effects on service utilization and quality of care measures, beneficiaries with LTSS use versus those without LTSS use in Michigan, March 1, 2015–December 31, 2018

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	–0.0082	–15.5	0.0017	–0.0133, –0.0031	–0.0125, –0.0039	–0.0081**
		Non-LTSS users	–0.0001	NS	0.8823	–0.0015, 0.0013	–0.0013, 0.0011	
	Demonstration year 1	LTSS users	–0.0090	–16.9	< 0.0001	–0.0134, –0.0046	–0.0127, –0.0053	–0.0095***
		Non-LTSS users	0.0005	NS	0.4642	–0.0009, 0.0020	–0.0007, 0.0017	
	Demonstration year 2	LTSS users	–0.0072	–13.7	0.0147	–0.0130, –0.0014	–0.0121, –0.0023	–0.0073*
		Non-LTSS users	0.0001	NS	0.9411	–0.0018, 0.0020	–0.0015, 0.0017	
	Demonstration year 3	LTSS users	–0.0065	NS	0.0952	–0.0140, 0.0011	–0.0128, –0.0001	–0.0053
		Non-LTSS users	–0.0012	NS	0.1539	–0.0027, 0.0004	–0.0025, 0.0002	
Probability of ED visit	Cumulative	LTSS users	–0.0111	–18.6	< 0.0001	–0.0142, –0.0080	–0.0137, –0.0085	–0.0122***
		Non-LTSS users	0.0011	NS	0.5360	–0.0024, 0.0047	–0.0019, 0.0041	
	Demonstration year 1	LTSS users	–0.0119	–19.6	< 0.0001	–0.0149, –0.0089	–0.0144, –0.0093	–0.0115***
		Non-LTSS users	–0.0003	NS	0.8151	–0.0032, 0.0025	–0.0027, 0.0020	
	Demonstration year 2	LTSS users	–0.0107	–18.3	< 0.0001	–0.0144, –0.0069	–0.0138, –0.0075	–0.0123***
		Non-LTSS users	0.0017	NS	0.3437	–0.0018, 0.0051	–0.0012, 0.0046	
	Demonstration year 3	LTSS users	–0.0096	–16.2	0.0001	–0.0144, –0.0047	–0.0137, –0.0055	–0.0123***
		Non-LTSS users	0.0027	NS	0.3052	–0.0025, 0.0079	–0.0016, 0.0070	

(continued)

Table E-2 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures, beneficiaries with LTSS use versus those without LTSS use in Michigan, March 1, 2015–December 31, 2018

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	–0.0141	NS	0.8614	–0.1725, 0.1443	–0.1470, 0.1188	–0.1424*
		Non-LTSS users	0.1283	17.8	< 0.0001	0.0775, 0.1791	0.0856, 0.1709	
	Demonstration year 1	LTSS users	0.0228	NS	0.7444	–0.1144, 0.1600	–0.0923, 0.1380	–0.1025
		Non-LTSS users	0.1253	17.2	< 0.0001	0.0798, 0.1709	0.0871, 0.1636	
	Demonstration year 2	LTSS users	–0.0098	NS	0.9197	–0.2009, 0.1813	–0.1702, 0.1506	–0.1494
		Non-LTSS users	0.1395	19.8	< 0.0001	0.0854, 0.1937	0.0941, 0.1850	
	Demonstration year 3	LTSS users	–0.1283	NS	0.2726	–0.3576, 0.1009	–0.3207, 0.0641	–0.2503**
		Non-LTSS users	0.1220	17.1	< 0.0001	0.0622, 0.1818	0.0719, 0.1722	
Probability of SNF admission	Cumulative	LTSS users	0.0015	NS	0.4593	–0.0025, 0.0055	–0.0018, 0.0048	0.0007
		Non-LTSS users	0.0008	39.5	< 0.0001	0.0006, 0.0009	0.0006, 0.0009	
	Demonstration year 1	LTSS users	0.0003	NS	0.8916	–0.0035, 0.0040	–0.0029, 0.0034	–0.0009
		Non-LTSS users	0.0012	66.0	< 0.0001	0.0010, 0.0015	0.0010, 0.0014	
	Demonstration year 2	LTSS users	0.0036	NS	0.1910	–0.0018, 0.0090	–0.0009, 0.0081	0.0028
		Non-LTSS users	0.0008	44.7	< 0.0001	0.0005, 0.0011	0.0005, 0.0010	
	Demonstration year 3	LTSS users	0.0026	NS	0.3446	–0.0027, 0.0078	–0.0019, 0.0070	0.0025
		Non-LTSS users	0.0000	NS	0.7756	–0.0003, 0.0004	–0.0002, 0.0003	

(continued)

Table E-2 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures, beneficiaries with LTSS use versus those without LTSS use in Michigan, March 1, 2015–December 31, 2018

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	–0.0096	–27.4	< 0.0001	–0.0127, –0.0064	–0.0122, –0.0069	–0.0117***
		Non-LTSS users	0.0021	NS	0.0598	–0.0001, 0.0043	0.0003, 0.0040	
	Demonstration year 1	LTSS users	–0.0091	–25.9	< 0.0001	–0.0123, –0.0059	–0.0118, –0.0064	–0.0100***
		Non-LTSS users	0.0009	NS	0.1409	–0.0003, 0.0022	–0.0001, 0.0020	
	Demonstration year 2	LTSS users	–0.0120	–35.0	< 0.0001	–0.0167, –0.0073	–0.0160, –0.0081	–0.0145***
		Non-LTSS users	0.0024	5.8	0.0481	0.0000, 0.0048	0.0004, 0.0044	
	Demonstration year 3	LTSS users	–0.0080	–23.4	< 0.0001	–0.0117, –0.0044	–0.0111, –0.0050	–0.0116***
		Non-LTSS users	0.0036	NS	0.0832	–0.0005, 0.0076	0.0002, 0.0070	
Probability of ACSC admission, overall	Cumulative	LTSS users	–0.0036	–35.1	< 0.0001	–0.0054, –0.0018	–0.0051, –0.0021	–0.0040***
		Non-LTSS users	0.0005	10.3	0.0336	0.0000, 0.0009	0.0001, 0.0008	
	Demonstration year 1	LTSS users	–0.0029	–30.2	< 0.0001	–0.0042, –0.0016	–0.0040, –0.0018	–0.0033***
		Non-LTSS users	0.0004	10.3	0.0192	0.0001, 0.0008	0.0001, 0.0007	
	Demonstration year 2	LTSS users	–0.0042	–37.9	< 0.0001	–0.0062, –0.0021	–0.0059, –0.0025	–0.0048***
		Non-LTSS users	0.0006	NS	0.0955	–0.0001, 0.0013	0.0000, 0.0012	
	Demonstration year 3	LTSS users	–0.0045	–41.2	0.0029	–0.0075, –0.0015	–0.0070, –0.0020	–0.0050***
		Non-LTSS users	0.0005	NS	0.0759	–0.0001, 0.0010	0.0000, 0.0009	

(continued)

Table E-2 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures, beneficiaries with LTSS use versus those without LTSS use in Michigan, March 1, 2015–December 31, 2018

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	–0.0027	–41.3	< 0.0001	–0.0041, –0.0014	–0.0038, –0.0016	–0.0030***
		Non-LTSS users	0.0003	NS	0.0888	0.0000, 0.0007	0.0000, 0.0006	
	Demonstration year 1	LTSS users	–0.0023	–37.5	< 0.0001	–0.0033, –0.0013	–0.0031, –0.0014	–0.0026***
		Non-LTSS users	0.0003	NS	0.1089	–0.0001, 0.0006	0.0000, 0.0006	
	Demonstration year 2	LTSS users	–0.0037	–49.9	< 0.0001	–0.0050, –0.0024	–0.0048, –0.0027	–0.0042***
		Non-LTSS users	0.0004	NS	0.1311	–0.0001, 0.0010	0.0000, 0.0009	
	Demonstration year 3	LTSS users	–0.0026	–36.0	0.0397	–0.0050, –0.0001	–0.0046, –0.0005	–0.0030*
		Non-LTSS users	0.0004	NS	0.0888	–0.0001, 0.0009	0.0000, 0.0008	
Probability of 30-day follow-up after mental health discharge	Cumulative	LTSS users	0.0320	NS	0.2734	–0.0252, 0.0892	–0.0160, 0.0800	0.0328
		Non-LTSS users	–0.0008	NS	0.9500	–0.0268, 0.0251	–0.0226, 0.0209	
	Demonstration year 1	LTSS users	–0.0073	NS	0.8663	–0.0917, 0.0772	–0.0781, 0.0636	0.0021
		Non-LTSS users	–0.0093	NS	0.5618	–0.0408, 0.0222	–0.0357, 0.0171	
	Demonstration year 2	LTSS users	0.0645	NS	0.1658	–0.0267, 0.1556	–0.0120, 0.1410	0.0423
		Non-LTSS users	0.0221	NS	0.1590	–0.0087, 0.0529	–0.0037, 0.0480	
	Demonstration year 3	LTSS users	0.0708	NS	0.1743	–0.0314, 0.1731	–0.0149, 0.1566	0.0839
		Non-LTSS users	–0.0130	NS	0.5054	–0.0513, 0.0253	–0.0452, 0.0191	

(continued)

Table E-2 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures, beneficiaries with LTSS use versus those without LTSS use in Michigan, March 1, 2015–December 31, 2018

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	–0.0096	NS	0.4097	–0.0323, 0.0132	–0.0287, 0.0095	–0.0102
		Non-LTSS users	0.0006	NS	0.9186	–0.0106, 0.0118	–0.0088, 0.0100	
	Demonstration year 1	LTSS users	–0.0127	NS	0.3518	–0.0396, 0.0141	–0.0353, 0.0098	–0.0176
		Non-LTSS users	0.0048	NS	0.4982	–0.0091, 0.0188	–0.0069, 0.0166	
	Demonstration year 2	LTSS users	0.0055	NS	0.8055	–0.0386, 0.0497	–0.0315, 0.0426	–0.0020
		Non-LTSS users	0.0075	NS	0.2695	–0.0058, 0.0209	–0.0037, 0.0187	
	Demonstration year 3	LTSS users	–0.0160	NS	0.2430	–0.0429, 0.0109	–0.0386, 0.0065	–0.0084
		Non-LTSS users	–0.0076	NS	0.2422	–0.0203, 0.0051	–0.0182, 0.0031	

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
— = data not available; 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 and encounter data.

Table E-3
Cumulative and annual demonstration effects on service utilization and quality of care measures, beneficiaries with SPMI versus those without SPMI in Michigan, March 1, 2015–December 31, 2018

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	–0.0022	–4.2	0.0329	–0.0042, –0.0002	–0.0039, –0.0005	–0.0024**
		Non-SPMI	0.0002	NS	0.8137	–0.0016, 0.0020	–0.0013, 0.0017	
	Demonstration year 1	SPMI	–0.0030	–5.6	0.0035	–0.0050, –0.0010	–0.0047, –0.0013	–0.0034**
		Non-SPMI	0.0004	NS	0.6334	–0.0013, 0.0022	–0.0010, 0.0019	
	Demonstration year 2	SPMI	–0.0022	NS	0.1070	–0.0049, 0.0005	–0.0045, 0.0000	–0.0023*
		Non-SPMI	0.0001	NS	0.9098	–0.0021, 0.0024	–0.0018, 0.0020	
	Demonstration year 3	SPMI	–0.0011	NS	0.3894	–0.0036, 0.0014	–0.0032, 0.0010	–0.0012
		Non-SPMI	0.0001	NS	0.9177	–0.0019, 0.0021	–0.0015, 0.0018	
Probability of ED visit	Cumulative	SPMI	–0.0009	NS	0.7618	–0.0068, 0.0050	–0.0058, 0.0040	–0.0023
		Non-SPMI	0.0014	NS	0.4971	–0.0026, 0.0053	–0.0019, 0.0046	
	Demonstration year 1	SPMI	–0.0029	NS	0.2231	–0.0075, 0.0018	–0.0068, 0.0010	–0.0032*
		Non-SPMI	0.0003	NS	0.8740	–0.0030, 0.0036	–0.0025, 0.0030	
	Demonstration year 2	SPMI	0.0007	NS	0.8286	–0.0052, 0.0066	–0.0043, 0.0056	–0.0005
		Non-SPMI	0.0011	NS	0.5913	–0.0030, 0.0052	–0.0023, 0.0046	
	Demonstration year 3	SPMI	0.0004	NS	0.9208	–0.0077, 0.0085	–0.0064, 0.0072	–0.0029
		Non-SPMI	0.0033	NS	0.1860	–0.0016, 0.0083	–0.0008, 0.0075	

(continued)

Table E-3 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures, beneficiaries with SPMI versus those without SPMI in Michigan, March 1, 2015–December 31, 2018

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	0.0897	7.3	0.0013	0.0349, 0.1445	0.0437, 0.1357	0.0181
		Non-SPMI	0.0716	10.3	0.0034	0.0237, 0.1195	0.0314, 0.1118	
	Demonstration year 1	SPMI	0.0947	7.5	0.0009	0.0387, 0.1507	0.0477, 0.1417	0.0243
		Non-SPMI	0.0704	9.7	0.0019	0.0261, 0.1147	0.0332, 0.1076	
	Demonstration year 2	SPMI	0.1052	8.7	0.0007	0.0444, 0.1661	0.0542, 0.1563	0.0363
		Non-SPMI	0.0689	10.3	0.0136	0.0142, 0.1237	0.0230, 0.1149	
	Demonstration year 3	SPMI	0.0639	5.3	0.0446	0.0015, 0.1263	0.0116, 0.1163	–0.0135
		Non-SPMI	0.0775	11.8	0.0033	0.0257, 0.1292	0.0341, 0.1209	
Probability of SNF admission	Cumulative	SPMI	0.0008	NS	0.3630	–0.0009, 0.0024	–0.0006, 0.0021	0.0005
		Non-SPMI	0.0003	NS	0.2221	–0.0002, 0.0008	–0.0001, 0.0007	
	Demonstration year 1	SPMI	0.0000	NS	0.9984	–0.0013, 0.0013	–0.0011, 0.0011	–0.0001
		Non-SPMI	0.0001	NS	0.7544	–0.0004, 0.0005	–0.0003, 0.0004	
	Demonstration year 2	SPMI	0.0009	NS	0.4280	–0.0013, 0.0032	–0.0010, 0.0028	0.0004
		Non-SPMI	0.0005	NS	0.0632	–0.0000, 0.0010	0.0001, 0.0009	
	Demonstration year 3	SPMI	0.0017	NS	0.0568	0.0000, 0.0034	0.0002, 0.0031	0.0012
		Non-SPMI	0.0005	NS	0.1843	–0.0002, 0.0012	–0.0001, 0.0011	

(continued)

Table E-3 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures, beneficiaries with SPMI versus those without SPMI in Michigan, March 1, 2015–December 31, 2018

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	0.0009	NS	0.7431	–0.0046, 0.0065	–0.0037, 0.0056	–0.0007
		Non-SPMI	0.0017	NS	0.0919	–0.0003, 0.0036	0.0000, 0.0033	
	Demonstration year 1	SPMI	–0.0000	NS	0.9851	–0.0036, 0.0035	–0.0030, 0.0029	–0.0008
		Non-SPMI	0.0007	NS	0.3609	–0.0008, 0.0023	–0.0006, 0.0020	
	Demonstration year 2	SPMI	0.0017	NS	0.6189	–0.0050, 0.0084	–0.0039, 0.0073	0.0005
		Non-SPMI	0.0012	NS	0.1831	–0.0006, 0.0030	–0.0003, 0.0027	
	Demonstration year 3	SPMI	0.0015	NS	0.7004	–0.0062, 0.0092	–0.0049, 0.0079	–0.0020
		Non-SPMI	0.0035	13.1	0.0229	0.0005, 0.0066	0.0010, 0.0061	
Probability of ACSC admission, overall	Cumulative	SPMI	0.0001	NS	0.8719	–0.0008, 0.0009	–0.0006, 0.0008	–0.0001
		Non-SPMI	0.0002	NS	0.6234	–0.0006, 0.0010	–0.0005, 0.0008	
	Demonstration year 1	SPMI	–0.0001	NS	0.8346	–0.0007, 0.0006	–0.0006, 0.0005	–0.0003
		Non-SPMI	0.0002	NS	0.5569	–0.0004, 0.0008	–0.0003, 0.0007	
	Demonstration year 2	SPMI	–0.0000	NS	0.9747	–0.0012, 0.0012	–0.0010, 0.0010	–0.0003
		Non-SPMI	0.0003	NS	0.6008	–0.0008, 0.0014	–0.0006, 0.0012	
	Demonstration year 3	SPMI	0.0004	NS	0.4492	–0.0007, 0.0016	–0.0005, 0.0014	0.0003
		Non-SPMI	0.0002	NS	0.6728	–0.0007, 0.0010	–0.0005, 0.0009	

(continued)

Table E-3 (continued)
Cumulative and annual demonstration effects on service utilization and quality of care measures, beneficiaries with SPMI versus those without SPMI in Michigan, March 1, 2015–December 31, 2018

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	–0.0001	NS	0.7692	–0.0010, 0.0007	–0.0008, 0.0006	–0.0003
		Non-SPMI	0.0002	NS	0.5662	–0.0004, 0.0007	–0.0003, 0.0006	
	Demonstration year 1	SPMI	–0.0003	NS	0.4872	–0.0012, 0.0006	–0.0010, 0.0004	–0.0005
		Non-SPMI	0.0002	NS	0.4106	–0.0003, 0.0006	–0.0002, 0.0005	
	Demonstration year 2	SPMI	–0.0003	NS	0.4848	–0.0013, 0.0006	–0.0011, 0.0005	–0.0005
		Non-SPMI	0.0002	NS	0.7204	–0.0007, 0.0010	–0.0006, 0.0009	
	Demonstration year 3	SPMI	0.0005	NS	0.3374	–0.0005, 0.0014	–0.0003, 0.0013	0.0002
		Non-SPMI	0.0003	NS	0.4413	–0.0004, 0.0009	–0.0003, 0.0008	
Count of all-cause 30-day readmissions	Cumulative	SPMI	0.0001	NS	0.9865	–0.0119, 0.0121	–0.0100, 0.0102	–0.0079
		Non-SPMI	0.0080	NS	0.2373	–0.0052, 0.0212	–0.0031, 0.0190	
	Demonstration year 1	SPMI	–0.0060	NS	0.5725	–0.0268, 0.0148	–0.0235, 0.0115	–0.0095
		Non-SPMI	0.0035	NS	0.6751	–0.0130, 0.0200	–0.0103, 0.0174	
	Demonstration year 2	SPMI	0.0081	NS	0.3802	–0.0100, 0.0262	–0.0071, 0.0233	–0.0070
		Non-SPMI	0.0152	NS	0.0693	–0.0012, 0.0315	0.0014, 0.0289	
	Demonstration year 3	SPMI	–0.0001	NS	0.9852	–0.0143, 0.0140	–0.0120, 0.0117	–0.0097
		Non-SPMI	0.0096	NS	0.1307	–0.0029, 0.0221	–0.0008, 0.0201	

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$
— = data not available; 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 and encounter data.

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

Data are shown for the predemonstration and demonstration period for both Michigan eligible beneficiaries (i.e., the demonstration group) and the comparison group. We also provide tables for the RTI quality of care and care coordination measures (***Table E-5***) and NF-related measures derived from the MDS (***Table E-6***). 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 E-4***). However, a few outcomes had some apparent differences. For example, outpatient therapy use was higher for the comparison group than for the demonstration group. Conversely, percentages with use of inpatient nonpsychiatric services and physician E&M visits were higher in the demonstration group than in the comparison group.

As with the service utilization measures, the Michigan 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 E-5***). In general, the demonstration group had more admissions for overall and chronic ACSC diagnoses, positive screenings for clinical depression, and a higher rate of 30-day follow-up after hospitalization for mental illness over the predemonstration and demonstration periods. On the other hand, preventable ED visits were more prevalent in the comparison group than in the demonstration group in the predemonstration period. No clear pattern was evident for the 30-day risk of readmission.

Finally, across all years, the demonstration-eligible group had a lower rate of new long-stay NF admissions relative to the comparison group (***Table E-6***). In demonstration years 2 and 3, the demonstration eligible group had a lower percentage of long-stay NF users than that of the comparison group. Some characteristics of long-stay NF residents differed at admission: relative to the comparison group, the demonstration-eligible group had better functional status, higher percentage with low level of care need, and a lower proportion of beneficiaries with severe cognitive impairment.

Table E-4
Proportion and utilization for institutional and non-institutional services for the Michigan demonstration and comparison groups

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3
Number of demonstration-eligible beneficiaries		73,728	72,829	68,686	65,187	66,701
Number of comparison beneficiaries		205,180	208,185	239,004	226,956	231,929
Institutional setting						
Inpatient admissions[1]	Demonstration					
Percentage with use		4.7	4.7	3.9	3.9	3.8
Utilization per 1,000 user months		1,163.5	1,170.5	1,157.3	1,155.2	1,155.3
Utilization per 1,000 eligible months		54.3	54.8	44.8	44.6	44
Inpatient admissions[1]	Comparison					
Percentage with use		4.4	4.2	3.8	3.7	3.6
Utilization per 1,000 user months		1,151.5	1,154.1	1,151.7	1,144.7	1,140
Utilization per 1,000 eligible months		50.8	48.3	43.6	42.3	41
Inpatient psychiatric	Demonstration					
Percentage with use		0.3	0.3	0.3	0.2	0.2
Utilization per 1,000 user months		1,072.8	1,086.6	1,081.6	1,053.1	1,065.6
Utilization per 1,000 eligible months		3.5	3.6	2.8	2.4	2.5
Inpatient psychiatric	Comparison					
Percentage with use		0.3	0.3	0.3	0.3	0.3
Utilization per 1,000 user months		1,065.9	1,082	1,073.1	1,074.5	1,067.2
Utilization per 1,000 eligible months		3.4	3.2	3.2	3	2.9

(continued)

Table E-4 (continued)
Proportion and utilization for institutional and non-institutional services for the Michigan demonstration and comparison groups

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3
Inpatient nonpsychiatric	Demonstration					
Percentage with use		4.4	4.4	3.6	3.7	3.6
Utilization per 1,000 user months		1,156.6	1,164.5	1,151.1	1,152.2	1,151
Utilization per 1,000 eligible months		50.8	51.1	42	42.1	41.4
Inpatient nonpsychiatric	Comparison					
Percentage with use		4.1	3.9	3.5	3.4	3.4
Utilization per 1,000 user months		1,145.1	1,147.1	1,144.5	1,137	1,135
Utilization per 1,000 eligible months		47.4	45.1	40.3	39.2	38.1
Emergency department use (non-admit)	Demonstration					
Percentage with use		6.7	6.8	6.8	6.7	6.5
Utilization per 1,000 user months		1,267.3	1,265.6	1,284.6	1,264	1,247.6
Utilization per 1,000 eligible months		85.2	86.1	86.9	84.4	81.5
Emergency department use (non-admit)	Comparison					
Percentage with use		6.8	6.9	6.9	6.7	6.4
Utilization per 1,000 user months		1,280.3	1,289.1	1,287.2	1,264.4	1,264.4
Utilization per 1,000 eligible months		86.5	88.4	89.1	84.6	81.3

(continued)

Table E-4 (continued)
Proportion and utilization for institutional and non-institutional services for the Michigan demonstration and comparison groups

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3
Emergency department use (psychiatric)	Demonstration					
Percentage with use		0.3	0.4	0.3	0.3	0.3
Utilization per 1,000 user months		1,181.6	1,195.2	1,182.2	1,186.4	1,121.1
Utilization per 1,000 eligible months		3.9	4.2	4.1	3.8	3.5
Emergency department use (psychiatric)	Comparison					
Percentage with use		0.3	0.3	0.4	0.4	0.3
Utilization per 1,000 user months		1,216.4	1,208	1,207.1	1,169.2	1,197.2
Utilization per 1,000 eligible months		4.2	4.2	4.5	4.1	4
Observation stays	Demonstration					
Percentage with use		1.1	1	1	1	1.1
Utilization per 1,000 user months		1,054	1,050.5	1,085.4	1,085.6	1,096
Utilization per 1,000 eligible months		11.3	11	10.8	11.1	12.5
Observation stays	Comparison					
Percentage with use		0.7	0.7	0.7	0.7	0.7
Utilization per 1,000 user months		1,048	1,044.1	1,054.3	1,063.6	1,052.2
Utilization per 1,000 eligible months		7.2	7.4	7.6	7.4	7.3

(continued)

Table E-4 (continued)
Proportion and utilization for institutional and non-institutional services for the Michigan demonstration and comparison groups

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3
Skilled nursing facility	Demonstration					
Percentage with use		1.1	1.1	0.9	0.9	0.9
Utilization per 1,000 user months		1,102.9	1,102	1,101.7	1,102.8	1,103.7
Utilization per 1,000 eligible months		12.3	12	9.8	9.9	9.7
Skilled nursing facility	Comparison					
Percentage with use		1.1	1.1	0.9	0.8	0.8
Utilization per 1,000 user months		1,089.2	1,089.4	1,093.3	1,079.6	1,084.5
Utilization per 1,000 eligible months		12.5	11.8	10.2	9.1	8.6
Hospice	Demonstration					
Percentage with use		—	—	0.1	0.9	0.8
Utilization per 1,000 user months		—	—	1,033.6	1,039.2	1,022.3
Utilization per 1,000 eligible months		—	—	0.6	9	8.4
Hospice	Comparison					
Percentage with use		—	—	0.1	1.1	1.1
Utilization per 1,000 user months		—	—	1,022.8	1,015.9	1,016.5
Utilization per 1,000 eligible months		—	—	0.7	10.9	11.4

(continued)

Table E-4 (continued)
Proportion and utilization for institutional and non-institutional services for the Michigan demonstration and comparison groups

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3
Non-institutional setting						
Physician E&M visits	Demonstration					
Percentage with use		58.9	58.4	57.4	56.6	55.7
Utilization per 1,000 user months		2,113.5	2,071.1	2,145.8	2,122.5	2,133.6
Utilization per 1,000 eligible months		1,245	1,210.2	1,231.3	1,201.8	1,188.4
Physician E&M visits	Comparison					
Percentage with use		53.1	52.8	51.7	49.8	49.2
Utilization per 1,000 user months		1,879.8	1,873.5	1,837.8	1,829.7	1,857.9
Utilization per 1,000 eligible months		997.5	988.5	949.8	912	913.5
Outpatient therapy (PT, OT, ST)	Demonstration					
Percentage with use		4	3.9	3.7	3.7	3.9
Utilization per 1,000 user months		21,833.9	23,540	23,370.5	22,236.7	21,780.1
Utilization per 1,000 eligible months		878.7	919.6	854.5	821.6	859.7
Outpatient therapy (PT, OT, ST)	Comparison					
Percentage with use		4.7	4.6	4.4	4.2	4.2
Utilization per 1,000 user months		21,225.8	22,028	21,656.8	20,465.6	19,822.1
Utilization per 1,000 eligible months		993.8	1,013.3	957.8	860.9	839

(continued)

Table E-4 (continued)
Proportion and utilization for institutional and non-institutional services for the Michigan demonstration and comparison groups

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3
Independent therapy (PT, OT, ST)	Demonstration					
Percentage with use		1	1.1	1.2	1.3	1.3
Utilization per 1,000 user months		14,633.4	16,220.6	15,098.6	14,477.9	15,560.1
Utilization per 1,000 eligible months		147.1	173.2	185.6	184.6	209.3
Independent therapy (PT, OT, ST)	Comparison					
Percentage with use		1.2	1.2	1.2	1.2	1.3
Utilization per 1,000 user months		15,574.9	16,081.2	16,083.7	14,485.3	15,254.3
Utilization per 1,000 eligible months		179.7	186.4	186.7	168.8	193.4
Other hospital outpatient services	Demonstration					
Percentage with use		30	30.8	30.9	30.8	31.2
Utilization per 1,000 user months		—	—	—	—	—
Utilization per 1,000 eligible months		—	—	—	—	—
Other hospital outpatient services	Comparison					
Percentage with use		31	30.9	30.6	30.6	30.9
Utilization per 1,000 user months		—	—	—	—	—
Utilization per 1,000 eligible months		—	—	—	—	—

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

Table E-5
Quality of care and care coordination outcomes for the Michigan demonstration and comparison groups

Quality and care coordination measures	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3
30-day all-cause risk-standardized readmission rate (%)	Demonstration	18.2	19.8	18.5	19.3	19.0
	Comparison	20.0	20.0	19.8	19.2	19.5
Preventable emergency department visits per eligible month	Demonstration	0.0405	0.0412	0.0416	0.0402	0.0388
	Comparison	0.0421	0.0434	0.043	0.0404	0.0385
Rate of 30-day follow-up after hospitalization for mental illness (%)	Demonstration	48.8	48.6	42.3	41.3	38.4
	Comparison	44.0	43.2	38.2	33.9	34.4
Ambulatory care sensitive condition admissions per eligible month—overall composite (AHRQ PQI #90)	Demonstration	0.0085	0.0086	0.0076	0.0083	0.0092
	Comparison	0.0082	0.0075	0.007	0.0075	0.0073
Ambulatory care sensitive condition admissions per eligible month—chronic composite (AHRQ PQI #92)	Demonstration	0.0058	0.0059	0.0054	0.0063	0.0074
	Comparison	0.0054	0.0051	0.005	0.0058	0.0055
Screening for clinical depression per eligible month	Demonstration	0.0007	0.0015	0.0032	0.0087	0.0111
	Comparison	0.0003	0.0011	0.0021	0.0022	0.0016

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

Table E-6
MDS long-stay NF utilization and characteristics at admission for the Michigan demonstration and comparison groups

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2	Demonstration year 3
Annual NF utilization						
Number of demonstration beneficiaries	Demonstration	54,098	53,975	43,779	49,856	51,838
New long-stay NF admissions per 1,000 eligible beneficiaries	Demonstration	10.9	9.5	10.9	7.1	6.6
Number of comparison beneficiaries	Comparison	152,949	157,989	168,990	179,899	183,298
New long-stay NF admissions per 1,000 eligible beneficiaries	Comparison	10.4	10.1	16.6	9.3	8.9
Number of demonstration beneficiaries	Demonstration	60,812	60,213	48,019	54,647	56,554
Long-stay NF users as percentage of eligible beneficiaries	Demonstration	11.8	11.0	10.1	9.4	8.9
Number of comparison beneficiaries	Comparison	172,380	176,321	183,742	194,374	197,050
Long-stay NF users as percentage of eligible beneficiaries	Comparison	12.0	11.1	9.5	8.2	7.7
Characteristics of new long-stay NF residents at admission						
Number of admitted demonstration beneficiaries	Demonstration	588	515	476	354	342
Number of admitted comparison beneficiaries	Comparison	1,589	1,593	2,806	1,681	1,632
Functional status (RUG-IV ADL scale)	Demonstration	7.8	8.1	7.9	7.6	7.7
Functional status (RUG-IV ADL scale)	Comparison	8.5	9.0	8.4	8.7	8.9
Percent with severe cognitive impairment	Demonstration	36.2	37.8	31.6	30.2	30.6
Percent with severe cognitive impairment	Comparison	40.3	36.0	33.5	34.3	32.4
Percent with low level of care need	Demonstration	1.8	2.1	0.7	1.8	2.3
Percent with low level of care need	Comparison	1.0	1.0	0.7	1.0	1.6

ADL = activities of daily living; MDS = Nursing Home Minimum Data Set; NF = nursing facility; RUG-IV = Resource Utilization Group Version 4.
NOTE: A higher score on the RUG-IV ADL scale indicates greater impairment, or worse functional status.
SOURCE: RTI International analysis of Minimum Data Set data.

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

Non-enrollees generally had higher utilization than the demonstration enrollees across most service settings (***Table E-7***). For the quality of care and care coordination measures, non-enrollees had a higher probability of both overall and chronic ACSC admissions and screening for clinical depression (***Table E-8***).

Table E-7
Proportion and utilization for institutional and non-institutional services for the Michigan demonstration enrollees and non-enrollees

Measures by setting	Group	Demonstration year 1	Demonstration year 2	Demonstration year 3
Number of demonstration enrollees		24,637	17,238	16,894
Number of demonstration non-enrollees		43,999	47,650	49,503
Institutional setting				
Inpatient admissions[1]	Enrollees			
Percentage with use		2.4	2.4	2.4
Utilization per 1,000 user months		1,135.8	1,118.7	1,144.9
Utilization per 1,000 eligible months		27.5	27.1	27.5
Inpatient admissions[1]	Non-enrollees			
Percentage with use		4.5	4.4	4.3
Utilization per 1,000 user months		1,161.1	1,163	1,157.5
Utilization per 1,000 eligible months		51.9	50.7	50
Inpatient psychiatric	Enrollees			
Percentage with use		0.1	0.1	0.1
Utilization per 1,000 user months		1,118.9	1,040.7	1,060.5
Utilization per 1,000 eligible months		1.2	1.1	1.3
Inpatient psychiatric	Non-enrollees			
Percentage with use		0.3	0.3	0.3
Utilization per 1,000 user months		1,070.7	1,052.7	1,063.7
Utilization per 1,000 eligible months		3.2	2.9	2.9
Inpatient nonpsychiatric	Enrollees			
Percentage with use		2.3	2.3	2.3
Utilization per 1,000 user months		1,129.1	1,117.6	1,138.6
Utilization per 1,000 eligible months		26.3	26	26.2
Inpatient nonpsychiatric	Non-enrollees			
Percentage with use		4.2	4.1	4.1
Utilization per 1,000 user months		1,155.3	1,160	1,154.2
Utilization per 1,000 eligible months		48.6	47.8	47.1

(continued)

Table E-7 (continued)
Proportion and utilization for institutional and non-institutional services for the Michigan demonstration enrollees and non-enrollees

Measures by setting	Group	Demonstration year 1	Demonstration year 2	Demonstration year 3
Emergency department use (non-admit)	Enrollees			
Percentage with use		6.3	6.6	6.5
Utilization per 1,000 user months		1,344.3	1,321.5	1,309.6
Utilization per 1,000 eligible months		84.2	87.9	84.7
Emergency department use (non-admit)	Non-enrollees			
Percentage with use		6.9	6.7	6.6
Utilization per 1,000 user months		1,265.3	1,244.1	1,225.3
Utilization per 1,000 eligible months		87.2	83.5	80.4
Emergency department use (psychiatric)	Enrollees			
Percentage with use		0.4	0.4	0.3
Utilization per 1,000 user months		1,253.2	1,236.8	1,133.7
Utilization per 1,000 eligible months		4.6	4.4	3.7
Emergency department use (psychiatric)	Non-enrollees			
Percentage with use		0.3	0.3	0.3
Utilization per 1,000 user months		1,161.1	1,167.1	1,116.9
Utilization per 1,000 eligible months		3.8	3.6	3.3
Observation stays	Enrollees			
Percentage with use		0.8	0.9	1
Utilization per 1,000 user months		1,215.2	1,192.2	1,191.1
Utilization per 1,000 eligible months		9.2	10.4	11.8
Observation stays	Non-enrollees			
Percentage with use		1.1	1.1	1.2
Utilization per 1,000 user months		1,055.8	1,056.4	1,067.3
Utilization per 1,000 eligible months		11.7	11.5	12.8
Skilled nursing facility	Enrollees			
Percentage with use		0.6	0.5	0.5
Utilization per 1,000 user months		1,079.8	1,088.4	1,126.4
Utilization per 1,000 eligible months		7	5.8	5.5
Skilled nursing facility	Non-enrollees			
Percentage with use		1	1	1
Utilization per 1,000 user months		1,105.6	1,105.3	1,101.3
Utilization per 1,000 eligible months		11.4	11.3	11.3

(continued)

Table E-7 (continued)
Proportion and utilization for institutional and non-institutional services for the Michigan demonstration enrollees and non-enrollees

Measures by setting	Group	Demonstration year 1	Demonstration year 2	Demonstration year 3
Hospice	Enrollees			
Percentage with use		0	0.5	0.6
Utilization per 1,000 user months		1,177.2	1,203.4	1,077.8
Utilization per 1,000 eligible months		0.4	5.4	6
Hospice	Non-enrollees			
Percentage with use		0	0.4	0.7
Utilization per 1,000 user months		1,020.8	1,019.5	1,011.8
Utilization per 1,000 eligible months		0.3	4.4	6.7
Non-institutional setting				
Physician E&M visits	Enrollees			
Percentage with use		43.7	44.2	45
Utilization per 1,000 user months		2,512.3	2,308.4	2,410.6
Utilization per 1,000 eligible months		1099	1,019.9	1,084.1
Physician E&M visits	Non-enrollees			
Percentage with use		63.3	61.1	59.6
Utilization per 1,000 user months		2,098.5	2,066.1	2,057.5
Utilization per 1,000 eligible months		1,328.7	1,261.6	1,226.2
Outpatient therapy (PT, OT, ST)	Enrollees			
Percentage with use		2.2	2.5	2.9
Utilization per 1,000 user months		13,792.9	11,886.6	12,859.4
Utilization per 1,000 eligible months		300.3	292.3	370.7
Outpatient therapy (PT, OT, ST)	Non-enrollees			
Percentage with use		4.4	4.1	4.3
Utilization per 1,000 user months		25,495.5	24,411.7	24,036.6
Utilization per 1,000 eligible months		1,129.9	1,001.5	1,044.9
Independent therapy (PT, OT, ST)	Enrollees			
Percentage with use		0.4	0.5	0.6
Utilization per 1,000 user months		1,2461	11,207.3	10,856.4
Utilization per 1,000 eligible months		55.6	57.8	66.5
Independent therapy (PT, OT, ST)	Non-enrollees			
Percentage with use		1.5	1.6	1.6
Utilization per 1,000 user months		15,330.8	14,847.6	16,207.3
Utilization per 1,000 eligible months		235.4	231.1	261

(continued)

Table E-7 (continued)
Proportion and utilization for institutional and non-institutional services for the Michigan demonstration enrollees and non-enrollees

Measures by setting	Group	Demonstration year 1	Demonstration year 2	Demonstration year 3
Other hospital outpatient services	Enrollees			
Percentage with use		27.6	30	31.8
Utilization per 1,000 user months		—	—	—
Utilization per 1,000 eligible months		—	—	—
Other hospital outpatient services	Non–enrollees			
Percentage with use		32.3	31.1	31
Utilization per 1,000 user months		—	—	—
Utilization per 1,000 eligible months		—	—	—

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

Table E-8
Quality of care and care coordination outcomes for enrollees and non-enrollees for the Michigan demonstration

Quality and care coordination measures	Group	Demonstration year 1	Demonstration year 2	Demonstration year 3
30-day all-cause risk-standardized readmission rate (%)	Enrollees	18.0	16.3	16.1
	Non-enrollees	18.2	18.0	18.3
Preventable ED visits per eligible month	Enrollees	0.0409	0.0425	0.0408
	Non-enrollees	0.0413	0.0396	0.0381
Rate of 30-day follow-up after hospitalization for mental illness (%)	Enrollees	37.0	40.2	39.4
	Non-enrollees	43.6	41.5	37.8
Ambulatory care sensitive condition admissions per eligible month—overall composite (AHRQ PQI #90)	Enrollees	0.0054	0.0052	0.0105
	Non-enrollees	0.0087	0.0095	0.0088
Ambulatory care sensitive condition admissions per eligible month—chronic composite (AHRQ PQI #92)	Enrollees	0.0038	0.004	0.0095
	Non-enrollees	0.0061	0.0072	0.0067
Screening for clinical depression per eligible month	Enrollees	0.0015	0.0036	0.0064
	Non-enrollees	0.004	0.0106	0.0129

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

Table E-9 presents descriptive (unadjusted) statistics for the demonstration enrollees for services traditionally paid by Medicaid, to help understand the Medicaid utilization experience over time. Nursing home, dental, and non-emergency transportation services are excluded from analysis due to encounter data deemed incomplete. LTSS nursing facility service use derived

from MMP-submitted Medicaid encounters is excluded from analysis in all FAI states because CMS and RTI decided it was not possible to reliably create this measure because we could not correctly identify all LTSS NF stays. Instead, each evaluation report includes an analysis of LTSS NF use using MDS data. Second, CMS and RTI also decided that dental and non-emergency transportation services in Michigan were either incomplete or had unexplained variation, precluding the use of those encounter data for analysis. Finally, two Michigan MMP plans are excluded from analyses as their encounter data were deemed incomplete.

Table E-9
Medicaid use for demonstration enrollees in Michigan, March 1, 2015–December 31, 2018

Measure	Demonstration year 1	Demonstration year 2	Demonstration year 3
Personal care			
Users as percentage of enrollees per enrollee month (%)	9.6%	11.6%	14.1%
Service days per enrollee month	1.67	2.23	2.87
Service days per user month	17.43	19.29	20.31
Other HCBS services			
Users as percentage of enrollees per enrollee month (%)	1.8%	1.4%	2.0%
Service days per enrollee month	0.11	0.16	0.21
Service days per user month	6.45	11.26	10.56
Behavioral health services			
Users as percentage of enrollees per enrollee month (%)	3.5%	4.3%	5.6%
Service days per enrollee month	0.08	0.10	0.17
Service days per user month	2.42	2.34	3.07

E.1 Service Use by Demographic Characteristics of Eligible Beneficiaries

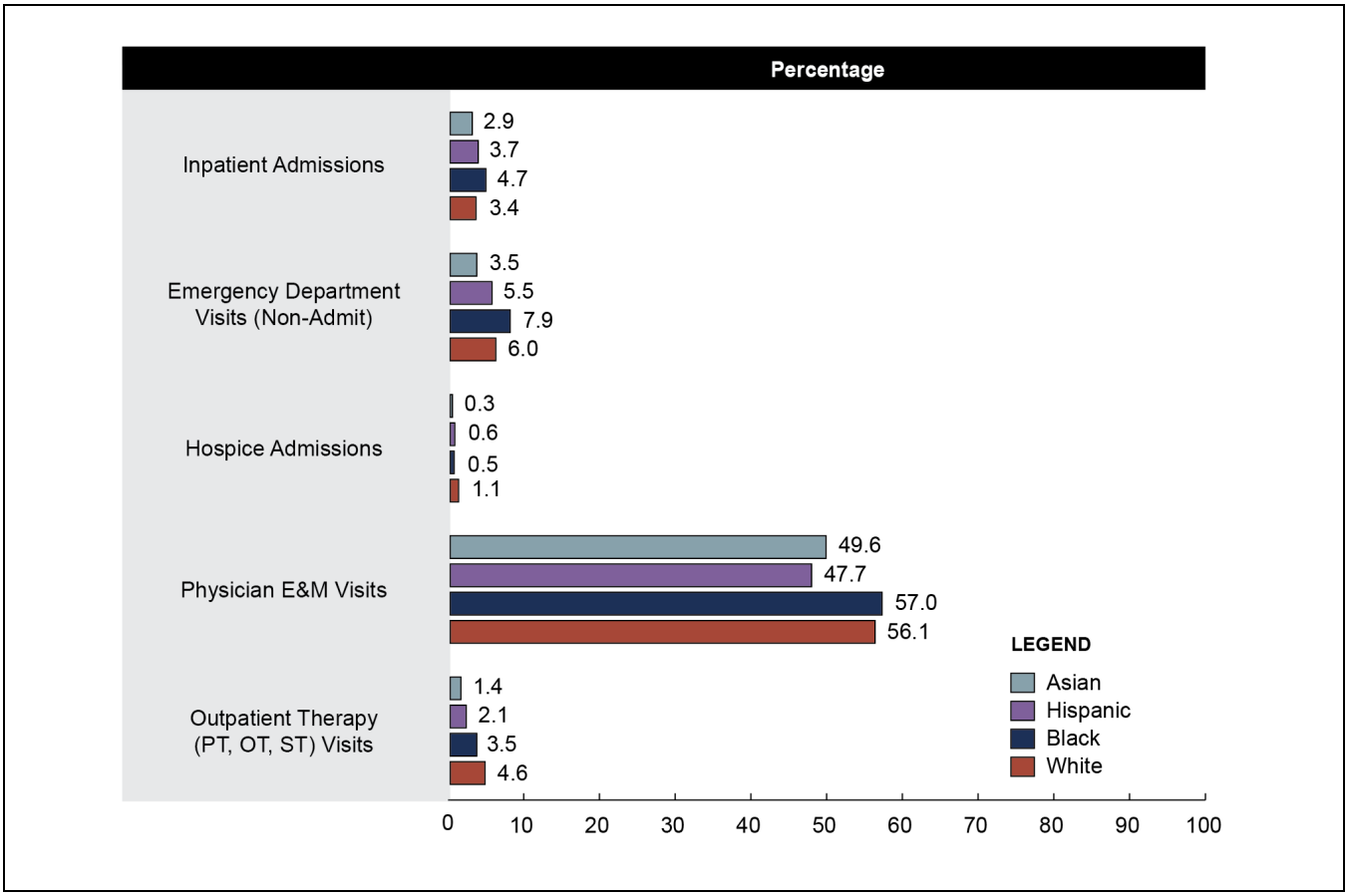
To examine any differences in racial and ethnic groups, ***Figures E-1, E-2,*** and ***E-3*** provide month-level results for five settings of interest for Michigan eligible beneficiaries: inpatient admissions, ED visits (non-admit), hospice admissions, physician E&M visits, and outpatient therapy (physical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

Figure E-1 presents the percentage of use of selected Medicare services. Black beneficiaries had slightly higher inpatient admissions and ED visits, relative to other racial categories. A slightly higher percentage of White and Black beneficiaries had monthly physician E&M visits, relative to other races. White beneficiaries also received more outpatient therapy visits and hospice admissions than other races did.

Regarding counts of services used among users of each respective service, as presented in ***Figure E-2***, there were limited differences across racial groups for inpatient admissions and ED visits. However, Black beneficiaries had slightly more hospice admissions, physician E&M, and outpatient therapy visits relative to other racial groups in months when there was any use. Hispanic beneficiaries appeared to have fewer outpatient therapy visits than beneficiaries of other racial groups.

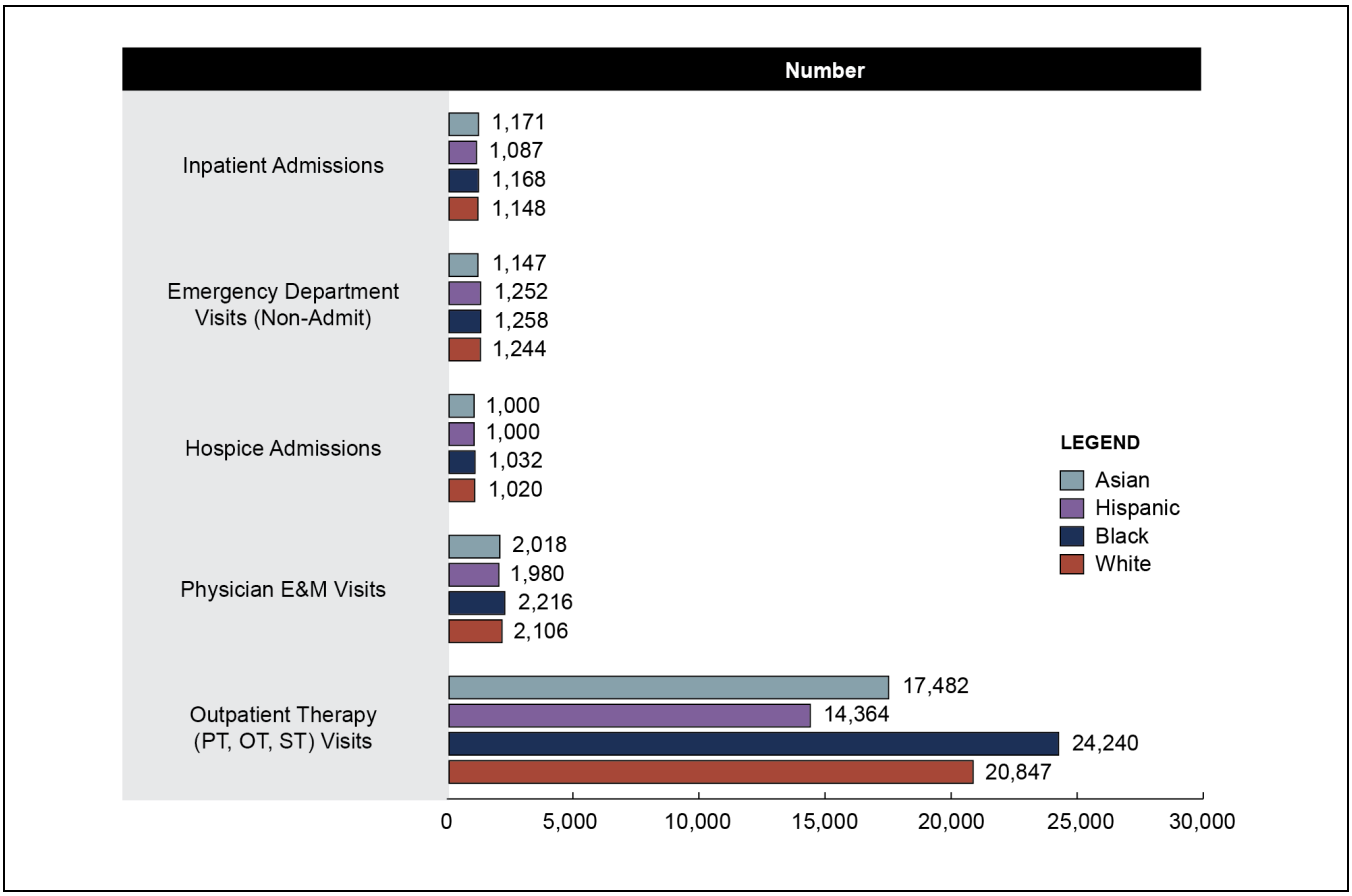
Figure E-3 presents counts of services across all Michigan demonstration eligible beneficiaries regardless of having any use of the respective services. Black beneficiaries had more inpatient admissions, ED visits, and physician E&M visits relative to the other racial groups. White beneficiaries had more hospice admissions relative to the other racial groups, in addition to more outpatient therapy visits. Hispanic and Asian beneficiaries had fewer outpatient therapy visits per month than White and Black beneficiaries.

Figure E-1
Percentage with use of selected Medicare service among Michigan demonstration eligible beneficiaries, January 1, 2018–December 31, 2018



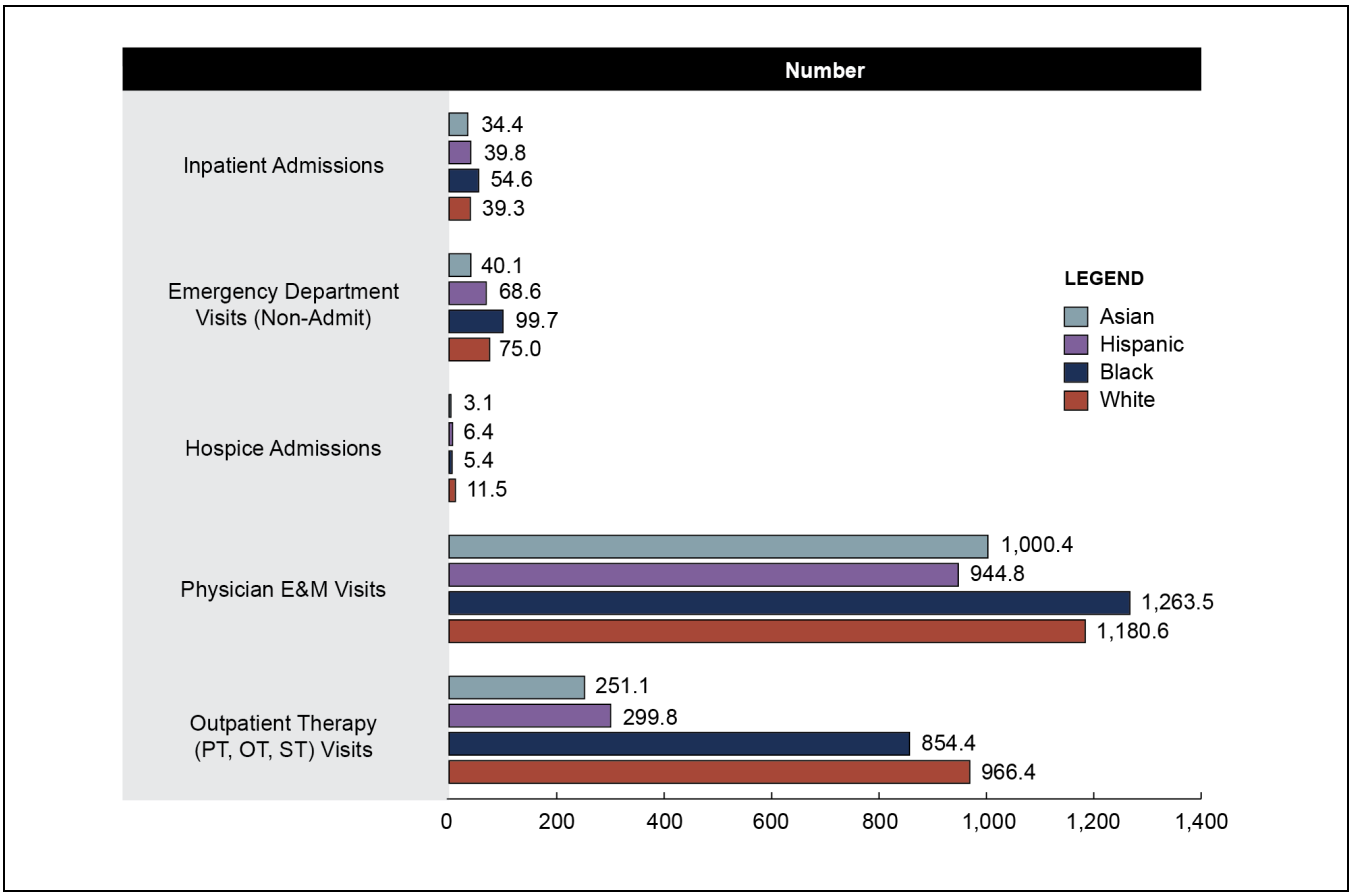
E&M = evaluation and management; OT = occupational therapy; PT = physical therapy; ST = speech therapy.

Figure E-2
Service use per 1,000 user months, among Michigan demonstration eligible beneficiaries, January 1, 2018–December 31, 2018



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

Figure E-3
Service use per 1,000 eligible months, among Michigan demonstration eligible beneficiaries, January 1, 2018–December 31, 2018



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

Appendix F

Cost Savings Methodology and Supplemental Tables

F.1 Adjustments to Medicare Expenditures

Several adjustments were made to the monthly Medicare expenditures to ensure that observed expenditures variations are not due to differences in Medicare payment policies in different areas of the country or the construction of the capitation rates. ***Table F-1*** summarizes each adjustment and the application of the adjustments to FFS expenditures or to the capitation rate.

Additionally, corrections were made to impact estimates from earlier reports that resulted in differences in our current impact estimates for demonstration year 1. For the most part, we attribute the differences in the estimates to changes in the definition of the intervention group and implementing monthly exclusion criteria. Specifically, we made the following corrections: (1) confirmed dual status for State-identified FAI eligible beneficiaries against IDR data, and (2) applied IDR-based exclusion criteria for all monthly observations in the comparison and demonstration groups during the predemonstration period and the demonstration period. Furthermore, we made two additional changes that contributed to the differences: inclusion of beneficiary-months with hospice use for beneficiaries who acquired hospice services only after first meeting FAI eligibility (for all groups in both periods) and removal of beneficiary-months covered under cost- or employer-based plans or those with missing plan ID.

Table F-1
Adjustments to Medicare expenditures variable

Data source	Adjustment description	Reason for adjustment	Adjustment detail
FFS	Indirect Medical Education (IME)	Capitation rates do not include IME.	Do not include IME amount from FFS payments.
FFS	Disproportionate Share Hospital (DSH) Payments and Uncompensated Care Payments (UCP)	The capitation rates reflect DSH and UCP adjustments.	Include DSH and UCP payments in total FFS payment amounts.
FFS	Medicare Sequestration Payment Reductions	Under sequestration Medicare payments were reduced by 2% starting April 1, 2013. Because the predemonstration period includes months prior to April 1, 2013, it is necessary to apply the adjustment to these months of data.	Reduced FFS claim payments incurred before April 2013 by 2%.
Capitation rate (MA and MMP)	Medicare Sequestration Payment Reductions	Under sequestration Medicare payments were reduced by 2% starting April 1, 2013. Sequestration is not reflected in the capitation rates.	Reduced capitation rate by 2%.

(continued)

Table F-1 (continued)
Adjustments to Medicare expenditures variable

Data source	Adjustment description	Reason for adjustment	Adjustment detail
Capitation rate (MA)	Bad debt	The Medicare portion of the capitation rate includes an upward adjustment to account for bad debt. Bad debt is not included in the FFS claim payments and therefore needs to be removed from the capitation rate for the savings analysis. (Note: "bad debt" is reflected in the hospital "pass through" payment.)	Reduced capitation rate to account for bad debt load (historical bad debt baseline percentage). This is 0.93% for CY 2012, 0.91% for CY 2013, 0.89% for CY 2014, 0.89% for CY 2015, 0.97% for CY 2016, 0.81% for CY 2017, and 0.82% for CY 2018.
Capitation rate (MMP)	Bad debt	The Medicare portion of the capitation rate includes an upward adjustment to account for bad debt. Bad debt is not included in the FFS claim payments and therefore needs to be removed from the capitation rate for the savings analysis. (Note, "bad debt" is reflected in the hospital "pass through" payment.)	Reduced blended capitation rate to account for bad debt load (historical bad debt baseline percentage). This is 0.89% for CY 2015, 0.97% for CY 2016, 0.81% for CY 2017, and 0.82% for CY 2018. Reduced the FFS portion of the capitation rate by an additional 1.71% for CY 2015, 1.84% for CY 2016, 1.74% for CY 2017, and 1.77% for CY2018 to account for the disproportional share of bad debt attributable to Medicare-Medicaid enrollees in Medicare FFS.
FFS and capitation rate (MA and MMP)	Average Geographic Adjustments (AGA)	The Medicare portion of the capitation rate reflects the most current hospital wage index and physician geographic practice cost index by county. FFS claims also reflect geographic payment adjustments. To ensure that change over time is not related to differential change in geographic payment adjustments, both the FFS and the capitation rates were "unadjusted" using the appropriate county-specific AGA factor.	Medicare FFS expenditures were divided by the appropriate county-specific 1-year AGA factor for each year. Capitation rates were divided by the appropriate county-specific 5-year AGA factor for each year. Note that the AGA factor applied to the capitated rates for 2014 reflected the 50/50 blend that was applicable to the payment year.

(continued)

Table F-1 (continued)
Adjustments to Medicare expenditures variable

Data source	Adjustment description	Reason for adjustment	Adjustment detail
Capitation rate (MA and MMP)	Education user fee	No adjustment needed.	Capitation rates in the MARx database do not reflect the education user fee adjustment (this adjustment is applied at the contract level). Note, education user fees are not applicable in the FFS context and do not cover specific Part A and Part B services. Although they result in a small reduction to the capitation payment received by MMPs, we did not account for this reduction in the capitated rate.
Capitation rate (MMP)	Quality withhold	A 1% quality withhold was applied in the first demonstration year, a 2% quality withhold was applied in the second demonstration year, and a 3% quality withhold was applied in the third demonstration year but were not reflected in the capitation rate used in the analysis.	Final quality withhold repayments for CY 2015, CY 2016, CY 2017, and CY 2018 were incorporated into the dependent variable construction.
Capitation rate (MMP)	Risk corridor	Risk corridor payment or recoupments are based on reconciliation after application of high-cost risk pool or risk adjustment methodologies.	Final risk corridor payments and recoupments were incorporated into the dependent variable construction for demonstration year 1.

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

The capitation payments in MARx reflect the savings assumptions applied to the Medicare components of the rate (1 percent for the first demonstration year, 2 percent for the second demonstration year, and 3 percent for the third demonstration year) but do not reflect the quality withhold amounts.

F.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.

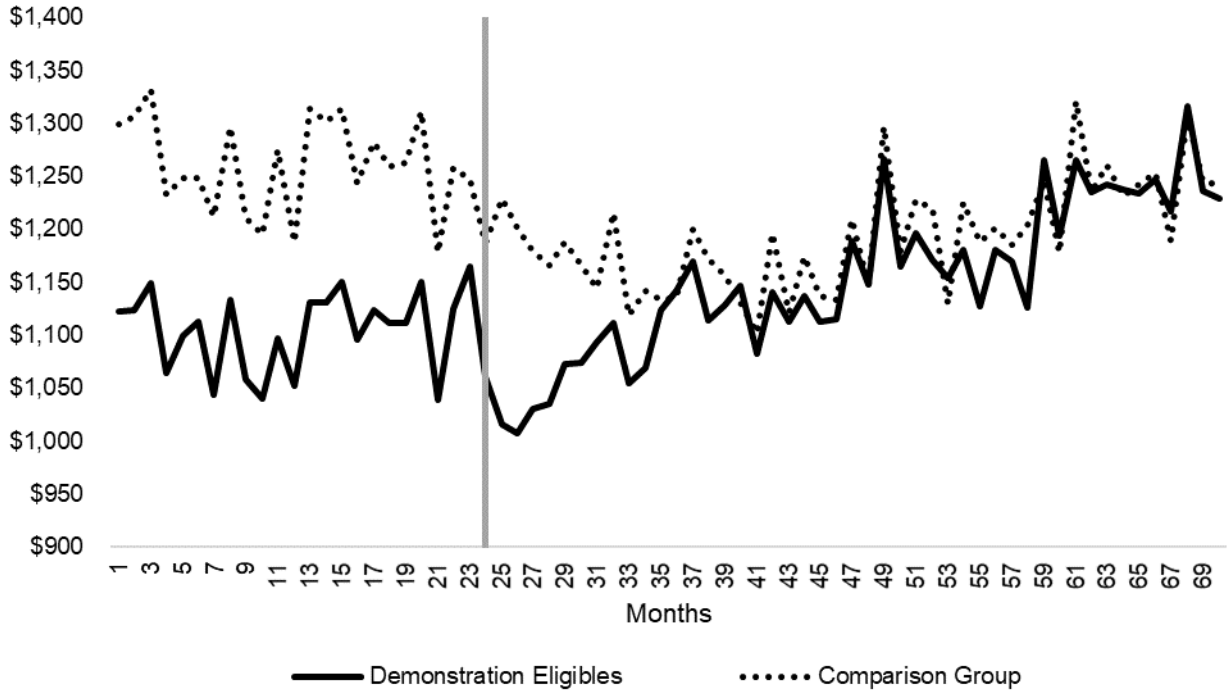
- Demographic variables included in the model were:
  - Age
  - Sex
  - Race/ethnicity
  - Enrolled in another Medicare shared saving program

  - End-stage renal disease status
  - Disability status as reason for Medicare entitlement
  - MA status
- Area-level variables included in the savings model were:
  - Medicare spending per Medicare-Medicaid enrollee age 19 or older
  - MA penetration rate
  - Proportion of Medicare-Medicaid enrollees using HCBS (age 65 or older)
  - Physicians per 1,000 population
  - Percentage of population living in married household
  - Percentage of households with member older than age 60
  - Percentage of households with member younger than age 18
  - Percentage of adults with college degree
  - Unemployment rate
  - Percentage of adults with self-care limitation

F.3 Descriptive Statistics for Medicare Data

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 F-1*** shows the resulting plot and suggests that there were parallel trends in the predemonstration period.

Figure F-1
Mean monthly Medicare expenditures (weighted), predemonstration and demonstration period, demonstration and comparison group, March 2013–December 2018



SOURCE: RTI Analysis of Michigan demonstration eligible and comparison group Medicare data (program: MIDY3_trends.log).

The DinD values in each table represent the overall impact on savings using descriptive statistics. These effects are descriptive in that they are arithmetic combinations of simple means, without controlling for covariates. The change in the demonstration group minus the change in the comparison group is the DinD value. This value would be equal to zero if the differences between predemonstration and the demonstration year were the same for both the demonstration group and the comparison group. A negative value would indicate savings for the demonstration group, and a positive value would indicate losses for the demonstration group. However, if the DinD confidence interval includes zero, then the value is not statistically significant. These results are only meant to provide a descriptive exploration of the results; the results presented in ***Section 6*** and ***Table F-8*** represent the most accurate adjusted impact on Medicare costs.

Tables F-2, F-3, and ***F-4*** show the mean monthly Medicare expenditures for the demonstration group and comparison group in the predemonstration and each demonstration period, unweighted. The unweighted tables show a decrease in mean monthly Medicare expenditures during demonstration year 1 for the demonstration group and increases in demonstration years 2 and 3. Additionally, the unweighted tables show a decrease in Medicare expenditures during demonstration year 1 and increases during demonstration years 2 and 3 for the comparison group. The weighted tables display a different pattern, with the comparison group showing decreases during demonstration years 1, 2, and 3. The weighted demonstration

group expenditures decrease in demonstration year 1 but increase in years 2 and 3 (***Tables F-5, F-6,*** and ***F-7***).

Table F-2
Mean monthly Medicare expenditures for demonstration group and comparison group, predemonstration period and demonstration year 1, unweighted

Group	Predemonstration period (Mar 2013–Feb 2015) (95% confidence intervals)	Demonstration year 1 (Mar 2015–Dec 2016) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,103.99 ($1,061.86, $1,146.12)	$1,101.21 ($1,050.71, $1,151.72)	−$2.78 (−$28.10, $22.55)
Comparison	$1,106.31 ($1,061.26, $1,151.36)	$1,099.52 ($1,055.38, $1,143.65)	−$6.79 (−$21.49, $7.91)
DinD	N/A	N/A	$4.01 (−$24.95, $32.98)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicare claims (program: mi_dy3_cs1502_Tables.log)

Table F-3
Mean monthly Medicare expenditures for demonstration group and comparison group, predemonstration period and demonstration year 2, unweighted

Group	Predemonstration period (Mar 2013–Feb 2015) (95% confidence intervals)	Demonstration year 2 (Jan 2017–Dec 2017) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,103.99 ($1,061.86, $1,146.12)	$1,172.58 ($1,127.13, $1,218.04)	$68.59 ($48.36, $88.82)
Comparison	$1,106.31 ($1,061.26, $1,151.36)	$1,168.17 ($1,124.30, $1,212.04)	$61.86 ($31.12, $92.61)
DinD	N/A	N/A	$6.73 (−$29.83, $43.29)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicare claims (program: mi_dy3_cs1502_Tables.log)

Table F-4
Mean monthly Medicare expenditures for demonstration group and comparison group, predemonstration period and demonstration year 3, unweighted

Group	Predemonstration period (Mar 2013–Feb 2015) (95% confidence intervals)	Demonstration year 3 (Jan 2018–Dec 2018) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,103.99 ($1,061.86, $1,146.12)	$1,243.13 ($1,208.18, $1,278.07)	$139.14 ($122.85, $155.43)
Comparison	$1,106.31 ($1,061.26, $1,151.36)	$1,230.45 ($1,186.83, $1,274.08)	$124.14 ($89.37, $158.91)
DinD	N/A	N/A	$14.99 (−$23.18, $53.17)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicare claims (program: mi_dy3_cs1502_Tables.log)

Table F-5
Mean monthly Medicare expenditures for demonstration group and comparison group, predemonstration period and demonstration year 1, weighted

Group	Predemonstration period (Mar 2013–Feb 2015) (95% confidence intervals)	Demonstration year 1 (Mar 2015–Dec 2016) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,103.99 ($1,061.86, $1,146.12)	$1,101.21 ($1,050.71, $1,151.72)	−$2.78 (−$-28.1, $22.55)
Comparison	$1,258.26 ($1,228.80, $1,287.72)	$1,160.61 ($1,135.69, $1,185.53)	−$97.65 (−$119.83, −$75.47)
DinD	N/A	N/A	$94.88 ($61.54, $128.21)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicare claims (program: mi_dy3_cs1502_Tables.log)

Table F-6
Mean monthly Medicare expenditures for demonstration group and comparison group, predemonstration period and demonstration year 2, weighted

Group	Predemonstration period (Mar 2013–Feb 2015) (95% confidence intervals)	Demonstration year 2 (Jan 2017–Dec 2017) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,103.99 ($1,061.86, $1,146.12)	$1,172.58 ($1,127.13, $1,218.04)	$68.59 ($48.36, $88.82)
Comparison	$1,258.26 ($1,228.80, $1,287.72)	$1,200.95 ($1,165.69, $1,236.22)	−$57.30 (−$85.60, −$29.01)
DinD	N/A	N/A	$125.90 ($91.37, $160.42)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicare claims (program: mi_dy3_cs1502_Tables.log)

Table F-7
Mean monthly Medicare expenditures for demonstration group and comparison group, predemonstration period and demonstration year 3, weighted

Group	Predemonstration period (Mar 2013–Feb 2015) (95% confidence intervals)	Demonstration year 3 (Jan 2018–Dec 2018) (95% confidence intervals)	Difference (95% confidence intervals)
Demonstration	$1,103.99 ($1,061.86, $1,146.12)	$1,243.13 ($1,208.18, $1,278.07)	$139.14 ($122.85, $155.43)
Comparison	$1,258.26 ($1,228.80, $1,287.72)	$1,245.84 ($1,203.39, $1,288.29)	−$12.42 (−$45.63, $20.80)
DinD	N/A	N/A	$151.55 ($114.78, $188.33)

DinD = difference-in-differences; N/A = not applicable.
SOURCE: RTI analysis of Medicare claims (program: mi_dy3_cs1502_Tables.log)

F.4 Regression Results for Medicare Data

Table F-8 shows the main results from the DinD analysis for demonstration years 1–3 and for the entire demonstration period, controlling for beneficiary demographics and market characteristics.

Table F-8
Cumulative and annual demonstration effects Demonstration effects on Medicare Parts A and B costs in Michigan, demonstration years 1–3, March 1, 2015–December 31, 2018

Period	Adjusted coefficient DinD ($)	*p*-value	95% confidence interval ($)	90% confidence interval ($)
Demonstration Year 1 (March 2015–December 2016)	98.89	<0.001	(66.01, 131.77)	(71.3, 126.49)
Demonstration Year 2 (January 2017–December 2017)	122.63	<0.001	(75.05, 170.22)	(82.68, 162.60)
Demonstration Year 3 (January 2018–December 2018)	155.20	<0.001	(116.06, 194.35)	(122.33, 188.09)
Cumulative (Demonstration Years 1–3, March 2015–December 2018)	118.05	<0.001	(82.00, 154.09)	(87.80, 148.30)

DinD = difference-in-differences.
SOURCE: RTI analysis of Medicare claims (program: mi_dY3_cs1482_glm.log)

Table F-9 presents the results from the DinD analysis for the enrollee-subgroup. The enrollee-subgroup analysis focused on beneficiaries identified as enrolled for at least 3 months in the demonstration period and with at least 3 months of baseline eligibility. A subset of the comparison group developed for the ITT analysis was used in the enrollee subgroup analyses. Comparison group beneficiaries used in the enrollee subgroup analyses were required to have at least 3 months of eligibility in the demonstration period (March 1, 2015–December 31, 2018) and at least 3 months of eligibility in the predemonstration period (March 1, 2013–February 28, 2015), analogous to the criteria for identifying enrollees. The results indicate statistically significant additional costs associated with enrollees across all years. This enrollee sub-group analysis is limited by the absence of person-level data on characteristics that potentially would lead an individual in a comparison area to enroll in a similar demonstration; thus, the results should only be considered in the context of this limitation.

Table F-9
Cumulative and annual demonstration effects on Medicare Parts A and B costs among enrolled beneficiaries in Michigan, demonstration years 1–3, March 1, 2015–December 31, 2018

Period	Adjusted coefficient DinD ($)	*p*-value	95% confidence interval ($)	90% confidence interval ($)
Demonstration Year 1 (March 2015–December 2016)	257.81	<0.001	(216.78, 298.84)	(223.37, 292.24)
Demonstration Year 2 (January 2017–December 2017)	285.80	<0.001	(236.39, 335.21)	(244.34, 327.27)
Demonstration Year 3 (January 2018–December 2018)	303.90	<0.001	(249.15, 358.65)	(257.95, 349.85)
Cumulative (Demonstration Years 1–3, March 2015–December 2018)	272.41	<0.001	(229.66, 315.15)	(236.54, 308.27)

DinD = difference-in-differences.
SOURCE: RTI analysis of Medicare claims (program: mi_dy3_1512_Enrollee.log)

F.5 Medicaid Descriptive Analysis

Table F-10 presents Medicaid descriptive statistics for FAI eligible beneficiaries in the State of Michigan, 2013 through 2018. Due to quality issues in the Medicaid claims in the TAF data in the comparison States, particularly in California and Pennsylvania, we are only able to examine the Medicaid costs among the Michigan FAI-eligible population. The Medicaid cost data presented for MI was not winsorized, based on timing anomalies in the data and our determination that winsorization would remove actual payment values, not just data errors. In California, the long-term care FFS spending is classified by the Data Quality (DQ) Atlas[39] as being either of high concern (2017 and 2018) or unusable (2016); our analysis of the data confirmed that there are quality issues with the long-term care FFS spending among the FAI comparison group in California, including significant fluctuations from month to month. In Pennsylvania, the total monthly beneficiary payments in the Other Services file are classified by the DQ Atlas as being unusable (2016–2018); our analysis of the data confirmed that a large fraction of the Other Services capitated payment amounts are negative among the FAI comparison group in Pennsylvania.

Almost all (more than 99 percent) FAI-eligible beneficiaries in Michigan had Medicaid spending in each baseline and demonstration year. Total Medicaid spending declined over time, from an average of $861.65 in the first baseline year (March 2013 to February 2014) to an average of $753.45 in the third demonstration year (January 2018 to December 2018), with most of the decline occurring between the second and third demonstration years. FFS spending decreased with the start of the demonstration in tandem with increases in capitated payments. This transition in payments is expected as beneficiaries move from FFS payment arrangement toward capitated plans. Inpatient Medicaid spending was low in all 5 years, always less than

[39] The DQ Atlas provides annual state-level quality assessments of select T-MSIS data elements.

Table F-10
Monthly Medicaid spending for eligible beneficiaries in Michigan—2013–2018

Measure	Baseline Year 1 (Mar. 2013–Feb. 2014)	Baseline Year 2 (Mar. 2014–Feb. 2015)	Demonstration Year 1 (Mar. 2015–Dec. 2016)	Demonstration Year 2 (Jan. 2017–Dec. 2017)	Demonstration Year 3 (Jan. 2018–Dec. 2018)
Number of beneficiary months	1,176,574	1,216,214	1,874,520	1,163,781	1,168,464
Number of beneficiaries	118,032	121,779	122,445	115,905	114,949
Users (percentage with non-zero spending within the year)	99.4	99.4	99.9	99.9	99.9
Total spending per beneficiary-month	861.65	873.50	857.60	848.15	753.45
Total spending per user month	893.17	896.97	868.32	856.78	763.91
Users of inpatient services (percentage with non-zero spending within the year)	1.6	1.4	3.2	2.7	2.8
Inpatient spending per beneficiary-month	6.24	4.87	10.23	12.42	13.22
Inpatient spending per user month	3,354.42	2,926.82	3,488.85	3,106.88	3,250.37
Users of long-term care services (percentage with non-zero spending within the year)	11.2	10.6	10.0	7.7	7.8
Long-term care spending per beneficiary-month	402.11	388.06	300.50	279.75	286.57
Long-term care spending per user month	4,387.38	4,478.80	4,798.14	4,790.73	4,891.12
Users of other fee-for-service (FFS) (percentage with non-zero spending within the year)	78.2	76.1	71.6	58.5	58.2
Other FFS spending per beneficiary-month	140.65	114.91	90.66	106.91	114.77
Other FFS spending per user month	319.49	271.17	311.16	351.49	373.22
Users of other capitated services (percentage with non-zero spending within the year)	98.7	98.8	99.9	99.8	99.8
Other capitated spending per beneficiary-month	312.65	365.66	456.21	449.06	338.89
Other capitated spending per user month	336.24	382.24	466.56	456.39	346.26

Notes: Total spending excludes Medicaid spending for prescription drugs. Inpatient spending calculated from the T-MSIS Analytic File Inpatient claims file. Long-term spending calculated from the TAF Long-term claims file. Other spending calculated from the TAF Other Services claims file.
SOURCE: RTI analysis of Medicaid claims (program: MI_MC_DY3_2020)

$15—this is expected because Medicare is the primary payer for inpatient care. The proportion of the FAI eligible population using FFS long-term care services declined from 11.2 percent in the first baseline year to 7.8 percent in the third demonstration year, with average spending per

user ranging from $2,900 to $3,500 and average spending overall declining from just over $400 to under $300.

The proportion of users of other FFS services declines from 78.2 percent in the first baseline year to 58.2 percent in the third demonstration year. Whereas the other FFS spending per user increased over time, the average spending per beneficiary-month fell from $140.65 in the first baseline year to a low of $90.66 in the first demonstration year, and then increased somewhat across the demonstration, to $114.77 in the third demonstration year. The proportion of the FAI eligible sample for which Other Services capitated payments are made remains high (at or above 98.7 percent) in all years. Average capitated payments per beneficiary-month were lower in the first baseline year ($312.65), rose to their highest level in the first demonstration year ($456.21), and then declined to $338.89 by the third demonstration year.

During the 2 baseline years, the largest contributor to Medicaid spending in the FAI eligible population in MI was the long-term care FFS spending. In the 3 demonstration years, the other capitated payments were the largest contributor to Medicaid spending, which is expected due to the demonstration.

Risk corridors payments for ICOs established during the first demonstration year are reported for three of the ICOs in ***Table F-11***.

Table F-11
Risk corridor settlements for ICOs in Michigan—2015–2016

Measure	Aetna Better Health	AmeriHealth	Michigan Complete Health
Final Medicaid Risk Corridor Settlement ($)	2,614,839	1,572,588	382,811

SOURCE: Figures provided by CMS (e-mail on August 4, 2021)