Research Report

New York State 1115 Demonstration Independent Evaluation

Interim Report

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The Interactive Health authors (Katherine J. Roberts and Laura A. Guerra) led the analysis and report writing of Domain 1, Goals 3 and 5, about consumer satisfaction.

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Preface

The broad goals of New York State's Medicaid Section 1115 Waiver are to enroll a majority of Medicaid beneficiaries into managed care, increase access and service quality, and expand coverage to more low-income New Yorkers. To meet the special terms and conditions specified by the Centers for Medicare & Medicaid Services under New York State's 1115 Medicaid Redesign Team Waiver, the RAND Corporation was competitively selected as the independent evaluator to assess two components under this 1115 Demonstration Waiver: the Managed Long-Term Care (MLTC) program and the 12-month continuous eligibility policy. This final interim evaluation report examines whether these two components have helped achieve the program's goals. This research was funded by the New York State Department of Health and carried out within the Payment, Cost, and Coverage Program in RAND Health Care.

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Evaluation Objective

The broad goals of New York State's Medicaid Section 1115 Waiver are to enroll a majority of Medicaid beneficiaries into managed care, increase access and service quality, and expand coverage to more low-income New Yorkers. To meet the special terms and conditions specified by the Centers for Medicare & Medicaid Services under New York State's 1115 Medicaid Redesign Team Waiver, the RAND Corporation was competitively selected as the independent evaluator to assess two components under this 1115 Demonstration Waiver: the Managed Long-Term Care (MLTC) program and the 12-month continuous eligibility policy. Starting in September 2012, the State required individuals who are over 21, eligible for both Medicare and Medicaid, and in need of 120 days or more of long-term services and supports (LTSS) to enroll in MLTC plans, which are paid on a capitated basis. The 12-month continuous eligibility policy was based on the Modified Adjusted Gross Income guideline and was implemented in January 2014 for individuals eligible for Medicaid, including pregnant women; childless adults who are not pregnant, are younger than 65, and are not on Medicare; parents or caretaker relatives; and individuals eligible for the Family Planning Benefit Program. Individuals who qualified for 12-month continuous eligibility were guaranteed Medicaid coverage regardless of changes in income in the 12 months after eligibility determination and enrollment. This final interim evaluation report examines whether these two programs have achieved the following:

- expanding access to LTSS and improving patient safety, quality of care, and consumer satisfaction (in the case of MLTC [Domain 1])
- reducing enrollment gaps and increasing Medicaid enrollment duration (in the case of 12-month continuous eligibility [Domain 2]).

Analytical Approach

To achieve the goals of this final interim evaluation, RAND researchers conducted a number of analyses applying primarily a quasi-experimental study design and using various data sources provided by the New York State Department of Health (NYS DOH), including the 2010–2018 MLTC monthly enrollment by county; 2007–2019 MLTC plan-level aggregate data[2] on patient safety, quality of care, and consumer satisfaction; and 2012–2018 Medicaid Data Warehouse data. The evaluation team described the trends in various outcomes over time and conducted statistical modeling and testing to answer the evaluation questions.

[2] The data years vary across different outcome measures. Please see Chapter 3 for more details.

Findings and Conclusions

The results of our analyses showed that the MLTC mandate was associated with a large increase in MLTC enrollment during 2012–2018, with its effect having stabilized by month 19, i.e., by the time the most recent demonstration period started (December 2016 to March 2021); there is no evidence of a decline in patient safety, quality of care, or consumer satisfaction, except for a decrease in satisfaction with care managers (Table S.1). Among those who transitioned from institutional settings to community settings, enrollment in MLTC increased during 2015–2018, but no statistically significant changes in patient safety and quality of care were observed except for an increase in receipt of dental exams.

The 12-month continuous eligibility policy was associated with a moderate increase in Medicaid enrollment duration among adults but a decline in monthly Medicaid cost, resulting in a small net increase in total Medicaid cost. The policy's impact was smaller among individuals enrolled through the Welfare Management System (WMS), administered by local departments of social services, than among those enrolled through New York State of Health (NYSoH), the State's health insurance exchange.

Table S.1. Summary of Evaluation Results

Domain	Goal	Outcome	Result	
Domain 1, Component 1: Managed Long-Term Care (MLTC)	Goal 1: Expand access to MLTC for Medicaid enrollees in need of LTSS	RQ1. Time for the MLTC mandate's effect on enrollment to stabilize	↑	19 months, stabilizing at +0.6 percentage points per year; a 12-percentage point increase in enrollment rates during the 79 months post-mandate ($p < 0.05$)
	Goal 2: Demonstrate stability or improvement in patient safety	RQ1. Percentage of enrollees who had no emergency room visits	—	+0.8 percentage points ($p > 0.05$)
		RQ2. Percentage of enrollees who had no falls that required medical intervention or resulted in major or minor injuries	—	–1.8 percentage points ($p > 0.05$)
	Goal 3: Demonstrate stability or improvement in quality of care	RQ1. Receipt of timely care	—	–0.8 percentage points ($p > 0.05$)
		RQ2. Influenza vaccination	—	+0.2 percentage points ($p > 0.05$)
		RQ2. Dental exam	—	–5.6 percentage points ($p > 0.05$)
	Goal 4: Stabilize or reduce preventable acute hospital admissions	RQ1. Potentially avoidable hospitalizations	—	–1.3 hospitalizations per 10,000 enrollee days ($p > 0.05$)

Domain	Goal	Outcome	Result	
	Goal 5: Demonstrate stability or improvement in consumer satisfaction	RQ1. Satisfaction with MLTC plans	—	–1.8 percentage points (p > 0.05)
		RQ2. Satisfaction with care managers	↓	–3.1 percentage points (p < 0.05)
		RQ3. Satisfaction with provider timeliness	—	–2.2 percentage points (p > 0.05)
		RQ4. Satisfaction with service quality	—	–1.2 percentage points (p > 0.05)
Domain 1, Component 2: Individuals Moved from Institutional Settings to Community Settings for LTSS	Goal 1: Improve access to MLTC for those who transitioned from an institutional setting to the community	RQ1. Enrollment in MLTC within one year post-discharge from an institution	↑	7% in 2015; 60% in 2018 (p < 0.05)
	Goal 2: Demonstrate stability or improvement in patient safety	RQ1. Percentage of enrollees who had no emergency room visits	—	50% in 2015; 85% in 2018 (p > 0.05)
		RQ2. Percentage of enrollees who had no falls that required medical intervention or resulted in major or minor injuries	—	50% in 2015; 93% in 2018 (p > 0.05)
	Goal 3: Demonstrate stability or improvement in quality of care	RQ1. Percentage in community within one year post-discharge from an institution	—	85% in 2015; 81% in 2018 (p > 0.05)
		RQ2. Influenza vaccination	—	50% in 2015; 73% in 2018 (p > 0.05)
		RQ2. Dental exam	↑	50% in 2015; 64% in 2018 (p < 0.05)
Domain 2: Mainstream Medicaid Managed Care and Temporary Assistance to Needy Families (TANF)	Goal 1: Increase access to health insurance through Medicaid enrollment—Express Lane Eligibility	RQ1. Medicaid enrollment, RQ2. demographic characteristics, and RQ3. percentage of ineligible enrollees		Removed from the evaluation

Domain	Goal	Outcome	Result	
	Goal 2: Limit gaps in Medicaid eligibility due to fluctuations in recipient income—12-month continuous eligibility	RQ1: Percentage with at least 12, 24, or 36 months of enrollment among the population affected by the continuous eligibility policy	↑	≥12 months: 47% in 2012; 58% in 2017 ($p < 0.01$) for NYSoH and 47% in 2012; 58% in 2017 for WMS ($p < 0.01$)
			↑	≥24 months: 23% in 2012, 32% in 2016 ($p < 0.01$) for NYSoH and 23% in 2012, 34% in 2016 for WMS ($p < 0.01$)
			↑	36 months: 13% in 2012; 18% in 2015 ($p < 0.01$) for NYSoH and 13% in 2012; 29% in 2015 for WMS ($p < 0.01$)
		RQ2: Difference in percentage with at least 12, 24, or 36 months of enrollment by enrollee characteristics	—	Demographics: Older members, White and Hispanic members, and members with a lower health status more likely to have longer enrollment duration for NYSoH and WMS populations (all $p < 0.01$)
			—	Geographic area: Individuals in New York City had longer enrollment durations that those not in New York City for NYSoH and WMS populations (all $p < 0.01$)
		RQ3: Average number of continuous enrollment months	↑	+0.8 and +1.9 months in a 12- and 24-month post-policy period for NYSoH populations, respectively ($p < 0.05$)
			↑	+0.4 and +1.2 months in a 12- and 24-month post-policy period for WMS populations, respectively ($p < 0.05$)
		RQ4: Probability of being continuously enrolled for at least 12 months	↑	+0.19 probability of being enrolled for the NYSoH population ($p < 0.05$)
			↑	+0.14 probability of being enrolled for the WMS population ($p < 0.05$)
		RQ5: Effect of the continuous eligibility policy on outpatient, inpatient, and emergency department visits and Medicaid cost of care	↓	Utilization: –43 inpatient admissions, –295 outpatient visits, and –49 emergency room visits per 1,000 member-years for the NYSoH population (all $p < 0.05$)
			↓	–29 inpatient admissions ($p < 0.05$), +101 outpatient visits ($p < 0.05$), and +17 emergency room visits per 1,000 member-years for the WMS population ($p > 0.05$)
			↓	Medicaid cost: –$27 per member per month for the NYSoH population ($p < 0.05$), –$8 per member per month for the WMS population ($p > 0.05$)

Domain	Goal	Outcome	Result	
		RQ6: Increased number of enrollment months due to the continuous eligibility policy	↑	+378k ($p < 0.05$), +1,030k ($p < 0.05$), +959k ($p < 0.05$), +1,046k ($p < 0.05$) enrollees for 2014–2017, respectively, for the NYSoH population
			↑	+530k ($p < 0.05$), +483k ($p > 0.05$) enrollees for 2016–2017, respectively, for the WMS population
		RQ7: Percentage of individuals in fee for service (FFS) by calendar month	↓	29% in January 2012; 23% in December 2018 ($p < 0.01$)
		RQ8: Percentage in FFS for 1–2 months, among those with any MMC coverage in a year	↑	All enrollees: 18% in 2012; 19% in 2018 ($p < 0.01$)
			↑	New enrollees: 25% in 2012; 36% in 2018 ($p < 0.01$)
			↓	NYSoH enrollees: 74% in 2014; 27% in 2018 ($p < 0.01$)
			↓	WMS enrollees: 8% in 2014; 6% in 2018 ($p < 0.01$)
		RQ8: FFS enrollment months in the first enrollment year, among those with at least 6 months of MMC coverage in that year	↓	–0.6 months of FFS enrollment during the first enrollment year ($p < 0.01$)
		RQ9: Percentage of MMC enrollees remaining in the same MMC plan after the recertification, among those with at least 13 consecutive months of MMC coverage	↓	All enrollees: 88% in 2013; 80% in 2018 ($p < 0.01$)
			↑	NYSoH enrollees: 70% in 2014; 77% in 2018 ($p < 0.01$)
			↓	WMS enrollees: 93% in 2014; 90% in 2018 ($p < 0.01$)
		RQ10: Percentage of MMC enrollees who are auto-assigned to any health plan at the start of MMC enrollment	↓	All enrollees: 6.6% in 2012; 4.4% in 2018 ($p < 0.01$)
			↑	NYSoH enrollees: ~0% in 2014; 2.7% in 2018 ($p < 0.01$)
			↑	WMS enrollees: 5.6% in 2014; 8.5% in 2018 ($p < 0.01$)

NOTE: RQ = research question. The color code: green represents favorable results, red unfavorable, and yellow neither. For Domain 1, Component 2, since no pre-MLTC mandate data were available, only the post-period trends are presented. Due to a large sample size of about 1 to 6 million individuals, the descriptive trend tests for Domain 2,

Goal 2, RQs 7–10 result in small p values.

Domain 1, Component 1, Goal 1: MLTC Enrollment

The MLTC mandate increased enrollment rapidly and dramatically and then stabilized at a growth rate of about 0.05 percent per month, or 0.6 percent per year within 19 months of the mandate's implementation (Table S.1). However, increases in enrollment and time for the MLTC mandate's effect on enrollment to stabilize differed across regions, suggesting that idiosyncratic factors may have affected implementation across the State. New York City, in which the mandate was implemented first, drove the results due to the size of its population compared to the rest of the State.

Domain 1, Component 1, Goals 2–5: Patient Safety, Quality of Care, and Consumer Satisfaction Among the MLTC Population

We found no evidence of changes in patient safety (percentage of enrollees who had no emergency room visits and percentage of enrollees who had no falls that required medical intervention or resulted in major or minor injuries) and quality of care (influenza vaccinations, dental exams, and potentially avoidable hospitalizations). Satisfaction measures remained high with MLTC, with no statistically significant evidence of decline occurring except for satisfaction with care managers. Thus, results indicate that MLTC plans were able to accommodate the large increases in enrollment without noticeably compromising patient safety, quality of care, or consumer satisfaction with care. These results are particularly important given the rapid and large increase in MLTC enrollment.

Domain 1, Component 2, Goals 1–3: Individuals Moved from Institutional Settings to Community Settings

Among those who transitioned from institutional to community settings, enrollment in MLTC increased, which is not surprising given that MLTC enrollment of new nursing home residents became mandatory starting in February 2015. We found no evidence of changes in patient safety measures (percentage of enrollees who had no emergency room visits and percentage of enrollees who had no falls that required medical intervention or resulted in major or minor injuries) among MLTC enrollees who transitioned from institutions to the community from 2015 through 2018. We also found that a substantial majority (66–85 percent) of the home- and community-based services (HCBS) expansion population remained in the community. Among the HCBS expansion population, the changes in influenza vaccination rates were not statistically significant. Receipt of dental exams increased, perhaps in response to a performance improvement project for MLTC enrollees during the period.

Domain 2, Goal 2: 12-Month Continuous Eligibility

There was an overall increasing trend in average Medicaid enrollment duration after the implementation of the 12-month continuous eligibility policy. Because of differences in operational processes, we analyzed the WMS and NYSoH populations separately. We found that the policy was associated with approximately 4- and 8-percent increases in enrollment duration among individuals enrolled in WMS and NYSoH, respectively. The policy impact in NYSoH could partially be attributed to the simplified and more convenient enrollment and renewal process under NYSoH versus WMS. The simultaneous implementation of the Medicaid expansion did not seem to affect the policy effect on enrollment because the estimates were similar after excluding the expansion population. In both NYSoH and WMS populations, we observed a statistically significant decline in annual patient admissions, as well as in average monthly Medicaid cost. Combining the increase in enrollment months and the decrease in monthly Medicaid cost, we estimated that the 12-month continuous eligibility policy has led to an increase in total Medicaid cost by about 3 percent. The State did make progress in reducing FFS enrollment and auto-assignment to a health plan at Medicaid managed care (MMC) enrollment start, although the proportion of MMC enrollees who stayed with the same plan after the 12-month recertification decreased during 2012–2018.

Limitations

We acknowledge that there are several major limitations to our evaluation. When examining MLTC enrollment rates, the number of dual eligible individuals was used as the denominator, but it is only a gross approximation of the actual eligible population. The definitions of some MLTC outcome measures changed over time, such as emergency room visits, falls, and perceived timely access to care, and such definitional changes made it difficult to evaluate changes in outcomes across years. Also, most of plan-level MLTC outcomes measures were risk-adjusted, and the adjustment methodologies changed over time. Because of the lack of individual-level data, we were not able to risk-adjust for the differences between voluntary enrollees before the MLTC mandate and new enrollees under the mandate, and these differences may affect the outcomes. The lack of individual-level data has also reduced the precision of our estimates of the impact of MLTC on outcomes.

In assessing the impact of 12-month continuous eligibility on Medicaid enrollment, our analysis is limited by the use of children as the control group. Children often have a broader income band, so that there is more room for income to fluctuate though they remain eligible for Medicaid. Furthermore, despite the difference-in-differences approach used in the analyses, we were not able to control for time-dependent changes that occurred simultaneously with the implementation of 12-month continuous eligibility policy and impacted the adult Medicaid population differently from the child population.

Conclusions

Based on the results of our analyses, the MLTC program under the 1115 Demonstration Waiver has achieved its goal of increasing access to LTSS through MLTC, as illustrated by the rapid expansion of MLTC across the State from 2012 through 2018. There is little evidence suggesting that the speed of the expansion has led to a significant change in patient safety or quality of care by the measures used in this evaluation.

We found that the 12-month continuous eligibility policy was associated with statistically significant increases in enrollment duration and outpatient visits, but decreases in inpatient admissions and per member per month Medicaid cost. When considering both increases in enrollment and decreases in per member per month Medicaid cost, the policy is associated with a net increase in total Medicaid cost. Finally, during 2012 through 2018, descriptive trends show that the State has been able to reduce the length of FFS enrollment among MMC enrollees.

The results for the most recent demonstration period (December 2016 to March 2021) covered by the data under this interim evaluation, i.e., December 2016 to December 2018 or 2019, showed similar trends or patterns to those from earlier post-policy years except that the MLTC mandate's impact on enrollment had stabilized by the end of 2016.

In brief, the State has achieved the Demonstration's first goal of expanding access to managed care through mandatory MLTC enrollment and 12-month continuous eligibility. Although we did not find evidence of improved quality, the second goal, increasing access without compromising quality of care, is a success in its own right. Questions remain about whether the MLTC mandate has generated efficiencies in spending—the third goal of the overall 1115 Demonstration—and the extent to which public reporting and quality assurance programs have affected quality of care. Future evaluations may be conducted to answer these questions to guide State policies.

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Abbreviations

CHA	Community Health Assessment Data
CHIP	Children's Health Insurance Program
CIN	client identification number
CMS	Centers for Medicare & Medicaid Services
COVID-19	coronavirus disease 2019
FFS	fee-for-service
FIDA	Fully Integrated Duals Advantage
HCBS	home- and community-based services
IPRO	Island Peer Review Organization
LOC	level of care
LTSS	long-term services and supports
MAGI	modified adjusted gross income
MAP	Medicaid Advantage Plus
MDS	Minimum Data Set
MFP	Money Follows the Person Demonstration
MLTC	Managed Long-Term Care
MMC	Medicaid Managed Care
NYS DOH	New York State Department of Health
NYSoH	New York State of Health
OASIS	Outcome and Assessment Information Set
PACE	Program for All-Inclusive Care for the Elderly
PIP	Performance Improvement Project
RFP	request for proposal
SAAM	Semi-Annual Assessment of Members
SD	standard deviation
SPARCS	Statewide Planning and Research Cooperative System
TANF	Temporary Assistance for Needy Families
UAS-NY	Uniform Assessment System for New York
WMS	Welfare Management System

1. Introduction

The 1115 Demonstration

New York State's Medicaid Redesign Team Section 1115 Demonstration—originally approved in 1997 through a federal Medicaid Section 1115 Waiver and named the Partnership Plan Demonstration—was established to improve the health of low-income residents through the implementation of a mandatory Medicaid managed care program (New York State Department of Health [NYS DOH], 2019a). The three broad goals of the Demonstration were to enroll a majority of the State's Medicaid population into a managed care plan, improve access to and quality of care, and capitalize on efficiencies gained by using managed care to expand insurance coverage to low-income individuals who would otherwise be uninsured.

The Medicaid Redesign Team Section 1115 Demonstration has evolved over time. It was originally authorized for a five-year period and has been extended multiple times through amendments that included different Medicaid populations, such as people living with HIV/AIDS or receiving supplemental security income, and certain populations in need of long-term services and supports (LTSS).

Demonstration Evaluation

According to the special terms and conditions specified by the Centers for Medicare & Medicaid Services (CMS) for the Demonstration, New York State is required to submit an interim evaluation report to CMS "as part of the State's request for any future renewal of the Demonstration."[3] After a competitive bidding process, the RAND Corporation was selected by the State as the independent evaluator to conduct an interim evaluation to determine the effectiveness of the 1115 Demonstration in achieving its goals. The original evaluation plan covered three components: (1) Domain 1, Components 1 and 2—the Managed Long-Term Care (MLTC) program; (2) Domain 2, Goal 1—the Express-Lane Eligibility; and (3) Domain 2, Goal 2—the 12-month continuous eligibility. As communicated to CMS in early 2020, Domain 2, Goal 1, was removed, because the Express Lane Eligibility was not part of the 1115 Demonstration, and four additional questions were added to Domain 2, Goal 2 (Table 1).

[3] Request for Proposal (RFP) #20020, "Independent Evaluation of the New York State (NYS) 1115 Program," was released November 5, 2018. The RFP can be found at the following NYS DOH webpage: https://www.health.ny.gov/funding/rfp/inactive/20020/20020.pdf

Table 1. Key Domains, Goals, and Outcomes

Domain	Goal	Outcome
Domain 1, Component 1: Managed Long-Term Care (MLTC)	Goal 1: Expand access to MLTC for Medicaid enrollees in need of LTSS.	Time for the MLTC mandate's effect on enrollment to stabilize
	Goal 2: Demonstrate stability or improvement in patient safety	Percentage of enrollees who had no emergency room visits and percentage of enrollees who had no falls that required medical intervention or resulted in major or minor injuries
	Goal 3: Demonstrate stability or improvement in quality of care	Receipt of timely care, influenza vaccination, and dental exam
	Goal 4: Stabilize or reduce preventable acute hospital admissions	Potentially avoidable hospitalizations
	Goal 5: Demonstrate stability or improvement in consumer satisfaction	Satisfaction with MLTC plans, care managers, care providers, and services
Domain 1, Component 2: Individuals Moved from Institutional Settings to Community Settings for LTSS	Goal 1: Improve access to MLTC for those who transitioned from an institutional setting to the community	Enrollment in MLTC within one year post-discharge from an institution
	Goal 2: Demonstrate stability or improvement in patient safety	Percentage of enrollees who had no emergency room visits and percentage of enrollees who had no falls that required medical intervention or resulted in major or minor injuries
	Goal 3: Demonstrate stability or improvement in quality of care	Community residence and receipt of influenza vaccination and dental exam
Domain 2: Mainstream Medicaid Managed Care and Temporary Assistance to Needy Families (TANF)	Goal 1: Increase access to health insurance through Medicaid enrollment—Express Lane Eligibility (removed from the evaluation)	Medicaid enrollment, demographic characteristics, and percentage of ineligible enrollees
	Goal 2: Limit gaps in Medicaid eligibility due to fluctuations in recipient income—12-month continuous eligibility	Medicaid enrollment, demographic characteristics, enrollment duration, health care utilization and cost, and percentage of ineligible enrollees

NOTE: Domain 2, Goal 1 was removed from the evaluation, and four new questions were added to Domain 2, Goal 2.

The broad goals of the MLTC program evaluation are to assess (1) the number of individuals who are MLTC-eligible and able to access LTSS through the program and (2) whether MLTC affects patient safety, quality of care, or consumer satisfaction. This includes the general MLTC population, as well as those who transitioned from institutions to the community and enrolled in MLTC. Specifically, Domain 1 covers the following questions:

- At what point in the Demonstration did the MLTC enrollee population stabilize in size?
- Is MLTC enrollment associated with improved or stabilized patient safety, quality of care, or satisfaction with care?

- Among individuals who were discharged from an institution to the community and enrolled in the Money Follows the Person (MFP) Demonstration and MLTC (the Home- and Community-Based Services [HCBS] expansion population), is MLTC enrollment associated with improved or stabilized patient safety and quality of care?

The key difference between fee-for-service (FFS) LTSS and MLTC is that MLTC plans receive capitated payments. On the one hand, such plans are incentivized to deliver services more efficiently. For example, MLTC plans could redirect care from institutions to take place in communities because LTSS in institutions are generally more expensive than home- and community-based LTSS (Kaye, 2012).[4] For MLTC plans that integrate acute medical care with LTSS, unnecessary and expensive acute medical utilization, such as non-urgent emergency room visits and potentially avoidable hospitalizations, may be reduced to improve efficiency. On the other hand, the potential side effect of capitation is that service quality might be affected by financial incentives, though this is likely mitigated by the NYS DOH's disclosure, through a published annual report, of various service quality measures for each MLTC plan and its implementation of quality assurance programs.

Mandatory MLTC enrollment could ensure budgetary certainty for the State Medicaid program, lead to efficiencies in spending, and expand access. It would be beneficial if patient safety, quality of care, and consumer satisfaction do not decline after the mandate, but considering the potential effects of financial incentives, quality assurance programs, and public reporting of quality of care, the direction of MLTC's impact on these outcomes is uncertain.

We hypothesize that, overall, mandatory MLTC enrollment is not associated with changes in

- costly medical events, such as falls requiring medical interventions and potentially avoidable hospitalizations
- preventive medical services, such as influenza vaccination
- access to services covered by MLTC
- consumer satisfaction with LTSS, providers, or the MLTC plan.

The goal of Domain 2 of this independent evaluation is to assess whether 12-month continuous eligibility—the purpose of which is to prevent lapses in Medicaid coverage because of income fluctuations—has reduced enrollment gaps or increased enrollment duration. Continuous enrollment ensures enrollees' timely access to primary medical care and thus may increase outpatient utilization and cost, but timely access to care could also help avoid future costly events and reduce overall cost. We hypothesize that 12-month continuous eligibility is associated with increased Medicaid enrollment duration and increased outpatient visits, but decreased emergency room visits, inpatient admissions, and cost.

This final interim report is organized as follows, as per the Medicaid Redesign Team Section 1115 Demonstration's Special Terms and Conditions, Section XI 2.d, for independent evaluation

[4] MLTC's effect on LTSS expenditures is outside the scope of this evaluation.

reporting. Chapter 2, “Demonstration Description,” presents the background of the programs involved in this evaluation. Chapter 3, “Study Design,” describes research questions, study populations, data sources, and outcome measures for each evaluation domain and component in the order they appear in the request for proposal (RFP). The results of our analyses are presented in a similar order in Chapter 4, “Discussion of Findings and Conclusions,” and discussed further in Chapter 5, “Policy Implications.” Chapter 6, “Interactions with Other State Initiatives,” examines relationships between the programs in the 1115 Demonstration and other state initiatives.

2. Demonstration Description

MLTC Mandatory Enrollment

MLTC plans benefit participants by delivering care plans to meet individual care needs, preferences, and goals and by providing coordination of care and related services for the participant to streamline the delivery of LTSS. Services can be provided at home, in adult day care centers, or in a nursing home. All MLTC plans provide HCBS covered by Medicaid, such as care management, assistance with personal care (e.g., bathing and eating), adult day care, home-delivered meals, non-emergency transportation services, respite care, durable medical equipment, dental services, hearing aids, optometry and eyeglasses, podiatry services, and nursing home care. Medicaid Advantage Plus (MAP), Program for All-Inclusive Care for the Elderly (PACE), and Fully Integrated Duals Advantage (FIDA) plans also cover medical services under Medicare. While LTSS programs help states provide services to their most vulnerable and medically complex populations, states can potentially reduce their costs by using managed care plans to effectively and efficiently manage resources to deliver LTSS (NYS DOH, 2003). In 2013, 42 percent of national Medicaid spending was attributed to 6 percent of Medicaid beneficiaries who used FFS to access LTSS (Medicaid and Children's Health Insurance Program [CHIP] Payment and Access Commission [MACPAC], 2018).

Prior to 2012, New York State primarily operated three voluntary MLTC programs: (1) the MLTC Partial Capitation Program ("Partial Capitation") for adults age 18 to 64 with physical disabilities and adults age 65 or older who required a nursing home level of care; (2) the MAP program, which offered both acute medical care and LTSS to dually eligible individuals needing a nursing home level of care; and (3) the PACE program for adults age 55 and older who are otherwise eligible for nursing home admission to receive care at home. Despite the availability of these programs, the majority of Medicaid beneficiaries received LTSS on an FFS basis before the Demonstration.

MLTC plans are required to conduct an initial assessment of new enrollees; a routine assessment is conducted every six months thereafter. An additional assessment is required if an individual returns from a hospital or when there is a significant change in health status. The assessment collects information on enrollees' physical function, cognitive function, behaviors such as wandering and resisting care, and clinical diagnoses.

Beginning in September 2012, under the Demonstration, the State required individuals age 21 and over who are eligible for both Medicare and Medicaid and who are in need of 120 days or more of LTSS to enroll in an MLTC plan under one of these three programs (Partial Capitation, MAP, or PACE). Enrollment in an MLTC plan is optional for nursing home–eligible individuals age 18 to 21 who are dual eligible or those who are over 18 and eligible for Medicaid only; it is

not allowed for individuals who need fewer than 120 days of LTSS, are younger than age 18, or receive other programs, including 1915(c) waivers (Traumatic Brain Injury, Nursing Home Transition and Diversion, or Office for People with Developmental Disabilities), a hospice program, or an assisted living program.

Mandatory enrollment in MLTC was rolled out region by region throughout the State over a three-year period, starting in New York City in September 2012 and completed in July 2015. During the implementation process, an announcement letter was sent to eligible individuals who were not yet in an MLTC plan. The following month, a 60-day notice letter advised individuals about the need to enroll in an MLTC plan. Enrollment applications were typically processed about two months later, and enrollment would then take effect sometime in the next two months, depending on the month in which the application was processed. For example, for an announcement letter sent out in January, the 60-day notice letter was sent out in February, the enrollment application was processed in April, and enrollment was effective in May or June, depending on when the application was processed. Individuals could enroll in the program prior to the start date for the region they lived in, as long as at least one MLTC plan was offered in their community.

Two notable changes occurred during the rollout of the mandate. Starting in January 2015, the FIDA demonstration, an MLTC demonstration program for dually eligible individuals that includes both LTSS and medical care, was launched in New York City; FIDA was later expanded to a small number of counties around New York City. Enrollment in a FIDA plan also satisfied the MLTC mandate in counties where it was offered. The FIDA plans were phased out by the end of 2019, as it was only a five-year demonstration. Also, prior to February 2015, eligible individuals who lived in a nursing home or who were newly admitted to a nursing home were not required to participate in an MLTC plan. Starting in February 2015, enrollment for these eligible individuals became mandatory.

Nationally, at the start of 2018, LTSS managed care programs were available in 24 states (MACPAC, 2018). Some of these programs have been implemented in the past few years, but several were adopted earlier, including programs in Arizona (1989), Wisconsin (1996), and Texas (1998) (MACPAC, 2018). Prior LTSS studies are sparse and range from implementation evaluations to interim outcome evaluations. A 2018 interim evaluation sponsored by CMS examined the LTSS programs of New York and Tennessee. The study showed that LTSS managed care programs led to higher use of HCBS and lower institutional and hospital services in New York, but they were associated with more hospitalizations in Tennessee; these results are consistent with those of a 2004 study for New York City (Libersky et al., 2018; Nadash, 2004).

Money Follows the Person

In 2007, the Federal Money Follows the Person Rebalancing Demonstration Program, authorized first by the Deficit Reduction Act and then by the Affordable Care Act, was designed

to shift LTSS delivery from institutions to the community. Specifically, the Money Follows the Person (MFP) program in New York State helps elderly individuals and individuals with intellectual disabilities (added in 2013), physical disabilities, and/or traumatic brain injury return to a qualified community-based setting from long-term care institutions, including hospitals, nursing homes, or intermediate care facilities (NYS DOH, 2016b; 2019b). Transition specialists assist potentially MFP-eligible individuals with the transition process by providing information about LTSS available in the community, identifying additional services offered in the community to facilitate independent living, and once transitioned, conducting periodic check-ins to assess ongoing service needs (NYS DOH, 2016b). MFP provides information and transition planning assistance—a "bridge" between institutional and HCBS—but does not provide or pay for LTSS, which are covered by MLTC. MFP contracts with the New York Association on Independent Living to coordinate the Open Doors Transition Center Program (Open Doors) to provide for transition specialists and peer support (New York Association on Independent Living, 2019).

Individuals are eligible to participate in MFP if they have at least 90 consecutive days in a qualified institution, are eligible for Medicaid at least one day prior to the transition from an institution to the community, have health needs that can be met through services available in the community, meet enrollment criteria for a constituent partner program,[5] voluntarily consent to participate, and transition into a qualified residence, including a house, apartment, or a group home with a maximum of four residents (NYS DOH, 2017b).

MFP enrollment starts at the time of transition from an institution to the community, or within 90 days post-discharge, and continues for 365 days after enrollment (NYS DOH, 2017b). If a participant returns to an institution before the end of the 365-day period, their MFP time is put on hold until they return to the community. During program enrollment, Open Doors follows up with participants on a regular basis, and participants are asked to voluntarily complete a quality-of-life survey pre-transition and 11 months post-transition. MFP enrollment ends when a participant completes 365 days in the community, requests an exit from the program, or is disenrolled from a constituent program. Individuals may re-enroll in the MFP program if they qualify again for MFP.

Transition specialists work with individuals who are potentially eligible for MFP to arrange for services and supports after their return to the community. This pre-transition assistance is provided by Open Doors. While there is no prescribed time period, the typical range for transition is 2–18 months (New York Association on Independent Living, 2019). The pre-transition period is not counted toward the time an individual is enrolled in the MFP program. Medicare- and Medicaid-certified nursing facilities are required to conduct the Minimum Data

[5] Constituent partner programs include the New York State Nursing Home Transition and Diversion waiver, Traumatic Brain Injury waiver, New York State Office for People with Developmental Disabilities waivers, mainstream Medicaid managed care, and MLTC.

Set (MDS) assessment for residents at regular intervals, or when there is a significant change in health status. The MDS assessment includes the following question (Section Q): "Do you want to talk to someone about the possibility of returning to live and receive services in the community?" If residents express interest, nursing facilities are required to refer residents to Open Doors (NYS DOH, 2016b).

Initially, MFP was available to those who were eligible for specific Medicaid FFS 1915(c) waiver programs. As of January 2016, and retroactive to transitions that occurred on or after July 1, 2015, MFP was made available to those eligible for MLTC, as well as mainstream Medicaid managed care plans (NYS DOH, 2017b). MLTC plans have been tasked with educating their members about the availability of Open Doors assistance, in addition to other required actions, although the absence of such plan actions does not preclude eligible individuals' access to MFP.[6] Individuals potentially eligible for MLTC are required to undergo an assessment to determine the eligibility, and Open Doors transition specialists can help arrange for the assessment.

As of October 2019, MFP operated in 44 states (Lipson et al., 2007; Musumeci, Chidambaram, and Watts, 2019; Mathematica Policy Research, 2017). From 2007 through December 2017, more than 100,000 people across the United States benefited from the MFP program (Liao and Peebles, 2019). States set a target for the number of participants they would like to transition each year. In 2016, 21 states achieved at least 85 percent of their transition goals; states that did not meet at least 85 percent of their transition goal for two years (excluding the State's first year) were required to draft an action plan for CMS describing how the goal would be achieved in the next year (Coughlin et al., 2017). In 2015, MFP participants across the United States reported improvement in all seven categories of a quality-of-life survey at one year after their transition to the community, with the largest quality of life improvements associated with living arrangements (Irvin et al., 2017).

Twelve-Month Continuous Eligibility

In January 2014, under the Section 1115 Demonstration Waiver, New York State implemented the 12-month continuous eligibility policy for individuals eligible for Medicaid, based on the Modified Adjusted Gross Income (MAGI) guideline. This includes pregnant women; individuals age 19–20 living alone or living with parents; childless adults who are not pregnant, are younger than 65, and are not on Medicare; parents or caretaker relatives; and individuals eligible for the Family Planning Benefit Program.[7] Eligible individuals were guaranteed Medicaid coverage regardless of changes in income in the 12 months after

[6] MLTC plans must include an "MFP Attestation" in their existing Enrollment Agreement, include specific language describing MFP in their handbook, and review "NYS Money Follows the Person Guidance for Managed Care Organizations" and share it with all appropriate plan staff to encourage recommended practices (NYS DOH. 2019b).

[7] The Family Planning Benefit Program provides family planning services to low-income New Yorkers. The goal is to increase access to family planning services in the target population to reduce unintentional pregnancies.

enrollment, even though they might have lost eligibility under the MAGI rule. Individuals could lose coverage for other reasons, however, such as moving out of the State or failure to provide documentation of citizenship.

The 12-month continuous eligibility policy is not new to New York State. In January 1999, the State provided 12 months of continuous coverage to children determined to be eligible for Medicaid, regardless of income changes or circumstances during the subsequent 12 months. In 2007, the State revised laws to allow the provision of 12-month continuous coverage to certain adults eligible for Medicaid. Further, CMS authorized New York State, as of 2011, to provide a 12-month continuous eligibility period for select groups of adults under the Section 1115 Waiver evaluated under Domain 2, Component 2. However, the policy was not implemented among adults until 2014.

The adoption of 12-month continuous eligibility in 2014 was complicated by the simultaneous launch of New York State of Health (NYSoH)—the State's health insurance exchange. Prior to NYSoH, eligible individuals were enrolled and renewed through local departments of social services, i.e., the Welfare Management System (WMS). After the launch of NYSoH, MAGI-eligible adults were gradually transitioned by the State from WMS to NYSoH in phases. Some counties started the transition earlier than others depending on enrollment and renewal contractors' capacity. The transition for counties outside of New York City was completed by 2018, but New York City did not start the transition until 2019, which is outside of the period covered by this evaluation. In the meantime, individuals were allowed to self-transition by disenrolling from WMS and re-enrolling in NYSoH. As of 2018, about one quarter of MAGI-eligible adults remained in WMS.

It should be noted that there was a timing difference in implementing 12-month continuous eligibility. NYSoH initiated the policy in 2014, while WMS did not implement it until April 2015. In addition, enrollees or potential enrollees can enroll or renew through NYSoH electronically, which is much more convenient than the manual process through the WMS. NYSoH administrators can also verify an individual's income through other federal and state data sources to determine and renew eligibility without any documentation from that individual.

Nationwide, as of 2018, 25 states have adopted a 12-month continuous eligibility policy for children eligible for Medicaid. Prior studies have shown that continuous eligibility is effective in increasing Medicaid coverage. States adopting a 12-month continuous eligibility option increased the average length of enrollment in the child population covered by CHIP by nearly 2 percent (Ku, Steinmetz, and Bruen, 2013). A simulation study by Swartz et al. (2015) showed that, compared with other policy options, extending eligibility to the end of a calendar year or ensuring coverage for the following 12 months could generate the greatest reduction in churning (a phenomenon of frequent or recurring Medicaid entries and exits due to monthly income fluctuation) among adults age 19 to 64 covered by Medicaid. Swartz et al. (2015) estimated that monthly enrollment among adults could increase by 17 percent if 12-month continuous eligibility policy were implemented nationwide.

3. Study Design

Given the non-experimental nature of the Demonstration, we developed descriptive statistics, estimated associations, and specified multivariable quasi-experimental models to evaluate the effects of the Medicaid Redesign Team Section 1115 Demonstration. We evaluated the two programs within the Demonstration, which we label as Domain 1 and Domain 2, with the following broad research questions:

- Did the MLTC program expand access and improve patient safety, quality of care, and consumer satisfaction? [Domain 1]
- Did the 12-month continuous eligibility policy increase enrollment duration among eligible adults and affect utilization and cost? [Domain 2].

Specifically, we described trends in various outcomes and used statistical models based on a difference-in-differences approach[8] for Domain 1's MLTC-related research questions or on survival analytic approaches for Domain 2's 12-month continuous eligibility research questions, while controlling for other factors in the models as necessary and feasible. These approaches allowed us to characterize trends and identify the impact of the Demonstration while minimizing threats to the internal validity of our estimates.

Domain 1, Component 1: Managed Long-Term Care

Table 2 describes the study design, data, and analytic approaches for each of the research questions under Domain 1, Component 1. Medicaid member-level data would be ideal to answer research questions on patient safety, quality of care, and consumer satisfaction, and thus were requested by the RAND team. The RFP for this independent evaluation, however, specifies that NYS DOH would provide only data aggregated to the state level and plan level for analysis. As a result, the statistical power of our analysis is limited by the absence of individual-level data.

[8] Also called the quasi-experimental approach. Basically, we compared the pre- and post-policy changes between the adults newly subject to the policy (treatment) and the children who were subject to the policy both in the pre- and post-policy periods (control).

Table 2. Study Design for Domain 1, Component 1: Managed Long-Term Care

Goal	Research Question	Measure	Data Source	Study Design and Analytic Approach
1. Expand access to Managed Long-Term Care for Medicaid enrollees in need of long-term services and supports	1. Enrollment into MLTC will continue to grow and then stabilize as the program is mandatory across the State. At what time point in the Demonstration did the population stabilize in size?	The time needed for the incremental enrollment due to the mandate to stabilize	2010–2018 NYS DOH Monthly MLTC Enrollment Data	A quasi-experimental design: Used a difference-in-differences approach by leveraging the fact that the mandate was rolled out gradually across 13 regions
2. Demonstrate stability or improvement in patient safety	1. Is the percentage of the MLTC population having an emergency room visit in the last 90 days stable or improving over the course of the Demonstration?	Percentage of enrollees who had no emergency room visits in the last 90 days	2010–2019 UAS-NY Community Health Assessment Data	A quasi-experimental design: Used a difference-in-differences approach by leveraging the fact that the mandate was rolled out gradually across 13 regions
	2. Is the percentage of the MLTC population having a fall requiring medical intervention in the last 90 days stable or improving over the course of the Demonstration?	Percentage of enrollees who had no falls that required medical intervention or resulted in major or minor injuries in the last 90 days	2014–2019 UAS-NY Community Health Assessment Data	
3. Demonstrate stability or improvement in quality of care	1. Are enrollees' perceived timely access to personal, home care, and other services such as dental care, optometry, and audiology stable over time or improving?	Percentage of members who received dental care in a timely manner [Note: the data for other services were not available]	2009–2019 MLTC Satisfaction Data	A quasi-experimental design: Used a difference-in-differences approach by leveraging the fact that the mandate was rolled out gradually across 13 regions
	2. Is the percentage of the MLTC population accessing preventive care services, such as the influenza vaccination and dental care, consistent or improving?	Percentage of members who received an influenza vaccination in the last year; percentage of members who received a dental exam in the last year	2010–2019 UAS-NY Community Health Assessment Data	A quasi-experimental design: Used a difference-in-differences approach by leveraging the fact that the mandate was rolled out gradually across 13 regions

Goal	Research Question	Measure	Data Source	Study Design and Analytic Approach
4. Stabilize or reduce preventable acute hospital admissions	1. Is the MLTC population experiencing stable or reduced rates of potentially avoidable hospitalizations?	The number of potentially avoidable hospitalizations per 10,000 member days	2013–2017 SPARCS Data	A quasi-experimental design: Used a difference-in-differences approach by leveraging the fact that the mandate was rolled out gradually across 13 regions
5. Demonstrate stability or improvement in consumer satisfaction	1. What is the percentage of members who rated their managed long-term care plan within the last six months as good or excellent? Has this percentage remained stable or improved over the Demonstration?	Percentage of members who rated their managed long-term care plans as good or excellent	2007–2019 MLTC Satisfaction Data	A quasi-experimental design: Used a difference-in-differences approach by leveraging the fact that the mandate was rolled out gradually across 13 regions
	2. What is the percentage of members who rated the quality of care manager/case manager services within the last six months as good or excellent? Has this percentage remained stable or improved over the Demonstration?	Percentage of members who rated the quality of care manager/case manager services within the last six months as good or excellent		
	3. What is the percentage of members who rated their home health aide/personal care aide/personal assistant, care manager/case manager, regular visiting nurse, or covering/on-call nurse services within the last six months as usually or always on time? Has this percentage remained stable or improved over the Demonstration?	Percentage of members who rated their home health aide/personal care aide/personal assistant, care manager/case manager, regular visiting nurse/registered nurse or covering/on-call nurse services within the last six months as usually or always on time	2007–2019 MLTC Satisfaction Data	A quasi-experimental design: Used a difference-in-differences approach by leveraging the fact that the mandate was rolled out gradually across 13 regions
	4: What is the percentage of members who rated the quality of home health aide/personal care aide/personal assistant services within the last six months as good or excellent? Has this percentage remained stable or improved over the Demonstration?	Percentage of members who rated the quality of home health aide/personal care aide/personal assistant services within the last six months as good or excellent	2007–2019 MLTC Satisfaction Data	A quasi-experimental design: Used a difference-in-differences approach by leveraging the fact that the mandate was rolled out gradually across 13 regions

NOTE: SPARCS = Statewide Planning and Research Cooperative System.

Goal 1: MLTC Enrollment

Research Question

- Goal 1, Research Question 1: Enrollment into MLTC will continue to grow and then stabilize as the program is mandatory across the State. At what time point in the Demonstration did the population stabilize in size?

Study Population and Data Sources

We used the 2010–2018 NYS DOH's MLTC monthly enrollment data to examine expanded access to MLTC for Goal 1. These data cover all individuals who were enrolled into MLTC during the time period. In addition, we used the New York Statewide Managed Long-Term Care Implementation Timeline to delineate the rollout schedule. The 2010–2018 Medicaid Data Warehouse was used to generate, for each county, the number of individuals who were eligible for both Medicare and Medicaid (dual eligibles). Since the exact number of individuals eligible for MLTC is not available, we used the number of dual eligibles to approximate the size of the population eligible for MLTC and therefore used as the denominator of MLTC enrollment rates. More details on the data sets used for this evaluation are in Appendix A, Table A1. We included data for the two years before and the five years after implementation of the Demonstration. This provides a time series of sufficient length to observe the transition from pre-implementation to post-implementation.

Outcome Measures

The outcomes of interest for this analysis are the number of individuals enrolled in MLTC plans and enrollment rates among eligible individuals. Enrollment rates were calculated by dividing enrollment at the county and month level by the number of dual eligibles, which we used to approximate the number of individuals eligible for MLTC.

Analytic Approach

For descriptive analysis, we delineated the time trends in MLTC enrollment by rollout region and month for the years 2010–2018. But a time point at which the total MLTC enrollment stabilized in descriptive trends could be the result of factors other than the MLTC mandate that are associated with the general time trend. To address the research question, therefore, we specified a multivariable model that identified a general time trend in addition to the post-mandate enrollment growth.

A key feature of the MLTC mandate is that it was rolled out at different times across the State. For example, the mandate was implemented first in New York City. During that time, the other regions in the State served as a comparison. Similarly, as more regions implemented the mandate, the rest of the State became a comparison. This staged rollout allows for the identification of a general underlying time trend separate from the impact of the mandate on the MLTC enrollment.

During the implementation, an announcement letter was sent to eligible individuals two to three months prior to the official mandate start date for a given region. In our analysis, we chose the announcement letter date as the starting point, because many eligible individuals began to enroll before the official start date. For example, in New York City, the announcement letter was sent in June 2012, but the official start date was September 2012. Individuals could enroll any time prior to the mandate for a given region.

In the multivariable analysis, we examined the enrollment rate at the rollout region level using a variant of the difference-in-differences approach. The models include a series of indicators for calendar months, as well as for the time since the mandate, which varies across rollout regions. We allowed the general time trend to vary across rollout regions, but we identified a common mandate effect across the regions, reflected by the coefficients of the indicators for the time since mandate. Note that because the 13 rollout regions differ substantially in population size, we modeled enrollment rates for each region using the number of individuals eligible for MLTC as the denominator (approximated by the number of dual eligible). Thus, the dependent variable in our model is the rate of enrollment rather than the enrollment level in each county. In addition, we used the number of dual eligibles as analytic weights in the model, so that our results are representative of the State and not just averages across the 13 regions. The full methods for the regression analysis are in Appendix B.

Because MLTC plans expected the mandate to be implemented on a specific date, there could be an anticipatory effect due to the competition among MLTC plans. That is, existing MLTC plans could have tried to enroll as many individuals as possible on a voluntary basis before the mandate started. Therefore, as a secondary analysis, we re-estimated the model with the inclusion of ten months preceding the mandate rollout in each region (based on the descriptive trends, which differed across rollout regions) to capture such a potential anticipatory effect on enrollment.

To identify whether and when the mandate's effect stabilized, we visually examined the mandate's effect over time, and we conducted statistical tests to identify when enrollment increases were no longer statistically significantly greater than zero. That is, starting from the fourth month after implementation, and for each of the following rolling three-month periods, we tested whether the current three-month average of enrollment rate was statistically significantly larger than that of the previous three months, using a significance level of 5 percent. For example, we compared the average rate of enrollment in months 1–3 to that of months 4–6, months 2–4 to months 5–7, and so on. We consider the mandate's effect as stabilized at the point at which three-month average enrollment increases were no longer statistically significant.

Goals 2–4: Patient Safety and Quality of Care Among the MLTC Population

Research Questions

- Goal 2, Research Question 1: Is the percentage of the MLTC population without any emergency room visits in the last 90 days stable or improving over the course of the Demonstration?
- Goal 2, Research Question 2: Is the percentage of the MLTC population without any falls requiring medical intervention in the last 90 days stable or improving over the course of the Demonstration?
- Goal 3, Research Question 1:[9] Are enrollees' perceived timely access to personal, home care, and other services, such as dental care, optometry, and audiology, stable over time or improving?
- Goal 3, Research Question 2: Is the percentage of the MLTC population accessing preventive care services, such as influenza vaccination and dental care, consistent or improving?
- Goal 4, Research Question 1: Is the MLTC population experiencing stable or reduced rates of potentially avoidable hospitalizations?

Study Population and Data Sources

We analyzed the data for individuals enrolled in an MLTC plan during 2010–2018 across the four different MLTC plan types: Partial Capitation, MAP, PACE, and FIDA (see Appendix D, Table A4 for more details). The NYS DOH provided aggregate MLTC plan-level performance data for five outcome measures: percentage of enrollees who had no emergency room visits, percentage of enrollees who had no falls that required medical intervention or resulted in major or minor injuries, influenza vaccinations, dental exams, and potentially avoidable hospitalizations. Specifically, for the years 2010, 2012, and 2013, we used annual MLTC performance reports produced by NYS DOH, which contain MLTC plan-level outcome measures derived from the Semi-Annual Assessment of Members (SAAM) data (NYS DOH, 2010, 2012b, 2013c). For the years 2014–2018, we downloaded semi-annual MLTC plan-level outcome data from Open Data NY (NYS DOH, 2020a). The five outcome measures, except for potentially avoidable hospitalizations, were derived from the Uniform Assessment System for New York (UAS-NY) Community Health Assessment (CHA) data. Potentially avoidable hospitalization rates for each MLTC plan were calculated by NYS DOH using the 2014–2018 Statewide Planning and Research Cooperative System (SPARCS) data, an all-payer hospital discharge database in New York State (NYS DOH, 2013a, 2020a, 2020b).

[9] Because Goal 3, Research Question 1, uses the survey data, its study design is described in the study design section for Goal 5.

Outcome Measures

In this analysis, we examined the following measures for each of the evaluation goals listed below:

- Goal 2: Demonstrate stability or improvement in patient safety
  1. Percentage of MLTC enrollees without any emergency room visits in the last 90 days
  2. Percentage of MLTC enrollees without any falls requiring medical intervention in the last 90 days
- Goal 3: Demonstrate stability or improvement in quality of care
  1. Percentage of MLTC enrollees receiving an influenza vaccination in the past year
  2. Percentage of MLTC enrollees receiving a dental exam in the past year
- Goal 4: Stabilize or reduce preventable acute hospital admissions
  1. Annual rate of potentially avoidable hospitalizations per 10,000 MLTC enrollee days.[10]

Significant changes in how each outcome was measured over time required manipulations to define a consistent measure; as a result, comparison over time should be made with caution. For example, in 2014, the measure instrument changed from the SAAM to the UAS-NY CHA instrument for reported outcomes, and this led to differences in how measures were calculated. Starting with outcomes reported in 2014, plans in each of the four MLTC programs conducted individual assessments every six months, as well as after a significant event such as discharge from a hospital, return from a facility, and a significant change in health status. Also, starting in 2014, the reference period for the measures of enrollees with no emergency room visits and enrollees with no falls that required medical intervention or resulted in major or minor injuries changed from six months to 90 days. We discuss below the changes for each of the outcome measures.

Emergency room visits were based on items in the SAAM in the 2010 Annual MLTC Performance Report and included any emergent care in any setting (hospital, physician's office, or outpatient department) since the last MLTC assessment. Starting with the 2012 annual report, the no-emergency-room-visits measure included only hospital emergent care since the last assessment, and this reported measure was risk-adjusted at the plan level. In the 2013 annual report, this measure was reported as the percentage with no emergent hospital care since the last assessment. We reverse-coded this for our analyses. Starting with 2014 reported outcomes, this measure was based on items in the UAS-NY CHA data and used a 90-day lookback period.

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[10] Potentially avoidable hospitalizations are in-patient hospitalizations that could potentially have been avoided with timely care, including those with a SPARCS primary diagnosis of respiratory infection, urinary tract infection, congestive heart failure, anemia, sepsis, or electrolyte imbalance. The rate is determined by dividing the number of such diagnoses by the total plan days for members with more than three months of plan enrollment and then multiplying by 10,000.

The percentage of enrollees who had no falls that required medical intervention or resulted in major or minor injuries was based on items in the SAAM in the 2010, 2012, and 2013 Annual MLTC Performance Reports and initially included any fall since the last assessment. This measure was not restricted to falls requiring medical intervention until 2014. Starting in the 2012 report, this plan-level measure was risk-adjusted using a statewide statistical model. In the 2013 annual report, there are two measures based on SAAM: any falls and falls not resulting in medical intervention. Each measure is risk-adjusted separately, so we cannot cleanly identify falls that require medical intervention by subtracting one from the other. Starting with 2014 reported outcomes, the measure was based on items in the UAS-NY CHA data and used a 90-day lookback period. In our analysis, we therefore included only the data reported in 2014 and afterward.

The measure of potentially avoidable hospitalizations was calculated for each plan starting with the 2013 Annual MLTC Performance Report. Potentially avoidable hospitalizations are identified by analyzing health care encounter data in SPARCS data for plan enrollees who have a hospital admission with a discharge diagnosis of respiratory infection, urinary tract infection, congestive heart failure, anemia, sepsis, or electrolyte imbalance during the measurement period. The plan's reported potentially avoidable hospitalization rate is the number of potentially avoidable hospitalizations per 10,000 enrollee days and is risk-adjusted. We did not use the January 1, 2013, data point in our analysis because it is about one-third of that of other measurement periods.

Two of the outcome measures did not change over time: the percentage of members who received an influenza vaccine in the past year and the percentage of members who received a dental exam in the past year. The percentage of members who received an influenza vaccine in the past year is available in the 2010, 2012, and 2013 Annual MLTC Performance Reports and in the 2014–2018 semi-annual MLTC plan-level outcome data. Even though the instrument changed from SAAM to UAS-NY in 2014, the item on the influenza vaccine did not change. The percentage of members who received a dental exam in the past year is available only in the 2014–2018 semi-annual MLTC plan-level outcome data.

Starting with the 2012 Annual MLTC Performance Report, selected plan-level outcome measures were risk-adjusted by NYS DOH to account for differences among plan enrollee populations. Risk adjustment accounts for variation in demographics and health status among plan enrollee populations and is designed to create a more equal comparison across plans within a measurement period. Plans that have more frail enrollees may have poorer outcome scores than plans with healthier enrollees because they have sicker enrollees, not because they are performing poorly. Risk adjustment is an attempt to address these differences in plan populations. NYS DOH calculates the expected rates for a plan for each of the risk-adjusted outcomes that would occur if the plan's enrollee population matched the total enrollee population in the State in that year. A plan's risk-adjusted rate is the ratio of the observed rate to the expected rate, multiplied by the statewide average rate.

The risk adjustment is calculated for each measurement period, and the demographic and health status measures that were used have changed over time, so individual plan scores are not comparable over time. In the 2012 Annual MLTC Performance Report, risk adjustment was based on a number of factors, including demographics, major medical conditions, physical function, cognitive function, and living arrangement. Starting with 2014 reported measures, risk adjustment was based on health status information available on the CHA. The set of risk adjustors has also changed slightly over time. For example, enrollee race/ethnicity was included for the 2012 and 2013 annual reports but not in later reports. Even for the same risk adjustors, definitions could change during the study period. For instance, cognitive functions were measured differently in reports prior to 2014 than they were in later reports; this is due to the change of the data collection instrument from SAAM to UAS-NY CHA.

Measure Reference Period Adjustment

Starting with data reported in 2014, the reference period changed from six months to 90 days for the no-emergency-room-visits measure and no-falls-requiring-medical-intervention measure because of the change of the assessment tool from SAAM to UAS-NY CHA. In our analysis, we adjusted these measures from earlier reports so that they reflect the same 90-day reference period and are therefore comparable over time. To make the adjustment, we assumed that the likelihood of each outcome occurring was the same for each month during the six-month time period, and we calculated the expected value for the outcome over a 90-day period.

Analytic Approach

Because outcome definitions evolved over time and were risk-adjusted, we were not able to directly estimate the impact of the MLTC mandate on absolute changes in outcomes. Instead, we calculated the difference in each outcome measure between each MLTC plan and the statewide average in each year. That is, we "re-centered" each outcome measure around the statewide average of the outcome across plans, such that the sum of the re-centered measure across plans in each year was zero. Although the outcome measures themselves are not comparable over time because of risk adjustment or definitional changes, the re-centered measures are comparable over time unless the definitions of outcome measures changed over time. The re-centered outcome measures allow for a fair comparison over time between a plan's performance and all other plans. Our strategy was to then determine whether a plan's relative performance improved or worsened with increased mandated enrollment, using each of the five re-centered plan outcomes.

Mandatory enrollment was rolled out at different times for different regions in the State between September 2012 and July 2015. Typically, identification of the mandate's effect would be done using outcome measures by rollout region. However, we had only statewide plan–level outcome data, and plans operated in multiple regions. To overcome this limitation, for each MLTC plan, we calculated the fraction of its enrollees residing in the regions under the mandate using monthly MLTC enrollment data, and we estimated its association with the re-centered

outcomes. The assumption was that, on average, plan enrollees contributed equally to plan-level outcomes across mandated enrollment status. The identification of the mandate's effect comes from the variation in this fraction across plans and over time. The full statistical model is provided in Appendix B.

Goal 5: Consumer Satisfaction Among the MLTC Population

Research Questions

- Goal 5, Research Question 1: What is the percentage of members who rated their managed long-term care plan within the last six months as good or excellent? Has this percentage remained stable or improved over the Demonstration?
- Goal 5, Research Question 2: What is the percentage of members who rated the quality of care manager/case manager services within the last six months as good or excellent? Has this percentage remained stable or improved over the Demonstration?
- Goal 5, Research Question 3: What is the percentage of members who rated their home health aide/personal care aide/personal assistant, care manager/case manager, regular visiting nurse, or covering/on-call nurse services within the last six months as usually or always on time? Has this percentage remained stable or improved over the Demonstration?
- Goal 5, Research Question 4: What is the percentage of members who rated the quality of home health aide/personal care aide/personal assistant services within the last six months as good or excellent? Has this percentage remained stable or improved over the Demonstration?

Study Population and Data Sources

The target population of our analysis consists of all MLTC enrollees regardless of dual eligibility for the years 2007–2019. The data for this secondary analysis originated from the customer satisfaction survey administered to MLTC plan enrollees. The data for the years 2007, 2011, and 2013 came from the annual MLTC performance reports produced by NYS DOH (NYS DOH, 2010, 2012b, 2013c), which contained MLTC plan-level outcome measures. For the years 2015, 2017, and 2019, the MLTC plan-level outcome data were downloaded from Open Data NY (NYS DOH, 2020a). Statewide data were not generated; these data came directly from the reports or from Open Data NY.

The demographic characteristics for the enrollees, available from Open Data NY, remained fairly consistent during 2015–2019. Approximately 30 percent were male and 70 percent were female. Race and ethnicity also remained consistent, with 32 percent White non-Hispanic, 25 percent Hispanic, and 18 percent African American; the remaining enrollees (25 percent) were designated as "other." Persons under 65 years of age represented only 16 percent of enrollees, while those 65 to 74 years old represented 24 percent, those age 75 to 84 represented 33 percent, and those age 85 plus represented 27 percent.

The customer satisfaction survey was developed by NYS DOH along with Island Peer Review Organization (IPRO), an external quality review organization contracted to evaluate the

satisfaction of services provided by the MLTC plans, including the quality, accessibility, and timeliness of services. The first customer member satisfaction survey of the State's MLTC population was field-tested and administered by IPRO beginning in 2007 and subsequently in two-year intervals starting in 2011 (NYS DOH, 2010).

Survey items explored health plan satisfaction; satisfaction with select providers and services, including timeliness of care and access; and self-reported demographic information. To maximize response rates, the satisfaction surveys were offered in English, Spanish, Russian, and Chinese and included a follow-up mailing to nonresponders within three months of the initial distribution. The survey underwent periodic revisions over the years, with survey items being added or modified (see details in the "Outcome Measures" section below).

In 2007 and 2011, the results of the survey were provided in unadjusted prevalence rates at the MLTC plan level (no individual respondent-level data were available for the analysis); beginning in 2013, the results of four of the five items were risk-adjusted to allow for a fairer comparison among the MLTC plans. In addition, beginning in 2015, to account for unequal plan size, statewide survey data were weighted by plan-eligible population. This allowed larger plans to contribute more—and smaller plans to contribute less—to the statewide average, thus yielding more-representative statewide results (NYS DOH, 2015). As seen in Table 3, the number of surveys mailed during each year of the survey administration has increased with increased MLTC enrollment over time; however, except for 2017, response rates have been trending downward.

Table 3. Number of Satisfaction Surveys Mailed and Response Rate, by Year

Year	Surveys Mailed	Completed Surveys	Response Rate (%)
2007	4,518	1,403	31.1
2011	5,742	1,845	32.1
2013	9,346	2,533	27.0
2015	17,804	4,592	25.8
2017	20,047	5,559	27.
2019	20,007	4,639	23.2%

NOTE: The data came from various annual New York State MLTC reports. (NYS DOH, 2010, 2012b, 2015, 2017a, 2020a).

Outcome Measures

For this analysis, we examined data pertaining to the questions listed below. Since Goal 3, Research Question 1, uses the survey data, its study design is described in this section.

Goal 3: Demonstrate stability or improvement in quality of care

1. Percentage of MLTC enrollees who reported timely access to dental care within the last six months

Goal 3, Research Question 1 is about enrollees' perceived timely access to personal, home care, and other services, such as dental care, optometry, and audiology. The outcome measure that most closely aligns with the research question pertains to dental care, and no reported measures on access to optometry and audiology are available in the data. There was a slight change in how the measure of timely access to dental care was constructed: Prior to 2015, the measure was the percentage of MLTC enrollees who reported that within the last six months they waited less than one month for access to routine dental care; from 2015 on, it became the percentage of members who reported that within the last six months they always got a routine dental appointment as soon as they thought they needed one. The item on the 2011 and 2013 satisfaction surveys that corresponded to the research question was: "In the last 6 months, when you called for a regular appointment, how long did you generally have to wait between making an appointment and seeing providers?" This item used the following response categories: "Less than 1 month," "1 to 3 months," or "Longer than 3 months." The questions and response categories for this item changed in 2015 to "In the past 6 months, when you called for a regular appointment, how often did you get an appointment as soon as you thought you needed one?" The new response categories were: "Always," "Usually," "Sometimes," or "Never" (IPRO Corporate Headquarters Managed Care Department, 2011). The measure is available for all the data years except for 2007, and no risk adjustment was made to the measure.

Goal 5: To demonstrate stability or improvement in consumer satisfaction

1. Percentage of MLTC enrollees who rate their health plan as good or excellent

The survey item is, "Overall, how would you rate your managed long-term care plan?" The response categories are "Excellent," "Good," "Fair," or "Poor." The measure is available for all the survey years and was risk-adjusted starting in 2013.

2. Percentage of MLTC enrollees who rate their care manager as good or excellent

The survey item is, "Please rate the providers and services you receive or have received within the last 6 months—even if the service is not covered, or paid for, by your health plan." The response categories are "Excellent," "Good," "Fair," "Poor," or "Not Applicable." The measure is available for all the survey years and was risk-adjusted starting in 2013.

3. Percentage of MLTC enrollees who reported that within the last six months the home health aide/personal care aide/personal assistant, care manager/case manager, regular visiting nurse/registered nurse, or covering/on-call nurse services were usually or always on time

This composite measure included four survey items: "In the past 6 months, please rate how often the following services were on time or if you were able to see the provider at the scheduled time: Home health aide, personal care aide (aide that comes to your house to take care of you); Care Manager/Case Manager (person who prepares your plan of care); Regular Visiting Nurse/Registered Nurse (comes to your house for regular visits); and Covering/On-call Nurse (comes to your house when regular nurse can't come." The response categories changed in 2015

from “Less than 1 month,” “1 to 3 months,” or “Longer than 3 months” to “Always,” “Usually,” “Sometimes,” “Never,” or “Not Applicable” (IPRO Corporate Headquarters Managed Care Department, 2011). The measure is available for all the survey years except 2007 and 2011 and was risk-adjusted for all years.

4. Percentage of MLTC enrollees who rate the quality of home health aide/personal care aide/personal assistant services within the last six months as good or excellent

The survey item is, “Please rate the providers and services you receive or have received within the last 6 months—even if the service is not covered, or paid for, by your health plan.” The response categories are: “Excellent,” “Good,” “Fair,” “Poor,” or “Not Applicable.” The measure is available for all the survey years and was risk-adjusted starting in 2013.

As stated above, the outcome measure under Goal 3 was an unadjusted prevalence measure. Beginning in 2013, all plan outcome measures under Goal 5 were risk-adjusted, meaning they were adjusted by NYS DOH for age, education, and self-reported health status, as these were found to be important satisfaction survey control variables that are widely accepted and used in satisfaction survey analysis (NYS DOH, 2015).

Analytic Approach

Descriptive statistics, specifically means, were generated for the three types of MLTC plans: Partial Capitation MLTC plans, PACE plans, and MAP plans. Satisfaction survey data for FIDA plans were not available. Means were calculated for each type by adding the outcome measure for each of the plans and then dividing the total by the number of plans under each type.[11]

We used the same multivariable modeling strategy as that for Goals 2–4; please refer to that section for details. The full statistical model is in Appendix B.

Domain 1, Component 2: Individuals Moved from Institutional Settings to Community Settings for Long-Term Services and Supports

Goals 1–3: Individuals Moved from Institutional Settings to Community Settings

Research Questions

- Goal 1, Research Question 1: For those who transition from an institutional setting to the community, did the percentage enrolling in MLTC increase over the Demonstration?
- Goal 2, Research Question 1: Is the percentage of the HCBS expansion population without any emergency room visits in the last 90 days stable or improving over the course of the Demonstration?

[11] The MLTC satisfaction survey uses a similar sample size across plans: 600 enrollees from each plan are selected for each survey year.

- Goal 2, Research Question 2: Is the percentage of the HCBS expansion population without any falls, as defined by the department's fall measure, stable or improving over the course of the Demonstration?
- Goal 3, Research Question 1: For the HCBS expansion population who entered MLTC after transitioning from an institutional setting, what percentage return to the nursing home within a year of discharge, what was their average level of care need, and for those who return within a year, how long on average did they reside in the community?
- Goal 3, Research Question 2: Is the percentage of the HCBS expansion population accessing preventive care services such as the flu shot and dental care consistent or improving?

In Table 4, we summarize the measures, data sources, study design, and analytic approaches for each of the research questions under Domain 1, Component 2.

Table 4. Study Design for Domain 1, Component 2: Individuals Moved from Institutional Settings to Community Settings for Long-Term Services and Supports

Goal	Research Question	Measure	Data Source	Study Design and Analytic Approach
1: Improve Access to MLTC for those who transitioned from an institutional setting to the community	1. For those who transition from an institutional setting to the community, did the percentage enrolled in MLTC increase over the Demonstration?	Percentage of the MFP population who enrolled in MLTC within one year post-discharge	2015–2018 UAS-NY Community Health Assessment Data, 2015–2018 MFP Master Data, 2014–2018 MDS Data	A single group, post-intervention design: Delineate annual trends in the percentage of the MFP population who enrolled in an MLTC plan
2: Demonstrate stability or improvement in patient safety	1. Is the percentage of the HCBS expansion population having an emergency room visit in the last 90 days stable or improving over the course of the Demonstration? 2. Is the percentage of the HCBS expansion population having a fall, as defined by the Department's fall measure, stable or improving over the course of the Demonstration?	Percentage of the HCBS expansion population who did not have an emergency room visit in the last 90 days Percentage of the HCBS expansion population who did not have a fall that required medical intervention or resulting in major or minor injuries in the last 90 days	2015–2018 UAS-NY Community Health Assessment Data, 2015–2018 MFP Master Data	A single group, post-intervention design: Delineate annual trends in the percentage of the HCBS expansion population who did not have an emergency room visit or a fall
3: Demonstrate stability or improvement in quality of care	1. For the HCBS expansion population who entered MLTC after transitioning from an institutional setting, what percentage return to the nursing home within a year of discharge, what was their average level of care need and, for those who return within a year, how long on average did they reside in the community?	Percentage of the HCBS expansion population who remained in the community for one year post-discharge; average residence time in the community for those who returned to a nursing home within one year	2015–2018 UAS-NY Community Health Assessment Data, 2015–2018 MFP Master Data, 2014–2018 MDS Data	A single group, post-intervention design: Describe annual rates stratified by level of care and delineate the trends in the percentage of the HCBS expansion population who remained in the community after one

Goal	Research Question	Measure	Data Source	Study Design and Analytic Approach
	2. Is the percentage of the HCBS expansion population accessing preventive care services such as the flu shot and dental care consistent or improving?	Percentage of the HCBS expansion population who received an influenza vaccination in the last year; percentage of the HCBS expansion population who received a dental exam in the last year		year post-discharge; average amount of time in the community among those who returned to a nursing home; and percentage of the HCBS expansion enrollees who received an influenza vaccination or a dental exam in the last year

Study Population and Data Sources

The study population for this analysis—that is, the HCBS expansion population—consists of individuals who were discharged from a nursing facility to the community and enrolled in MFP and MLTC during 2015–2018. To identify this population, the NYS DOH merged three data sets: the MFP master data, the MDS data, and the UAS-NY CHA data. In the MFP master data, there were 1,443 unique client identification numbers (CINs) with an MFP-start date in the years 2015–2018, after excluding 16 individuals discharged from a hospital or an intermediate care facility. From these 1,443 unique CINs, a total of 1,420 were found in the 2014–2018 MDS data,[12] among whom 1,314 were matched using MDS discharge assessments, 38 using non-discharge assessments, and 68 using names and birthdates. The 23 unmatched CINs were excluded from further analysis. Among the 1,420 unique CINs that were in both the MFP master data and the MDS data, 755 were matched to the 2015–2018 UAS-NY CHA data. The remaining 665 CINs without any MLTC assessment were considered not to have been enrolled in MLTC at any time between 2015 and 2018 because MLTC enrollees are required to have an assessment at least every six months.

Of the 755 unique CINs that exist in all three data sets, 629 unique CINs were associated with at least one MLTC assessment conducted either in the 45 days prior to the MFP enrollment date or after MFP enrollment during 2015–2018.[13] After limiting the population to those who had at least one MLTC assessment within 45 days before enrollment or 365 days after the MFP start date, there were 589 unique CINs. Finally, after removing multiple enrollment records for the same individual, there were 583 unique individuals who participated in the MFP program for

[12] NYS DOH also included the 2014 MDS data to identify individuals who were in a nursing home prior to 2015 and transitioned to the community in 2015 and onward. However, MLTC assessments should be done within 45 days prior to MFP participation.

[13] The previous assessment instrument, the SAAM, was valid for six weeks for MLTC enrollment (see NYS DOH MLTC Policy 13.09(b)). The window was later changed to 45 days.

the first time during 2015–2018 and who were enrolled in an MLTC plan either 45 days prior to MFP start or within 365 days post-MFP start date.

In addition, for Goal 3, those who remained in the community one year post-discharge were identified using the MDS. First, the 589 unique CINs who had MLTC assessments between 45 days prior to and 365 days post-MFP start date were matched to the MDS data using nursing home discharge assessments with CINs. To ensure that the MFP days overlapped with the calendar days post-discharge, the sample was further limited to those with an MFP start date within 90 days of the discharge date. From this process, 421 participants were identified. For research questions that used assessment data, the sample was limited to 368 individuals with one or more assessments conducted after MLTC enrollment.

Outcome Measures

In this analysis, we examined the following measures for each of the evaluation goals listed below for the HCBS population as described in the previous section. The MFP master data and the UAS-NY CHA data were used to construct Goal 1 measures, and the UAS-NY CHA data were used to construct the Goal 2 measures. The MDS data and UAS-NY CHA data were used to construct Goal 3 measures. In cases where an individual had multiple MLTC assessments in the UAS-NY CHA data within a 12-month period, the most recent assessment was used to produce aggregate data; all initial assessments around the time of MLTC enrollment were excluded because our aim was to examine the events that occurred after MLTC enrollment.

Goal 1: Improve access to MLTC for those who transitioned from an institutional setting to the community

1. Percentage of MFP participants who were enrolled in MLTC within 365 days post-MFP start date, by calendar year
2. Percentage of MFP participants who were enrolled in MLTC any time during 2015–2018, by calendar year.

Goal 2: Stability or improvement in patient safety

1. Percentage of the HCBS expansion population without any emergency room visits in the last 90 days
2. Percentage of the HCBS expansion population without any falls that required medical intervention or resulted in major or minor injuries in the last 90 days. (The measure was defined as falls requiring medical intervention in the 2015–2017 UAS-NY CHA data. The assessment question on falls changed in 2018, which is now defined as falls that result in major or minor injuries.)

Goal 3: Stability or improvement in quality of care

1. Percentage of HCBS expansion population who remained in the community for one year post-discharge from a nursing facility, overall and by level of care. (Re-institutionalization was defined as an entry date into a nursing home either on or after the MFP start date.)
2. Average level of care among those who returned to a nursing home within a year post-discharge

3. Average residency time in the community for HCBS expansion population who returned to a nursing home within one year post-discharge
4. Percentage of HCBS expansion population who received an influenza vaccination in the last year
5. Percentage of HCBS expansion population who received a dental exam in the last year.

Analytic Approach

The data analysis for this evaluation was descriptive in nature. Because of constraints on data sharing, NYS DOH completed the data merge and compiled the aggregate-level data with RAND's input. Descriptive statistics and figures were then generated based on the aggregate-level data. Pearson's χ^2 tests were used to examine the trends in the measures (Manitoba Centre for Health Policy, 2008). Two-tailed Student's t-tests were used to compare continuous outcomes between two subgroups of the HCBS expansion population.

In some cases, the trend test was not conducted for either 2015 or 2018 because of small sample sizes and incomplete data, respectively, as noted. For example, because we examined whether an individual enrolled in MLTC within 365 days post-MFP start date, the data for 2018 participants did not include the new MLTC enrollment that occurred in the second half of 2019; the average residency time in the community and the return to a nursing home may be biased because of such incomplete data.

Because there were 28 individuals who died without re-entering a nursing facility, we conducted sensitivity analyses by assuming these individuals did not re-enter a nursing facility or excluding them from the analysis when examining the percentage of HCBS expansion population who remained in the community for one year post-discharge.

Domain 2: Mainstream Medicaid Managed Care

Goal 1: Express Lane Eligibility

Research Questions

- Goal 1, Research Question 1: How many recipients are enrolled in Express Lane eligibility?
- Goal 1, Research Question 2: Are there differences in the demographic and clinical characteristics of Medicaid beneficiaries enrolled through Express Lane–like eligibility as compared to those not enrolled through this mechanism?
- Goal 1, Research Question 3: What portion of the beneficiaries enrolled through Express Lane–like eligibility were later deemed not eligible for this coverage?

New York State did not make use of the Section 1115 authority related to Express Lane Eligibility, which determines temporary assistance for Medicaid. Express Lane Eligibility was instead implemented through a State Plan amendment. Thus, these three questions for Domain 2, Goal 1, were dropped from this 1115 program evaluation. As a replacement, four new research

questions have been added to Domain 2, Goal 2. The four new research questions are aligned with the original evaluation design and Domain 2, Goal 2 (see below for details).

Goal 2: 12-Month Continuous Eligibility

Research Questions[14]

- Goal 2, Research Question 1: What is the distribution of enrollees within select continuous enrollment categories, i.e., 12 months, 24 months, etc.?
- Goal 2, Research Question 2: Does the continuous enrollment differ by demographic or clinical characteristics?
- Goal 2, Research Question 3: Did Medicaid's average months of continuous enrollment increase following the implementation of continuous eligibility as compared to pre-implementation?
- Goal 2, Research Question 4: Was there an increase in the percentage of Medicaid beneficiaries continuously enrolled for 12 months following the implementation of continuous eligibility as compared to pre-implementation?
- Goal 2, Research Question 5: How do outpatient, inpatient, and emergency department visits compare pre- and post-implementation of this policy? How have costs been impacted because of the change in utilization?
- Goal 2, Research Question 6: How many of the beneficiaries covered under continuous eligibility would have been ineligible for coverage if not for the waiver?
- Goal 2, Research Question 7: Is overall FFS enrollment decreasing over time? (New Question 1)
- Goal 2, Research Question 8: Is short-term FFS enrollment decreasing over time? (New Question 2)
- Goal 2, Research Question 9: What percentage of Medicaid managed care (MMC) enrollees remain in the same MMC plan after 12-month recertification? (New Question 3)
- Goal 2, Research Question 10: What percentage of MMC enrollees are auto-assigned to any health plan? (New Question 4)

In Table 5, we summarize the measures, data sources, study design, and analytic approaches for each of the research questions under Domain 2, Goal 2.

[14] Research questions 7–10 were added later and are not designed to measure the impact of the 12-month continuous eligibility policy.

Table 5. Study Design for Domain 2, Goal 2: To Limit Gaps in Medicaid Eligibility Due to Fluctuations in Recipient Income

Research Question	Measure	Data Source	Study Design and Analytic Approach
1. What is the distribution of enrollees within select continuous enrollment cohorts (i.e., 12 months, 24 months, etc.)?	Percentages of enrollees with at least 12, 18, or 24 months of continuous enrollment	2012–2018 Medicaid Data Warehouse	A pre-post design: Describe the distributions of enrollment months by enrollment start year and test for differences between the pre- and post-policy periods using a χ^2 test
2. Does continuous enrollment differ by demographic or clinical characteristics?	Percentages of enrollees with at least 12, 18, or 24 months of continuous enrollment by enrollee characteristics	2012–2018 Medicaid Data Warehouse	A cross-sectional design: Describe the distributions of enrollment months by enrollee characteristics and test for differences using a χ^2 test
3. Did Medicaid's average months of continuous enrollment increase following the implementation of continuous eligibility as compared to pre-implementation?	Average number of continuous enrollment months	2012–2018 Medicaid Data Warehouse	A quasi-experimental design: Apply a difference-in-differences approach using a concurrent comparison (children who were enrolled with 12-month continuous eligibility both before and after the expansion of continuous eligibility)
4. Was there an increase in the percentage of Medicaid beneficiaries continuously enrolled for 12 months following implementation of continuous eligibility as compared to pre-implementation?	Probability of being continuously enrolled for at least 12 months	2012–2018 Medicaid Data Warehouse	A quasi-experimental design: Apply a difference-in-differences approach using a concurrent comparison (children who were enrolled with 12-month continuous eligibility both before and after the expansion of continuous eligibility)
5. How do outpatient, inpatient, and emergency department visits compare pre- and post-implementation of this policy? How have costs been impacted because of the change in utilization?	Annualized rates of inpatient, outpatient, and emergency room visits per 1,000 member-years; per member per month Medicaid cost in 2020 U.S. dollars	2012–2018 Medicaid Data Warehouse	A quasi-experimental design: Apply a difference-in-differences approach using a concurrent comparison (children who were enrolled with 12-month continuous eligibility both before and after the expansion of continuous eligibility)
6. How many of the beneficiaries covered under continuous eligibility would have been ineligible for coverage if not for the waiver?	Number of enrolled months in which enrollees would have been ineligible for coverage had the 12-month continuous eligibility been removed	2012–2018 Medicaid Data Warehouse	A quasi-experimental design: Use the analysis results for Research Question 3 to simulate what would have happened to enrollment after 2014 had it not been for the 12-month continuous eligibility
7. Is overall FFS enrollment decreasing over time? (NEW)	Percentage of individuals who were enrolled in FFS by calendar month	2012–2018 Medicaid Data Warehouse	A cross-sectional design: Describe the trends over time and test them using a χ^2 test
8. Is short-term FFS enrollment decreasing over time? (NEW)	Percentage of individuals enrolled in FFS for two or fewer months, among those with any MMC coverage in a year	2012–2018 Medicaid Data Warehouse	A cross-sectional design: Describe the trends over time and test them using a χ^2 test

Research Question	Measure	Data Source	Study Design and Analytic Approach
9. What percentage of MMC enrollees remain in the same MMC plan after 12-month recertification? (NEW)	Percentage of MMC enrollees remaining in the same MMC plan after the recertification, among those with at least 13 consecutive months of MMC coverage, respectively	2012–2018 Medicaid Data Warehouse	A cross-sectional design: Describe the trends over time and test them using a χ^2 test
10. What percentage of MMC enrollees are auto-assigned to any health plan? (NEW)	Percentage of MMC enrollees who are auto-assigned to any health plan at the start of MMC enrollment	2012–2018 Medicaid Data Warehouse	A cross-sectional design: Describe the trends over time and test them using a χ^2 test

NOTE: Research Questions 7–10 are not designed to measure the impact of the 12-month continuous eligibility.

Study Population and Data Source

For questions 1–6, the population of interest includes the individuals who became newly covered by the 12-month continuous eligibility (hereafter called the treatment group), which was implemented in January 2014. These are individuals eligible for Medicaid based on the MAGI guideline, including pregnant women; individuals age 19–20 living alone or living with parents; childless adults who are not pregnant, are younger than 65, and are not on Medicare; parents or caretaker relatives; and individuals eligible for the Family Planning Benefit Program. During the study period, the number of unique enrollees in this population was 1.3 million in 2012, 2.1 million in 2013, 3.3 million in 2014, and 3.8 million in 2015–2018. Those in NYSoH became newly eligible for 12-month continuous eligibility starting January 2014, while those in WMS started in April 2015. In this analysis, an enrollment episode was defined as a pre-policy episode if it started in 2012–2013 and a post-policy one if it started in 2014–2018.

The comparison group includes infants and children age 18 or younger who were eligible for the 12-month continuous eligibility during the study period. The number of unique individuals increased from 0.8 million in 2012, to 1.3 million in 2013, 1.9 million in 2014, 2.2 million in 2015, 2.3 million in 2016, and 2.4 million in 2017–2018. We acknowledge that the labor force and employment statuses of the parents of potential child enrollees are likely very different from those of potential adult enrollees. In addition, certain Medicaid eligibility rules differ for children versus adults, making children more likely to maintain coverage. Together, these factors make children a less than ideal control group. We did not consider non-MAGI individuals enrolled in Medicaid as a comparison group because these individuals are often very different populations—for example, those who are disabled or in foster care.

Because individuals were allowed to self-transition from WMS to NYSoH except for those who needed services through FFS such as personal care and nursing home care, the two resulting populations differ in various characteristics. Compared to WMS, NYSoH individuals were more likely to be male (45 versus 39 percent), White (30 versus 24 percent), and located in New York City (44 versus 37 percent), but less likely to have an aid category related to TANF (0 versus 5 percent), a safety net (0 versus 17 percent), family planning (0 versus 9 percent), and adult groups who were parents or caretaker relatives (12 versus 21 percent). In addition, NYSoH individuals were healthier than those in WMS, with a larger proportion of individuals having a healthiest Clinical Risk Group (CRG) score of 1 (66 versus 49 percent).

For questions 7 and 8, the analysis covers all Medicaid enrollees in the State (range: 5.2 million in 2012 to 6.2 million in 2018) to examine the FFS enrollment pattern over time. Question 9 focuses on those who were continuously enrolled in Medicaid for at least 13 months and were in an MMC plan in month 12 (range: 1.6 million in 2012 to 1.8 million in 2018), which allows a comparison of MMC plan identifiers before and after the recertification process. To estimate the proportion of MMC enrollees who were auto-assigned to a plan, the analysis for Question 10 is about new MMC enrollees only (range: 2.6 million in 2012 to 2.9 million 2018).

The 2012–2018 Medicaid Data Warehouse was used to answer all research questions under Domain 2, Goal 2 (Table 5). The Medicaid Data Warehouse provides information on age, gender, race and ethnicity, Medicaid eligibility, Medicaid enrollment status, managed care enrollment status, CRG, utilization, and cost (3M, 2020). CRG uses inpatient and ambulatory diagnosis and procedure codes, medications, and functional levels to assign a health status to an individual for severity adjustment purposes. The health status score ranges from 1 to 9, with lower scores representing healthier statuses.[15]

Outcome Measures

- Goal 2, Research Question 1: Percentages of enrollees with at least 12, 24, or 36 months of continuous enrollment, by the year in which enrollment starts.
- Goal 2, Research Question 2: Percentages of enrollees with at least 12, 24, or 36 months of continuous enrollment by enrollee characteristics such as socio-demographics and clinical risk at the time of enrollment, by the year in which enrollment starts.
- Goal 2, Research Question 3: Average number of continuous enrollment months.
- Goal 2, Research Question 4: Probability of being continuously enrolled for at least 12 months.
- Goal 2, Research Question 5: Annualized rates of inpatient, outpatient, and emergency room visits per 1,000 members; per member per month Medicaid cost in 2020 U.S. dollars.
- Goal 2, Research Question 6: Number of enrolled months in which enrollees would have been ineligible for coverage had the 12-month continuous eligibility been removed, by the year in which enrollment starts.
- Goal 2, Research Question 7: The proportion of total Medicaid enrollment that was FFS by calendar month.
- Goal 2, Research Question 8: The proportion of individuals enrolled in FFS for one or two months in a year, among those with at least one month of MMC coverage in that year.
- Goal 2, Research Question 9: The proportion of MMC enrollees who remain in the same MMC plan after the 12-month recertification, among individuals who are enrolled in MMC in the 12th month and who had at least 13, 14, or 15 consecutive months of Medicaid enrollment, respectively, by the year in which enrollment starts.
- Goal 2, Research Question 10: The proportion of MMC enrollees who are auto-assigned to a health plan at the start of MMC enrollment, by the year in which enrollment starts.

[15] There are nine health status codes (3M, 2020): 1 – no chronic disease and no significant acute illness in the past 6 months; 2 – a history of significant acute disease (e.g., pneumonia); 3 – a single minor chronic disease (e.g., chronic stomach ulcer); 4 – minor chronic disease in multiple organ systems (e.g., chronic bronchitis, hyperlipidemia); 5 – single dominant or moderate chronic disease (e.g., congestive heart failure, diabetes); 6 – significant chronic disease in multiple organ systems (e.g., congestive heart failure, cerebrovascular disease, asthma); 7 – dominant chronic disease in three or more organ systems (e.g., congestive heart failure, diabetes, chronic obstructive pulmonary disease); 8 – dominant, metastatic and complicated malignancies (e.g., brain malignancy, metastatic prostate cancer); 9 – catastrophic conditions (e.g., dialysis, persistent vegetative state).

Analytic Approach

Because the enrollment and renewal process differ between WMS and NYSoH, for all Domain 2, Goal 2 research questions, we stratified the analyses by NYSoH versus WMS. In particular, the 12-month continuous eligibility policy was implemented in January 2014 for the treatment group enrolled via NYSoH, but it wasn't implemented till April 2015 for those enrolled via WMS.

Research Questions 1–6

The analyses for questions 1 and 2 are descriptive in nature. We described the distributions of enrollment duration and conducted χ^2 tests to compare them by enrollee characteristics. We used the whole treatment population for these two questions.

Because of the amount of data and the computation intensity required to run regression analyses, we drew a 1 percent simple random sample of Medicaid enrollees for questions 3 to 5. For regression analyses, we used a concurrent comparison group of children age 18 or younger and applied a difference-in-differences design to measure the policy's impact on Medicaid enrollment duration, utilization, and cost. The State implemented the 12-month continuous eligibility for children in the Medicaid program in 1999. Thus, children were covered by 12-month continuous eligibility in both the pre- and post-policy periods. For questions 3 and 5, we examined the pre-policy trends by including a linear time interaction with treatment group. We did not reject the hypothesis that the trends were parallel.

For question 3, we used a standard month-level discrete time survival model to estimate the 12-month continuous eligibility policy's impact on enrollment duration, controlling for enrollee age, gender, race and ethnicity, Medicaid aid category, dual eligibility status, geographic region (New York City versus upstate), and CRG categories. Since the policy was implemented in January 2014 for the NYSoH sub-population, the maximum number of pre-policy enrollment months is 24; that is, we cannot well identify the policy's effect on enrollment duration beyond 24 months. Therefore, we censored all enrollment episodes at month 24, December 2013, or December 2018, whichever occurred first. Similarly, for the WMS sub-population, we censored episodes at month 36. We specified the model with non-parametric baseline hazards interacted by indicators of pre- versus post-intervention time and treatment versus control group. The covariates of interest that reveal the association between enrollment duration and policies are the interactions between the treatment group indicator, the post-intervention indicator, and the duration month indicators. We generated Huber-White standard errors (Huber, 1964), clustered at the individual level to account for intra-person correlation.

For question 4, we used estimates from the survival model of question 3 to calculate survivor function values for months 12 and 24, separately for the pre-intervention and post-intervention periods. For question 5, due to a large proportion of observations without any utilization, we considered zero inflation negative binomial or Poisson models, but neither model converged. We therefore adopted a two-part model, where the first part is a logistic regression to model whether

there was any utilization, and the second part is a Poisson model truncated at zero. To model health care cost, we used a generalized linear model with a log link and a Gaussian family (Manning and Mullahy, 2001). Data were aggregated at the annual level for both utilization (annual totals) and cost (monthly averages), and the interactions between calendar year indicators and the treatment group indicator were the variables of interest that represent the impact of 12-month continuous eligibility. The specifications of covariates for these models are similar to those of the discrete time survival model. Since only a subset of individuals have CRG information, we conducted secondary analyses to examine whether including CRG as a risk adjustor would change conclusions. Huber-White standard errors, clustered at the enrollee level (Huber, 1964), were estimated for all regression models to account for intra-person correlation and possible misspecifications. Please see Appendix B for additional model details. All costs have been inflation adjusted to 2020 U.S. dollars (U.S. Bureau of Labor Statistics, 2021).

After regression, we used the post-intervention treatment group as the standard set of population to predict outcomes with and without 12-month continuous eligibility: enrollment duration for question 3, the probability of being enrolled for at least 12 or 24 months for question 4, and cost and utilization for question 5. We re-sampled the data and re-generated point estimates (bootstrapping) for 100 times to generate 95 percent confidence intervals.

To answer question 6, for each of the years 2014–2018, we used the standardized populations, defined as the observed treatment group in each year, to predict enrollment duration with and then without the 12-month continuous eligibility policy (turning on and then off the policy variable). We generated the ratio of the predictions with and without the policy, and we applied the ratio to the actual number of enrollment months to derive the change in the number of enrollment months attributed to the 12-month continuous eligibility policy.[16] Note that because there are only two years of data prior to 2014 for the NYSoH sub-population, we predicted enrollment durations up to 24 months for both NYSoH and WMS sub-populations to ensure comparability. Similarly, we used bootstrapping to generate 95 percent confidence intervals.

Research Questions 7 to 10

For questions 7–10, we generated the measures and describe their trends during 2012–2018. Pearson's χ^2 tests were used to test such trends (Manitoba Centre for Health Policy, 2008). We conducted secondary analyses by excluding those who are either required to enroll in FFS or are required to enroll in MMC (see Appendix C, Tables A2 and A3 for details). In other words, there is no choice between FFS and MMC for these two groups. We therefore conducted secondary analyses for questions 7 and 8 by excluding each of these two groups, respectively.

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[16] Research question 6 asks, "How many of the beneficiaries covered under continuous eligibility would have been ineligible for coverage if not for the waiver?" Due to the lack of the income data, we were not able to answer the question directly; the counterfactual we generated is about enrollment months instead of the number of beneficiaries.

For question 9, to determine whether an individual switched to another plan in these cases, in addition to the comparison of plan identifiers between month 12 and month 13, we also compared month 12 to months 14 and 15, respectively, for two reasons. New Medicaid enrollees may be retroactively enrolled to cover medical bills for as many as three months prior to the month of the Medicaid application. Those months do not count against the 12-month period of continuous eligibility, but we do not observe this information in the data. Thus, the recertification month could be as late as the 15th month (that is, up to three months of retrospective eligibility followed by 12 months of continuous eligibility). Also, individuals who submit recertification materials late, or for whom eligibility is not determined by the end of month 12, would not be dropped from coverage until eligibility is adjudicated. Thus, some may be enrolled for several months after the 12-month continuous eligibility period has ended.

4. Discussion of Findings and Conclusions

Domain 1, Component 1: Managed Long-Term Care

Goal 1, Research Question 1: MLTC Enrollment

Enrollment into MLTC will continue to grow and then stabilize as the program is mandatory across the State. At what point in the Demonstration did the population stabilize in size?

MLTC Mandate Rollout

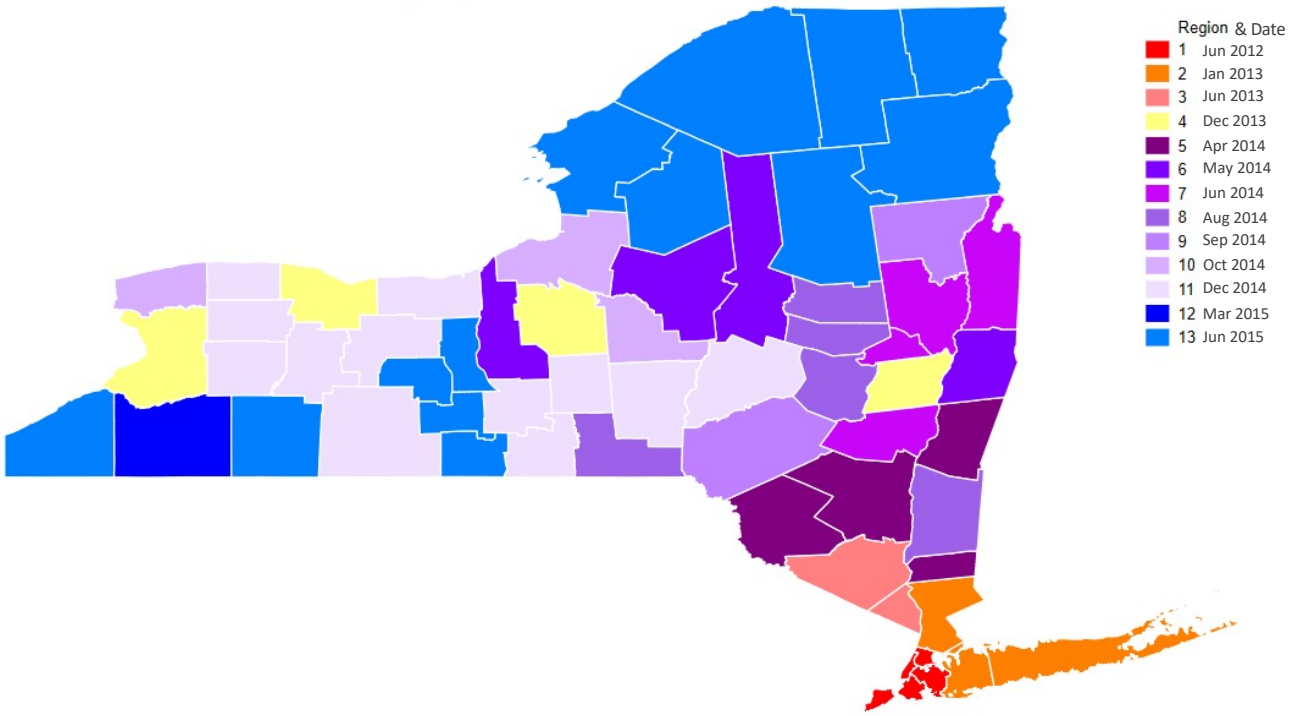
Table 6 presents the rollout region, the counties in each region, and the announcement letter date for each region. The rollout regions are also illustrated in Figure 1. The mandate started in New York City (Region 1), followed by three most populous remaining regions (Regions 2–4), and then the remaining regions. The majority of regions (Regions 5–11) implemented the mandate in 2014. The last two regions (Regions 12–13) are less populated than the rest of the State.

Table 6. List of Counties and the MLTC Mandate Rollout Dates

Region	Counties in Region	Announcement Letter Date
1	New York City (Bronx, Kings, New York, Queens, Richmond)	June 2012
2	Nassau, Suffolk, Westchester	January 2013
3	Orange, Rockland	June 2013
4	Albany, Erie, Monroe, Onondaga	December 2013
5	Columbia, Putnam, Sullivan, Ulster	April 2014
6	Cayuga, Herkimer, Oneida, Rensselaer	May 2014
7	Greene, Saratoga, Schenectady, Washington	June 2014
8	Broome, Dutchess, Fulton, Montgomery, Schoharie	August 2014
9	Delaware, Warren	September 2014
10	Madison, Niagara, Oswego	October 2014
11	Chenango, Cortland, Genesee, Livingston, Ontario, Orleans, Otsego, Steuben, Tioga, Tompkins, Wayne, Wyoming	December 2014
12	Cattaraugus	March 2015
13	Allegany, Chautauqua, Chemung, Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, Schuyler, Seneca, St Lawrence, Yates	June 2015

NOTE: The MLTC mandate was formally launched in September 2012. For our analytic purposes, we used the announcement letter date as the start date, since some beneficiaries started to enroll in MLTC under the mandate after the letter date.

Figure 1. MLTC Mandate Rollout Regions by Announcement Letter Date

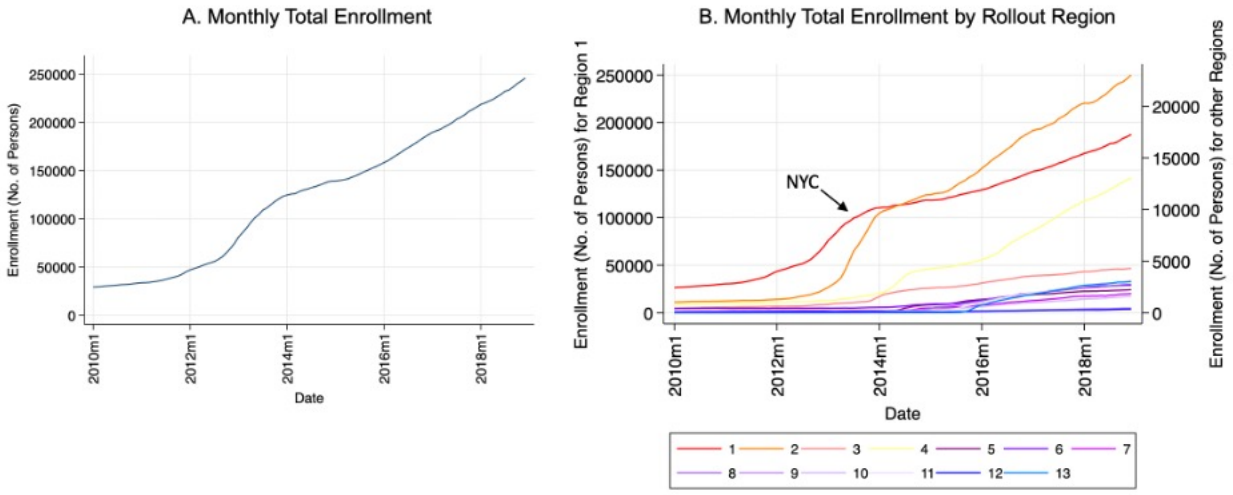


NOTE: This map depicts the clusters of counties by Announcement Letter date. Region numbers correspond to those in Table 6.

MLTC Enrollment

The total enrollment over calendar time is presented in Figure 2A. MLTC enrollment increased rapidly from 54,479 in mid-2012 to 124,757 at the beginning of 2014, at which point the curve flattens slightly before resuming a continuing trend of increased enrollment compared to the pre-mandate period. The total enrollment reached 245,973 in December 2018. We also looked at enrollment by each region, over time. Most of the growth was driven by Region 1 (New York City), where enrollment accounted for 76 percent of total enrollment at the end of 2018; this is clearly presented in Figure 2B, in which the total enrollment trend mirrors that of New York City. The next two regions that contributed most to the total enrollment, but to a much lesser extent, are Regions 2 (Nassau, Suffolk, Westchester) and 4 (Albany, Erie, Monroe, Onondaga), accounting for 9 percent and 5 percent of the total enrollment in December 2018, respectively.

Figure 2. Total MLTC Enrollment over Calendar Time, Statewide and by Rollout Region

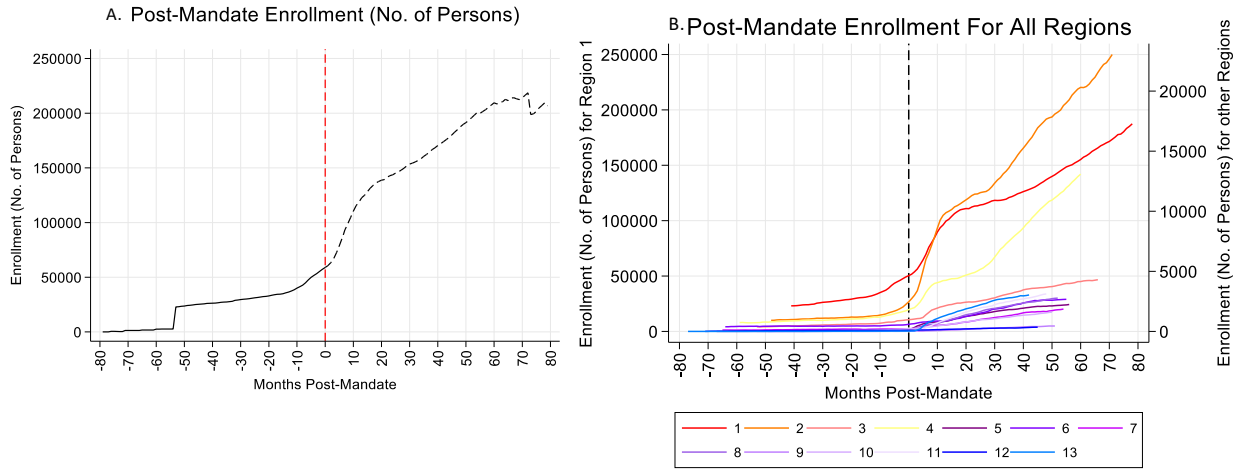


NOTE: The x-axis labels take the form of "yyyym1," representing the first month of year "yyyy."

The calendar time enrollment trend is confounded by the fact that the mandate started at different times. Each region has a different number of months in the pre- and post-mandate periods, depending on when the mandate was rolled out in that region. For example, Region 1 had the smallest number of months (29 months) in the pre-period and the greatest number of months (79 months) in the post-period. As a result, we observed an upward calendar time trend simply because different regions started to implement the mandate at different times. We therefore examined the trend by resetting a region-specific time index to 0 for the month during which each region implemented the mandate (i.e., "re-centering" the data).

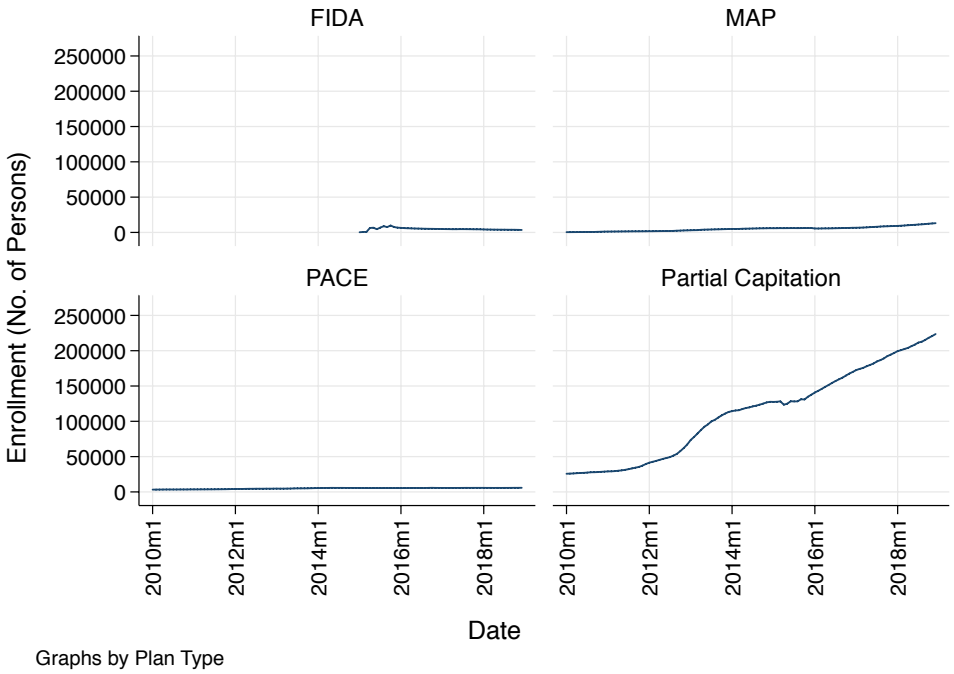
Once the data were re-centered, we found that the increases observed in the ten months prior to the mandate and those in the post-mandate period are more pronounced (Figure 3A) than those in calendar time trends (Figure 2A). The post-mandate enrollment trend increased very rapidly until month 19, at which point it started to flatten and stabilize. Note that, due to re-centering the data for each region, the total enrollment (213,852) at month 79, reflecting the enrollment in New York City in December 2018, is different from the statewide enrollment (245,973) in December 2018, as illustrated in Figure 2A. Similar to the enrollment trend by calendar time, Figure 3B shows the greatest enrollment (188,872 at month 79, based on the left y-axis) in Region 1 (New York City), followed by Region 2 (Nassau, Suffolk, Westchester) and Region 4 (Albany, Erie, Monroe, Onondaga), 24,980 at month 79, and 14,786 at month 72 (based on the right y-axis), respectively.

Figure 3. Total MLTC Enrollment over Time Since Mandate, Statewide and by Rollout Region



We next examined the enrollment by MLTC plan type. Four plan types were included in the analysis: Partial Capitation, PACE, MAP, and FIDA plans (see Appendix D, Table A4 for more details). The FIDA plans were part of a five-year demonstration and were limited to Regions 1 (New York City) and 2 (Nassau, Suffolk, Westchester); the program closed December 31, 2019. Figure 4 describes the number of MLTC enrollees by plan type. We find that most members enrolled in Partial Capitation plans (223,568, or 91 percent, in December 2018), followed by MAP (5 percent), PACE (2 percent), and FIDA (1 percent). The trend in Partial Capitation enrollment mirrors that of the statewide enrollment presented in Figure 2A. MAP and PACE plans have a limited increase in enrollment over time and do not mimic the Partial Capitation trend curve.

Figure 4. Total MLTC Enrollment by Calendar Time and Plan Type

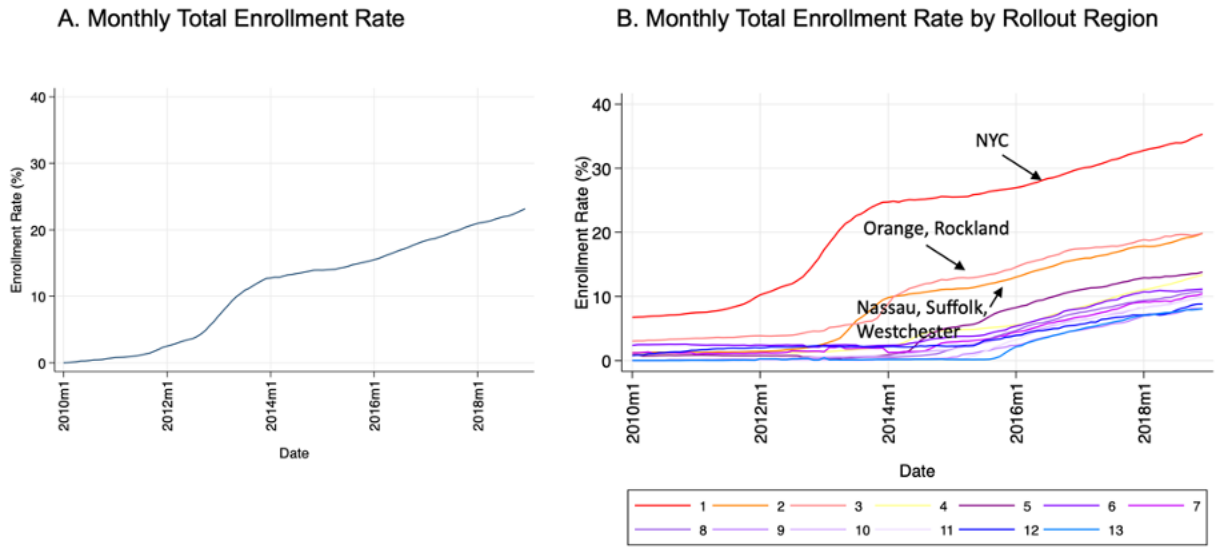


NOTE: The x-axis labels take the form of "yyyym1," representing the first month of year "yyyy." FIDA = Fully Integrated Duals Advantage; MAP = Medicaid Advantage Plus; PACE = Program for All-Inclusive Care for the Elderly.

MLTC Enrollment Rate

We next performed a similar descriptive analysis of enrollment rates. Figure 5 presents the statewide (A) and region-specific (B) rates. The statewide enrollment rate increased rapidly from 4 to 8 percent in the second half of 2012 to 12 percent in December 2013, after which it slowed and then increased again in 2016 and reached 23 percent by 2018. The statewide enrollment rate is driven by Region 1 (New York City), with a rate of 36 percent in December 2018. Regions 2 (Nassau, Suffolk, Westchester) and 3 (Orange, Rockland) have the second-highest rates, with a similar pattern to that of Region 1 (Figure 5B) at about 20 percent at the end of 2018. The enrollment rates in other regions varied between 8 percent and 15 percent as of December 2018.

Figure 5. MLTC Enrollment Rates over Calendar Time, Statewide and by Rollout Region



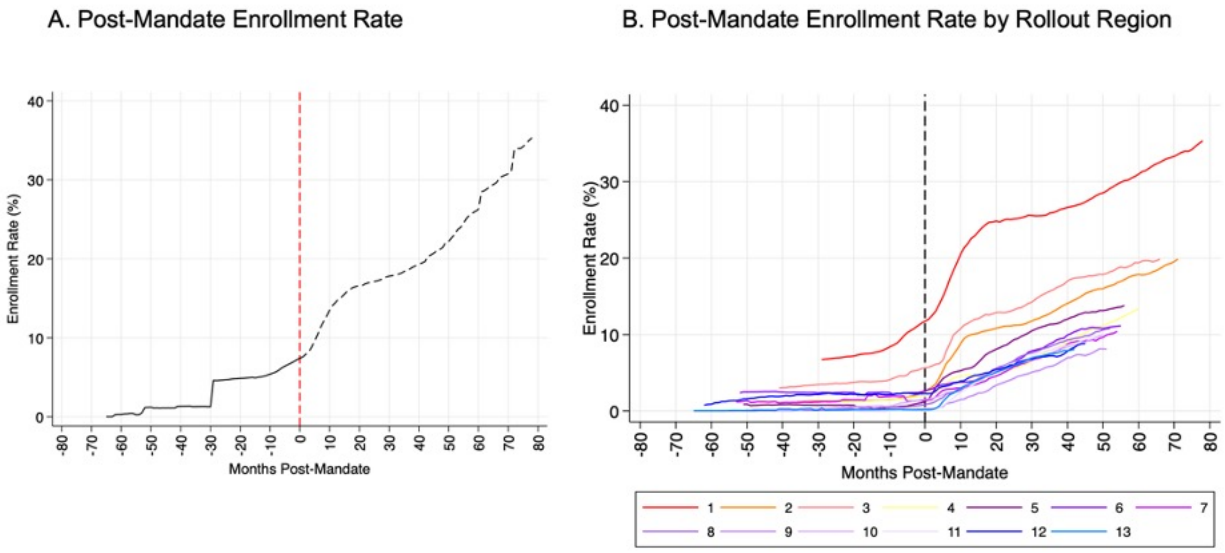
NOTE: The X-axis labels take the form of "yyyym1," representing the first month of year "yyyy."

Figure 6 shows that, after the data were re-centered around the mandate start for each rollout region, the trend curves continued to increase during the post-mandate period, from 7 percent at month 0 to 35 percent at month 79, and are much steeper than calendar time trends as depicted in Figure 5. In particular, the ten months prior to the start of the mandate appear to have a marked increase in statewide enrollment rates compared to earlier months (Figure 6A). Note that, due to the re-centering of the data for each region, the overall rate in Figure 6A is different from that in Figure 5A.

A close examination of enrollment rates by region (Figure 6B) shows that at month 40,[17] Region 1 (New York City) had the highest rate (27 percent), followed by Regions 2 (18 percent) and 3 (15 percent). But even prior to the mandate, the enrollment rate in Region 1 was about 11 percent, higher than in other regions. The acceleration in enrollment rates just prior to the mandate start was primarily driven by Regions 1 (New York City) and 3 (Orange, Rockland). Other than Regions 1, 2, and 3, rates in the remaining regions appear to have similar trends with similar values, varying between 8 percent and 12 percent at month 40.

[17] Because not all the regions have the same number of months of data since mandate, we used Month 40 as an example to compare the enrollment rate across regions.

Figure 6. MLTC Enrollment Rates over Time Since Mandate, Statewide and by Rollout Region

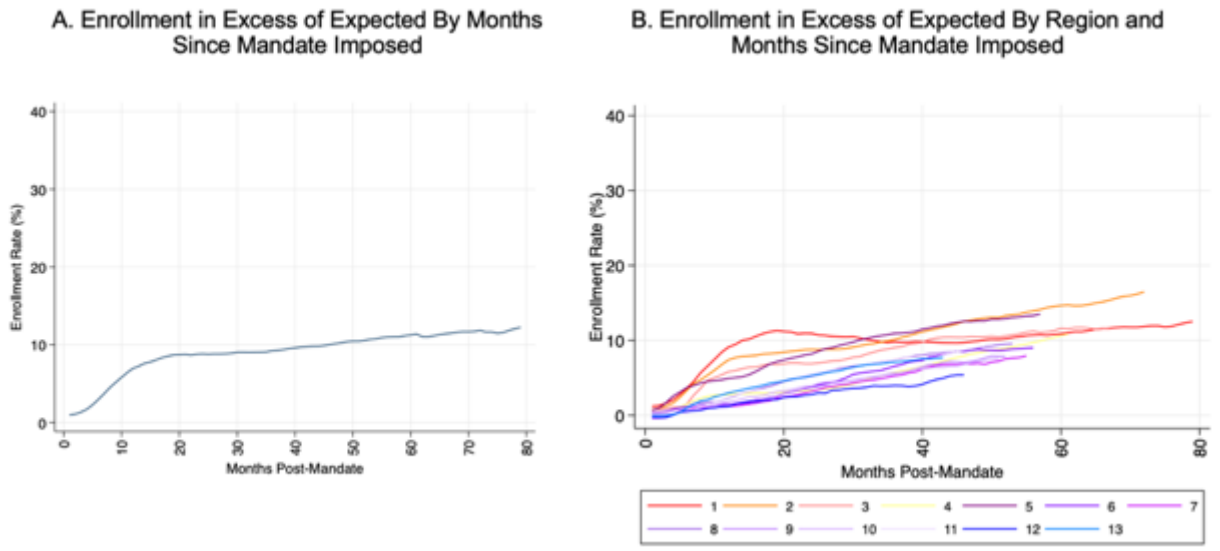


MLTC Mandate's Effect on Enrollment Rate

For the regression analysis, we determined the enrollment rate increase in excess of the expected rate based on prior trends in the data (Figure 7); that is, we controlled for the region-specific baseline calendar time trends that are assumed to continue regardless of the mandate. The MLTC mandate is associated with an increase of 12 percentage points in enrollment rates during the 79 months post-mandate, with about three-fourths of the impact (a 9-percentage point increase) occurring in the first 19 months post-mandate (Figure 7A). After month 19, the mandate's impact stabilized[18] at about 0.05 percentage points per month, or 0.6 percentage points per year. Not surprisingly, the mandate's effect differs across regions. In New York City, the mandate's effect (12 percentage points) was largely realized in the first 19 months, and Regions 3 (Orange, Rockland), 5 (Columbia, Putnam, Sullivan, Ulster), and 6 (Cayuga, Herkimer, Oneida, Rensselaer) seem to stabilize at months 42, 46, and 45, respectively, based on a visual inspection. But in other regions, the mandate continued to increase its impact. At month 40, Regions 1, 2, and 5 seem to experience the largest impact from the mandate, with enrollment rates in excess of what was expected, reaching 9 percent, 11 percent, and 12 percent, respectively.

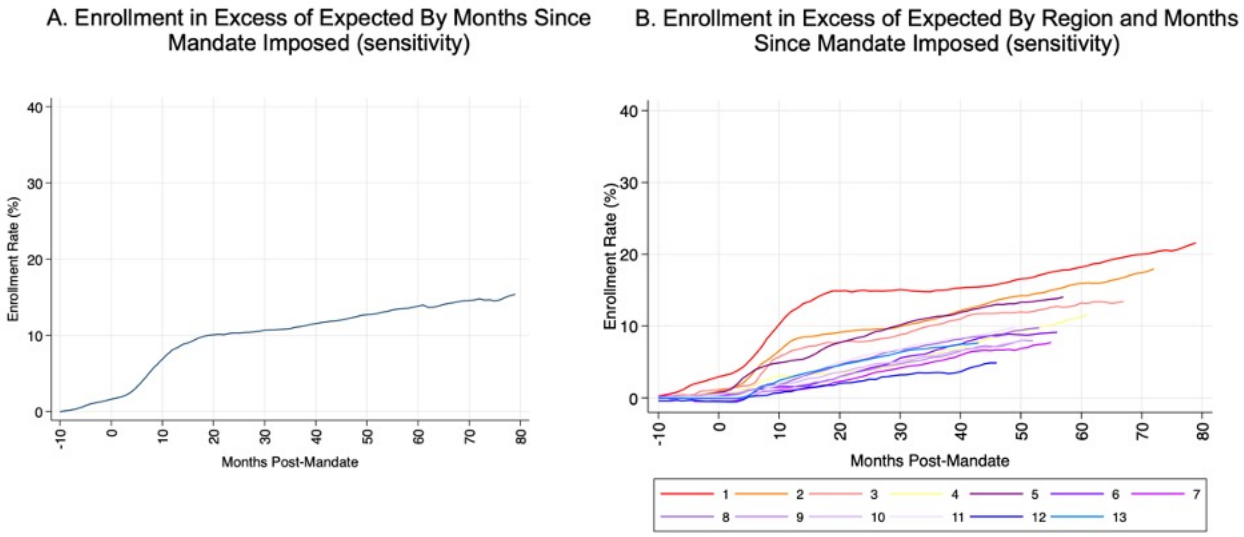
[18] In general, enrollment rates continued to increase over time. By *stabilizing*, we mean the rate of rate increase slowed down. Based on the regression analysis results, for each of the following rolling three-month periods, we formally tested whether the current three-month average of enrollment rate was statistically significantly larger than that of the previous three months.

Figure 7. Trends In Excess of MLTC Enrollment Rates over Time Since Mandate, Statewide and by Rollout Region



We noted previously that there seemed to be an increase in enrollment in the ten months prior to the mandate start, and we observed this trend when looking at the number of enrollees, as well. We therefore conducted a sensitivity analysis by explicitly modeling these ten months as part of the implementation period (Figure 8); that is, the reference group now becomes the time period of 11 months or more prior to the mandate. We found that both the level and the slope of excessive enrollment rates increased after explicitly modeling the ten months prior to the mandate start. For example, the mandate's impact on the statewide enrollment rate increases to 10 percentage points by month 19 (Figure 8A) from 9 percentage points (Figure 7A), and the impact at month 70 is 15 percentage points versus 12 percentage points in the main analysis. After month 19, the mandate's impact stabilized at about 0.08 percentage points per month, or about 1.0 percentage point per year. This change, admitting anticipatory effects, has a large impact on results for Region 1. First, in Figure 8B, we observe enrollment in excess of expected in the ten months prior to the mandate start (in contrast, this effect is small in Region 3). Second, the trend in Region 1 started to increase again at month 45, which is not present in the main analysis. On visual inspection, no other regions had stabilized their enrollment rates by 2018.

Figure 8. Trends in Excess of MLTC Enrollment Rates over Time Since Mandate, Including the Ten Months Prior to the Mandate, Statewide and by Rollout Region



Based on our tests of the changes in three-month average enrollment rates, the mandate's effect on enrollment rate stabilized statewide at month 19 post-mandate (comparing months 19–21 with months 16–18), and no significant increases are observed from that point forward. The testing results are similar to those from the sensitivity analysis, in which the ten months prior to the mandate were included as an anticipatory effect of the mandate.

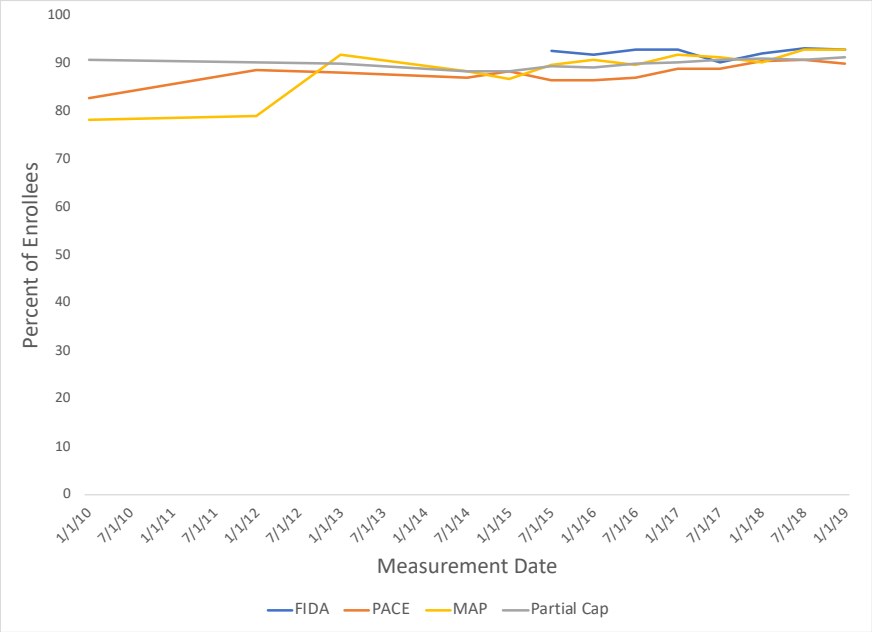
Goal 2, Research Question 1: Emergency Room Visits

Is the percentage of the MLTC population without any emergency room visits in the last 90 days stable or improving over the course of the Demonstration?

As illustrated in Figure 9, the percentage of enrollees without any emergency room visits remained largely unchanged[19] during 2010–2019 among Partial Capitation plans, which accounted for 91 percent of total MLTC enrollment in 2018. In comparison, the rates among MAP and PACE plans were lower than among Partial Capitation plans based on the data reported prior to July 2012 but similar in the later reporting years. FIDA plans had a relatively flat trend over the observation period, with a range from 93.1 percent to 90.1 percent of enrollees from July 2015 to January 2019, and FIDA rates were generally higher than those of other plan types. Note that the total enrollment of FIDA plans was relatively small, ranging from 1 to 2,978 during 2015–2019, and accounting for about 1 percent of total MLTC enrollment.

[19] Despite our adjustment for the reference period, rates in percentage of enrollees with no emergency room visits and percentage of enrollees with no falls that required medical intervention or resulted in major or minor injuries may not be comparable over time because of measure definitional issues and risk adjustment. We therefore did not conduct trend tests. But they are comparable within the same time period across different plan types.

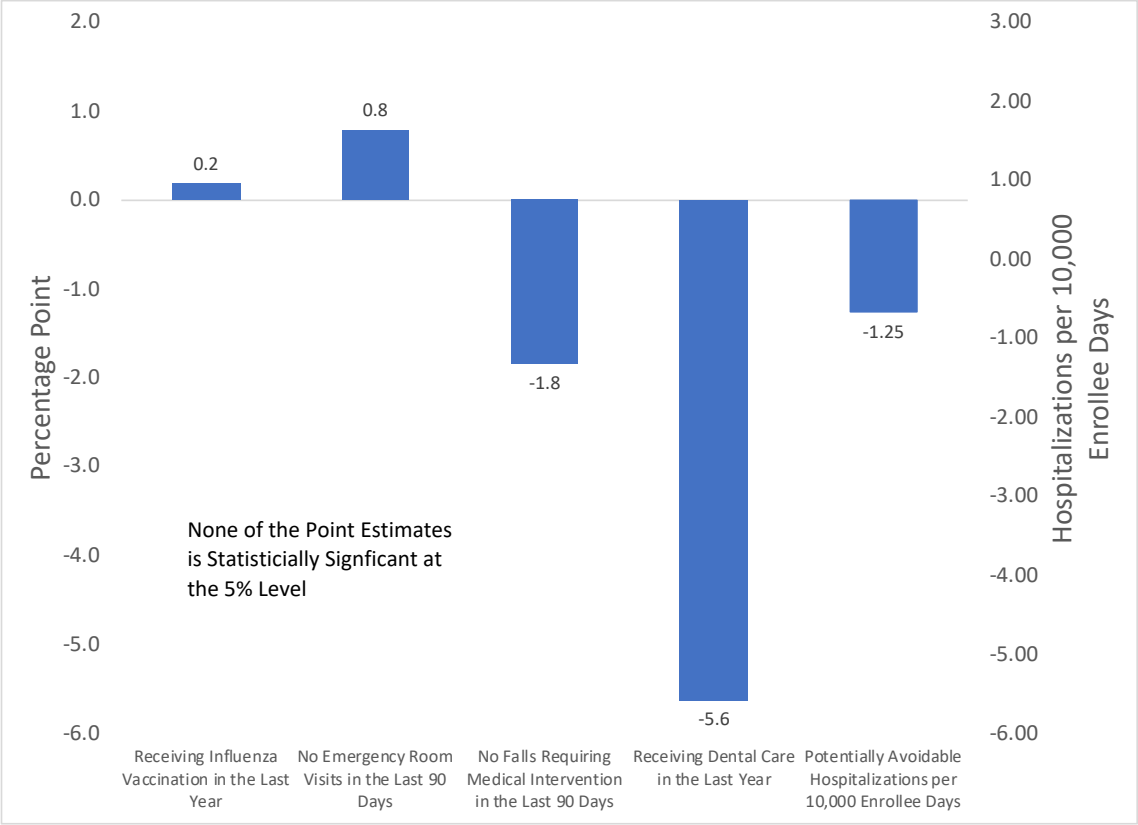
Figure 9. Percentage of MLTC Enrollees Without Any Emergency Room Visits in the Last 90 Days



NOTE: The lookback period was adjusted from the last six months to the last 90 days for the 2010, 2012, and 2013 measures. The 2010 measure includes any emergent care received in a hospital emergency room, outpatient department, or physician's office. Starting in 2012, the measure includes only emergent care received in a hospital emergency room and is risk-adjusted.

Based on the multivariable regression analysis, we did not find a statistically significant association between the MLTC mandate and the no-emergency-room-visits measure (Figure 10). Other results in Figure 10 are discussed in later sections.

Figure 10. Effect of the MLTC Mandate on Patient Safety and Quality of Care Measures



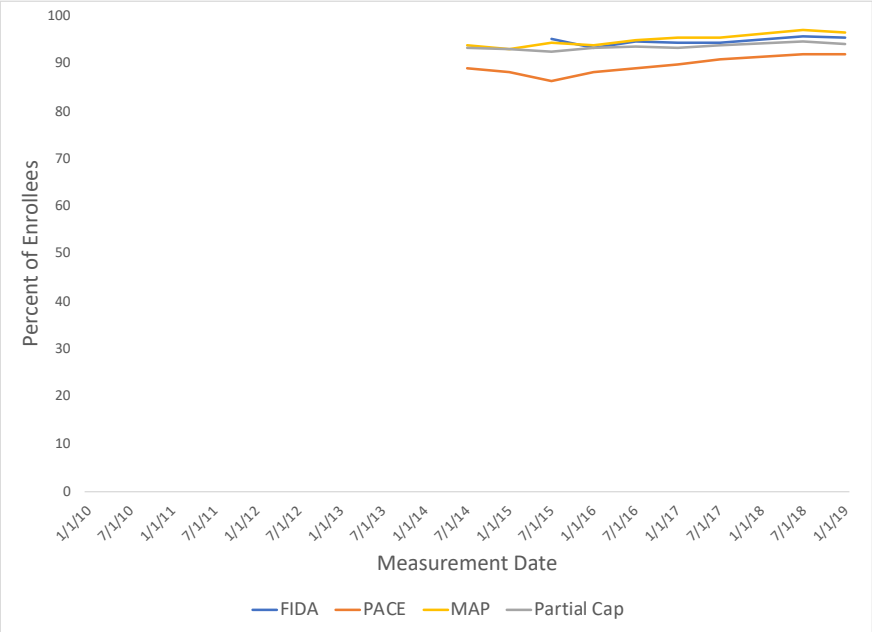
NOTE: The outcome measures for influenza vaccination (N=522), no emergency room visits (N=475), no falls requiring medical intervention (N=403), and dental exam (N=448) are in percentage points (left y-axis). Potentially avoidable hospitalization rate (N=210) is defined as the number of such events per 10,000 MLTC enrollee days (right y-axis). None of the estimates is statistically significant at the 5 percent level.

Goal 2, Research Question 2: Falls Requiring Medical Intervention

Is the percentage of the MLTC population without any falls requiring medical intervention in the last 90 days stable or improving over the course of the Demonstration?

Figure 11 shows the percentage of enrollees without any falls that required medical intervention in the last 90 days by plan type. Because the measure definition changed significantly in 2014, the data set is limited to July 2014 onward. Rates of enrollees without falls among both PACE and Partial Capitation plans were lowest in July 2015, at 85.4 percent and 92.5 percent, respectively. After an initial drop in the rate of falls, there was a general increase in the trends across all plan types. In 2019, 95.6 percent of FIDA, 91.0 percent of PACE, 94.2 percent of Partial Capitation, and 96.7 percent of MAP enrollees did not have any falls requiring medical intervention in the last 90 days. The multivariable regression analysis did not show a statistically significant association between the MLTC mandate and falls requiring medical intervention (Figure 10).

Figure 11. Percentage of MLTC Enrollees Without Any Falls Requiring Medical Intervention or Resulting in Major or Minor Injuries in the Last 90 Days



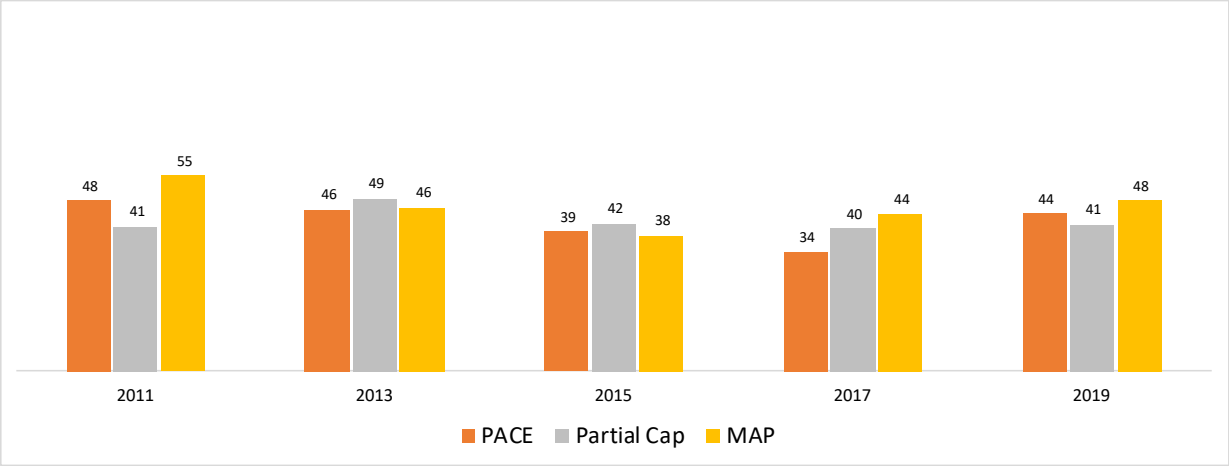
NOTE: The year 2014 is the first reporting period in which the risk-adjusted percentage of enrollees without any falls requiring medical intervention was reported. In 2010, the percentage of enrollees without any falls was reported; in 2012, the risk-adjusted percentage of enrollees without any falls was reported; in 2013, the risk-adjusted percentage of enrollees without any falls and the risk-adjusted percentage of enrollees without falls not requiring medical intervention was reported. We did not analyze the data reported prior to 2014 because the definition changed in 2014, and data were not available for January 1, 2018.

Goal 3, Research Question 1: Timely Access to Care

Are enrollees' perceived timely access to personal, home care, and other services such as dental care, optometry, and audiology stable over time or improving?

Because of a lack of reported measures on access to optometry and audiology, we present results on access to dental care only. The percentage of enrollees who waited less than a month for routine dental care decreased from 2011 to 2013 for those in PACE and MAP plan types, and it increased slightly for those in the Partial Capitation (Figure 12). In 2015, the outcome definition changed from "waiting less than one month for routine dental care" to "always getting routine dental care as soon as they needed one." The percentage of enrollees who received access to routine dental appointments within PACE and MAP plan types increased from 2015 to 2019, while that in the Partial Capitation plans remained largely unchanged.

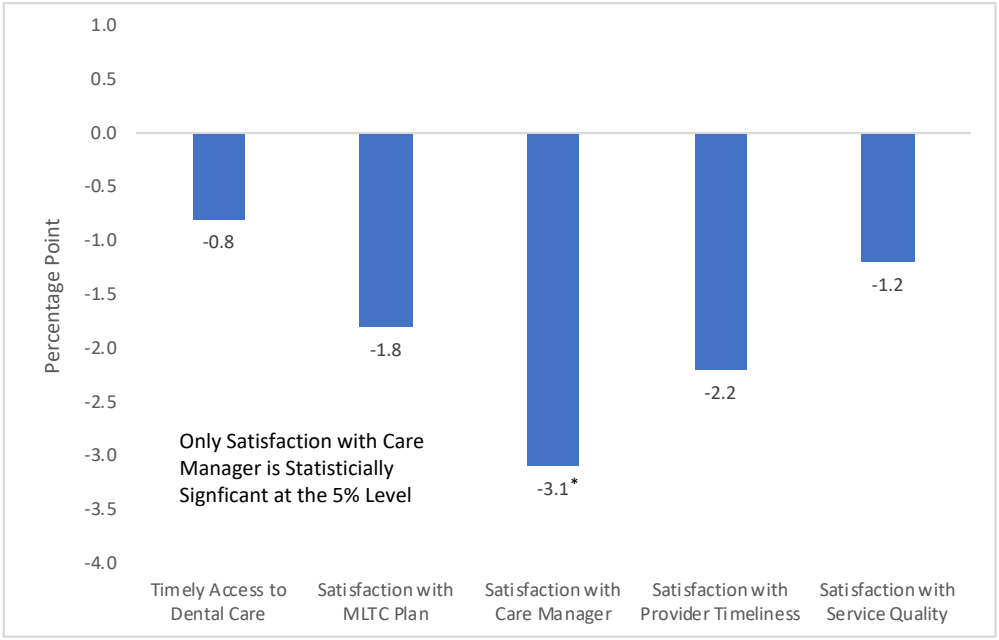
Figure 12. Percentage of MLTC Enrollees Who Received Timely Access to Dental Care



NOTE: The bars represent the percentage of MLTC enrollees who reported that within the last six months they waited less than 1 month for access to routine dental care (2011, 2013) or the percentage of members who reported that within the last six months they always got a routine dental appointment as soon as they thought they needed one (2015, 2017, 2019). Data from 2007 was not available from MLTC reports by individual plan; the outcome definition changed in 2015; the measure is not risk-adjusted.

Based on the multivariable regression analysis, no statistically significant association between the MLTC mandate and timely access to dental care was found (Figure 13). The results of satisfaction measures in Figure 13 are reported in relevant sections.

Figure 13. Effect of the MLTC Mandate on Access and Satisfaction Measures



NOTE: *p < 0.05. The sample sizes (plan-years in the data) for timely access to dental care, satisfaction with MLTC plan, satisfaction with care manager, satisfaction with provider timeliness, and satisfaction with service quality are 42, 45, 46, 45, and 47, respectively.

Goal 3, Research Question 2: Preventive Services

Is the percentage of the MLTC population accessing preventive care services, such as the influenza vaccination and dental care, consistent or improving?

Figure 14 shows that the rate of influenza vaccination in PACE and FIDA enrollees stayed relatively flat or increased slightly since the pre-mandate period (before 2013), whereas those of Partial Capitation and MAP enrollees experienced a drop in 2012 or 2013 but increased in the later years. Since 2013, the percentage of MAP enrollees who received an influenza vaccination in the last year increased to 83.5 percent as of the January 2019 measurement period. The percentage of enrollees in FIDA plans who received influenza vaccinations in the last year increased from 76.5 percent in July 2015 to 83.0 percent in January 2019. The percentage of PACE and Partial Capitation plan enrollees who received influenza vaccinations in the last year did not change much during the study period, at 87.2 percent to 86.3 percent and 80.9 percent to 78.8 percent, respectively, from January 2010 to January 2019. This measure is not risk-adjusted at the plan level. The multivariable regression analysis did not show a statistically significant association between the MLTC mandate and influenza vaccinations (Figure 10).

Figure 14. Percentage of MLTC Enrollees Receiving an Influenza Vaccination in the Last Year

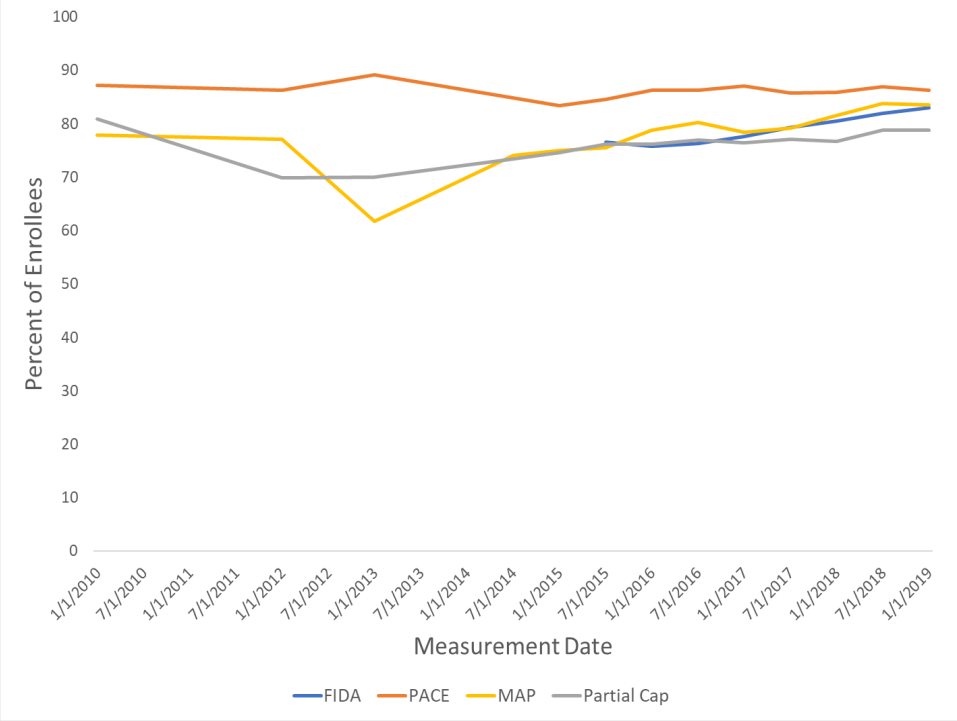
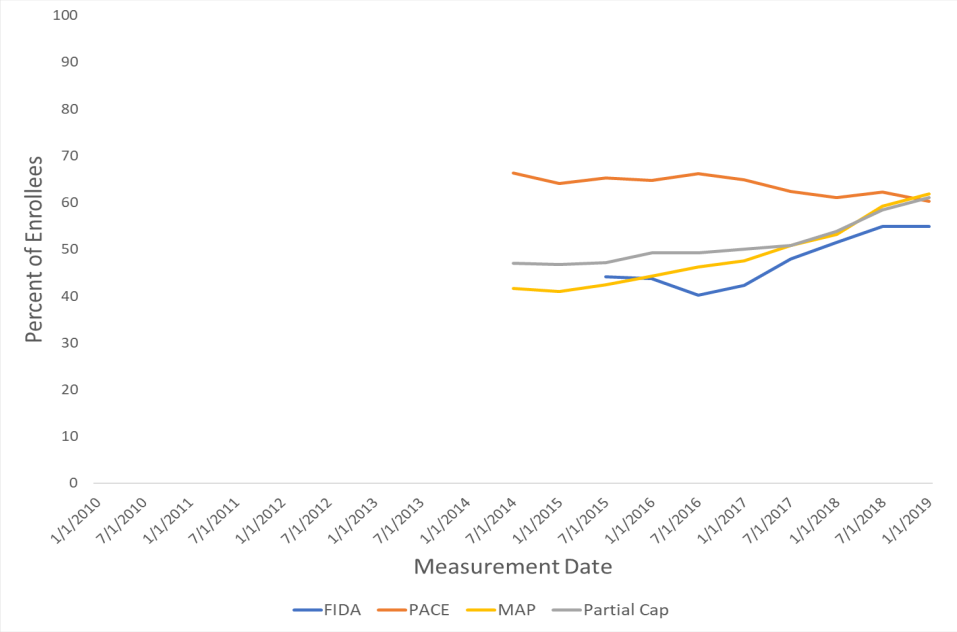


Figure 15 shows the percentage of MLTC enrollees receiving a dental exam in the last year by plan type; the measure was reported starting in July 2014. Overall, there was an upward trend over the available measurements, with the exception of PACE plan enrollees, who had a

downward trend from 66.3 percent in July 2014 to 60.3 percent in January 2019. The percentage of Partial Capitation and MAP plan enrollees receiving a dental exam steadily increased from 47.0 percent to 61.1 percent and from 41.6 percent to 61.8 percent, respectively, over the same period. The percentage of FIDA plan enrollees who received a dental exam also increased, albeit over a shorter period, from July 2015 to January 2019. This measure is not risk-adjusted at the plan level. The multivariable regression analysis did not show a statistically significant association between the MLTC mandate and receipt of dental exam (Figure 10), although the point estimate is sizable (–5.6 percentage points).

Figure 15. Percentage of MLTC Enrollees Receiving a Dental Exam in the Last Year



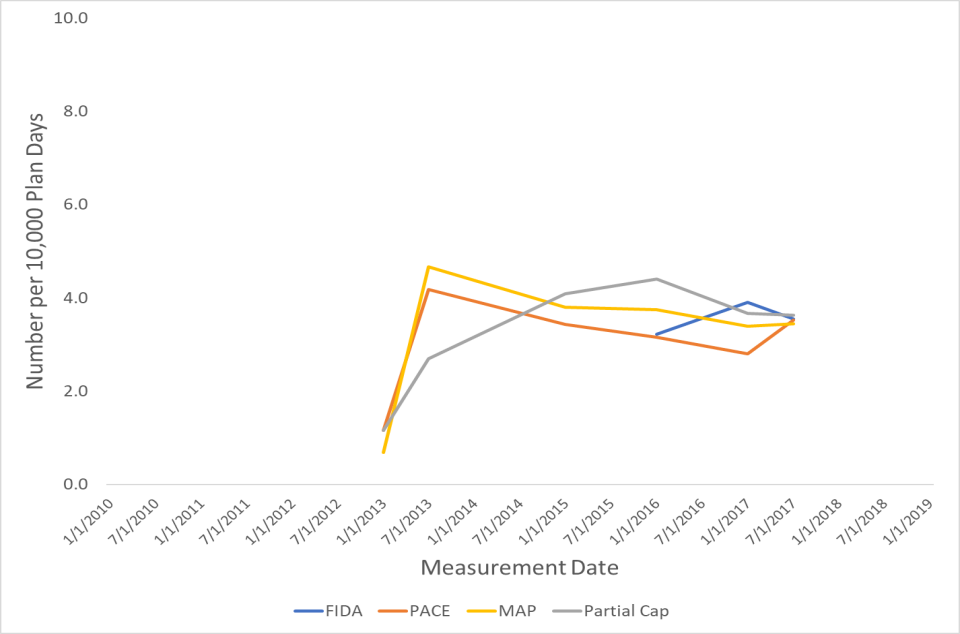
Goal 4, Research Question 1: Potentially Avoidable Hospitalizations

Is the MLTC population experiencing stable or reduced rates of potentially avoidable hospitalizations?

We descriptively examine the annual rate of potentially avoidable hospitalizations by plan type (Figure 16), measured as the number of potentially avoidable hospitalizations per 10,000 plan enrollee days. FIDA plans reported only for three measurement periods, and the rate is relatively flat at 3.219 to 3.910 hospitalizations per 10,000 enrollee days. For the other three plan types, the rates reported in January 2013 were relatively low; rates spiked in either July 2013 (4.176 for PACE, 4.670 for MAP) or January 2016 (4.404 for Partial Capitation), and then remained relatively stable (PACE) or decreased (Partial Capitation and MAP). The multivariable

regression analysis did not show a statistically significant association between the MLTC mandate and potentially avoidable hospitalizations (Figure 10).

Figure 16. Annual Rate of Potentially Avoidable Hospitalizations



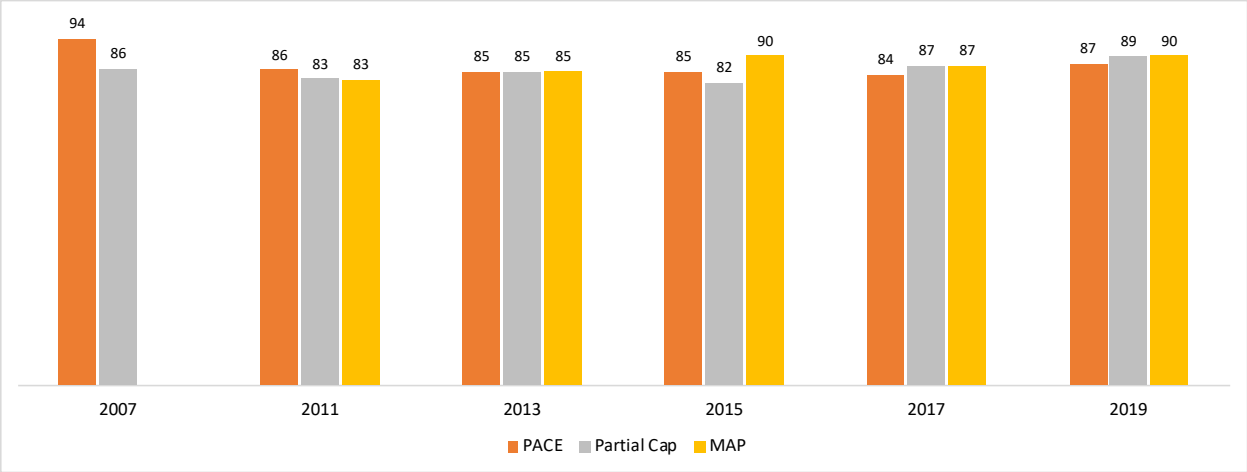
NOTE: SPARCS records were matched using SAAM data (2013) or UAS-NY data (2014 onward). After 2013, eligible enrollees were those with continuous enrollment periods of four months or greater in an MLTC plan. We did not analyze the January 1, 2013, data point in the regression analysis because, for some reason, it is about one-third of other data points.

Goal 5, Research Question 1: Satisfaction with MLTC Plans

What is the percentage of members who rated their managed long-term care plan within the last six months as good or excellent? Has this percentage remained stable or improved over the Demonstration?

Figure 17 shows how enrollees rated their health plan, by plan type and survey year. The percentage of participants who rated their health plan as good or excellent was initially quite high in 2011: 85.7 percent, 83.2 percent, and 83.0 percent for PACE, Partial Capitation, and MAP plans, respectively. Among PACE plans, ratings of health plan satisfaction remained rather stable over time except for a decline compared to 2007. Ratings of satisfaction in health plans among Partial Capitation and MAP plan enrollees did not experience the same dip and generally rose each year. The multivariable regression analysis did not show a statistically significant association between the MLTC mandate and satisfaction with MLTC plan (Figure 13).

Figure 17. Percentage of MLTC Enrollees Who Rate Their Health Plan as Good or Excellent



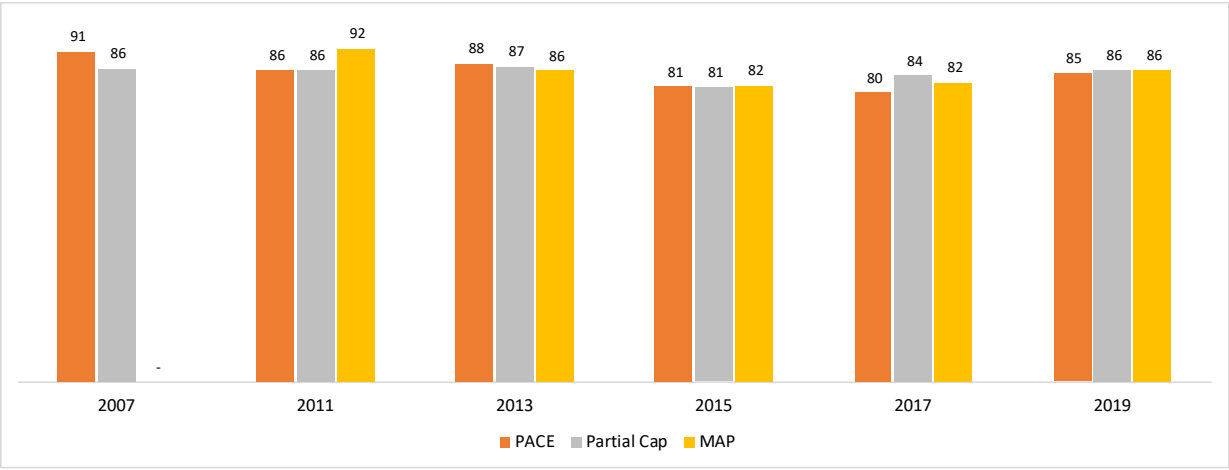
NOTE: The 2007 data for MAP plans are not available.

Goal 5, Research Question 2: Satisfaction with Care Managers

What is the percentage of members who rated the quality of care manager/case manager services within the last six months as good or excellent? Has this percentage remained stable or improved over the Demonstration?

Ratings for each plan type showed decreases in care manager satisfaction corresponding to the time that mandatory enrollment was rolled out. While satisfaction increased in 2019, it remained below 2011 levels across all plan types (Figure 18). The multivariable regression analysis shows a statistically significant 3.1 percentage point drop in satisfaction with care managers associated with the MLTC mandate (Figure 13).

Figure 18. Percentage of MLTC Enrollees Who Rate Their Care Manager as Good or Excellent

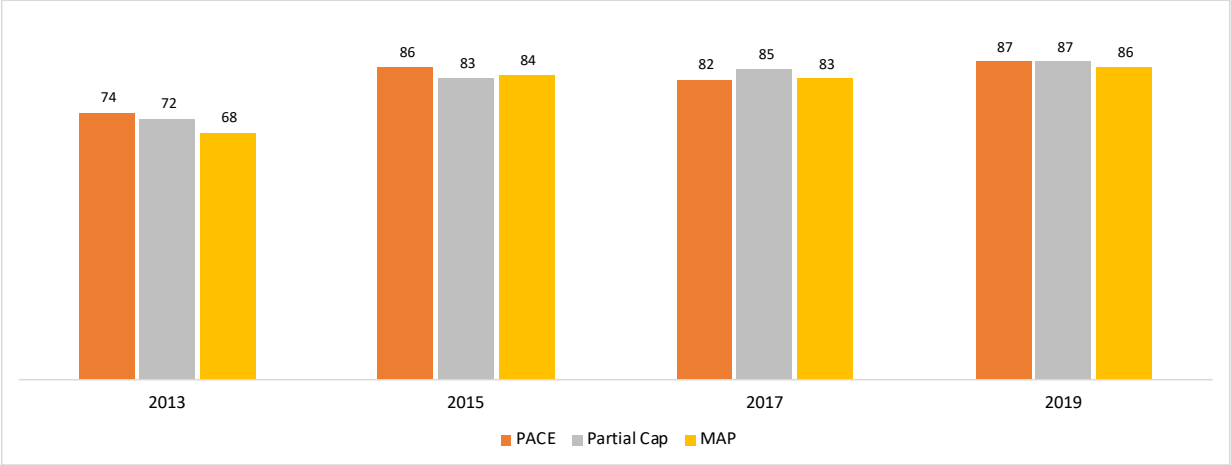


Goal 5, Research Question 3: Satisfaction with Services

What is the percentage of members who rated their home health aide/personal care aide/personal assistant, care manager/case manager, regular visiting nurse, or covering/on-call nurse services within the last six months as usually or always on time? Has this percentage remained stable or improved over the Demonstration?

The timeliness composite indicates the percentage of MLTC enrollees who reported that within the last six months the home health aide/personal care aide/personal assistant, care manager/case manager, regular visiting nurse/registered nurse, or covering/on-call nurse services were usually or always on time. The measure was implemented in 2013 and has increased across plan types from 2013 to 2019 (Figure 19). The multivariable regression analysis did not show a statistically significant association between the MLTC mandate and the timeliness of care providers (Figure 13).

Figure 19. Percentage of MLTC Enrollees Who Rate Their Care Providers as Usually or Always on Time



NOTE: The measure reflects the risk-adjusted percentage of MLTC enrollees who reported that within the last six months the home health aide/personal care aide/personal assistant, care manager/case manager, regular visiting nurse/registered nurse, or covering/on-call nurse services were usually or always on time. The outcome measure for this measure was not included on the survey in 2007 or 2011.

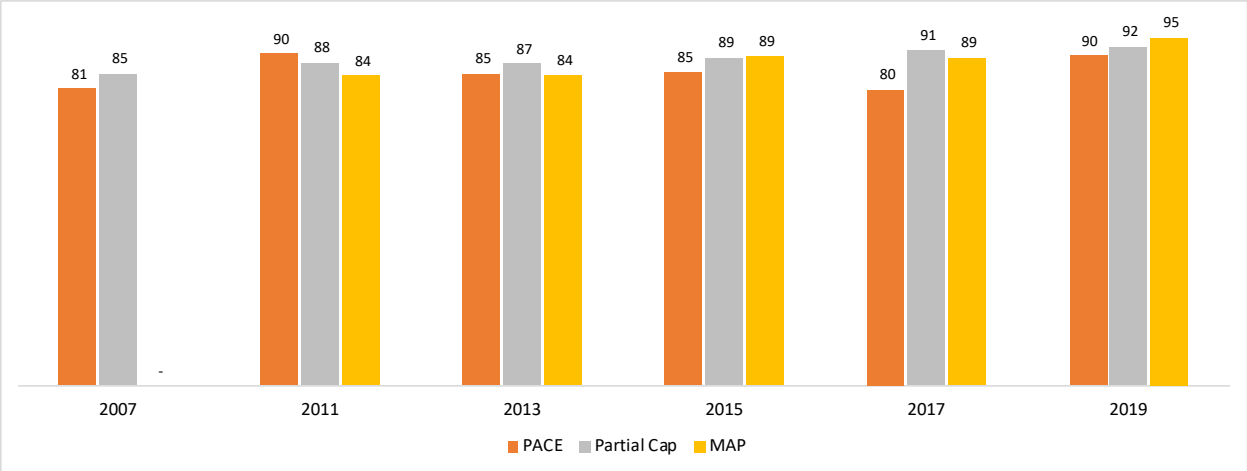
Goal 5, Research Question 4: Satisfaction with Service Quality

What is the percentage of members who rated the quality of home health aide/personal care aide/personal assistant services within the last six months as good or excellent? Has this percentage remained stable or improved over the Demonstration?

Satisfaction with home health aides for PACE plans showed an initial increase and then a dip in ratings; by 2019, satisfaction with home health aides had returned to 2011 levels (Figure 20). In contrast, Partial Capitation and MAP plan participant satisfaction increased from 2011 levels, 87.6 percent and 84.0 percent to 92.0 percent and 94.5 percent, respectively, in 2019. The

multivariable regression analysis did not show a statistically significant association between the MLTC mandate and the quality of LTSS (Figure 13).

Figure 20. Percentage of MLTC Enrollees Who Rate Service Quality as Good or Excellent



Domain 1, Component 1: Managed Long-Term Care—Discussion and Conclusions

MLTC Enrollment

The statewide MLTC enrollment increased rapidly after the mandate implementation, particularly during mid–2012 to 2014, reaching about 250,000 by 2018. The enrollment trend was dominated by New York City (Region 1), where enrollment accounted for 76 percent of the statewide total enrollment in 2018. This is consistent with the size of New York City's population, which is about 56 percent of the State's eligible population (calculated using total dual eligible population by county for New York). In addition, New York City had a much higher baseline enrollment rate even prior to the mandate start; this may reflect the enrollment capacity and/or a better awareness among New York City beneficiaries eligible for MLTC. By December 2018 (month 79 post-mandate), New York City achieved an enrollment rate of 36 percent. Regions 2 (Nassau, Suffolk, Westchester) and 3 (Orange, Rockland) had the largest enrollment other than New York City: 18 percent and 19 percent in 2018, respectively.

Based on the descriptive results, it is not apparent that enrollment had stabilized by 2018. However, when controlling for the underlying time trend, and by identifying enrollment in excess of what was expected, we estimated that about three-fourths of the mandate's impact, a 9-percentage-point increase in enrollment rates, had materialized by month 19, and the overall trend in enrollment rates stabilized by month 19 post-mandate based on our statistical tests contrasting consecutive three-month average enrollment rates. After month 19, the mandate's impact stabilized at about 0.05 percentage points per month, or 0.6 percentage points per year.

There was large regional variation in the mandate's impact on enrollment. Region 1 (New York City) dominated statewide trends and stabilized faster (month 19), driving the overall trend

for statewide stability by month 19. The enrollment in Regions 3 (Orange, Rockland), 5 (Columbia, Putnam, Sullivan, Ulster), and 6 (Cayuga, Herkimer, Oneida, Rensselaer) seemed to have stabilized by months 42 to 46. The mandate's impact in other regions had not stabilized by 2018. In addition, the magnitude of the mandate's impact also differs across regions. For example, Regions 1, 3, and 5 achieved a higher impact from the mandate in terms of enrollment rates by month 40 than the rest of the State.

There are several possible explanations for this large regional variation. First, some regions may not have had long enough post-mandate horizons for enrollment to stabilize within the study period. For instance, Regions 7–13 had a horizon of 42 to 55 months post-mandate. Nonetheless, the post-mandate time required for enrollment rates to stabilize varied across regions. Regions 2 and 4 stabilized by 72 and 61 months post-mandate, respectively, but the mandate's impact continued to increase in each region, whereas enrollment rates in Regions 3, 5, and 6 stabilized by month 46. It is also possible that enrollment in regions with higher pre-mandate enrollment rates may have stabilized more quickly. Regions 1 and 3 are two such examples. A higher pre-mandate enrollment rate may also be associated with a smaller total mandate effect, at least in part because enrollment may be approaching a ceiling. New York City may be such an example. The mandate's impact there could be lower than in many other regions, even though its post-mandate enrollment rate is high. Another possible explanation may lie in a region's MLTC enrollment capacity. Regions 1, 3, 5, and 6 may have leveraged the mandate better using their existing institutions and infrastructure.

We observe an increase in enrollment rate in the ten months prior to the mandate start. This trend was linear in nature and largely driven by Region 1 (New York City) and, to a lesser extent, Region 3 (Orange, Rockland). The MLTC program enrollment was largely concentrated in New York City prior to the mandate, and there may have been an anticipatory effect as MLTC plans prepared for the rollout and actively competed with each other to gain a larger market share. If we consider this anticipatory effect as part of the mandate's impact, as modeled in the sensitivity analysis, the overall impact becomes larger for Regions 1 and 3, particularly for Region 1. It is very likely that enrollment capacity caused both the pre-mandate acceleration in enrollment and the more rapid stabilization of the mandate's impact.

When focusing on the time period of the most recent demonstration period (December 2016 to March 2021) covered by the data in this interim analysis, i.e., December 2016 to December 2018, our results show that the overall enrollment continued to increase from nearly 200,000 in December 2016 to about 250,000 in December 2018. The statewide enrollment rate demonstrated a similar pattern in the most recent demonstration period; it continued to increase but at a slower rate than that during earlier years. Overall, the enrollment in excess of expected stabilized in the first 19 months, suggesting that by the time the most recent demonstration started in December 2016, the statewide impact of the MLTC mandate had stabilized. There was variation across regions—for example, in Regions 5 (Columbia, Putnam, Sullivan, Ulster) and 6

(Cayuga, Herkimer, Oneida, Rensselaer), the mandate's impact on excess enrollment did not stabilize until April 2018 (month 46) and March 2018 (month 45), respectively.

There are limitations to our analysis. First, the denominator (number of dual eligible) we used to calculate enrollment rates is not ideal. The actual number of individuals eligible for MLTC was not available because not all dual eligibles were assessed to determine their MLTC eligibility. It is only a gross approximation of the actual eligible population. Second, we controlled for the underlying calendar time trend and consider the residual post-mandate trend as the impact of the mandate. There could be other omitted time-varying factors that coincide with the timing of the mandate's implementation, which could bias our estimates of the mandate's effect either up or down. The variation in the timing of the mandates across the State mitigates this concern but does not eliminate it.

Patient Safety and Quality of Care

Our results show that during the study period, on average by plan type, about 87 to 93 percent of MLTC plan enrollees did not have any emergency room visits; 86 to 96 percent did not have falls requiring medical intervention; 60 to 90 percent received an influenza vaccination in the last year; 40 to 70 percent received a dental exam in the last year; and there were 3 to 5 potentially avoidable hospitalizations per 10,000 enrollee days. For the four outcomes measured in percentage points, the difference between an MLTC plan's outcome measure and the statewide average varied from –0.27 to 0.32 percentage points, whereas for potentially avoidable hospitalizations the difference varied from –3.4 to 9.3 hospitalizations per 10,000 enrollee days. For the time period in the most recent demonstration period covered by the data in this analysis, i.e., January 2017 to January 2019, the trends in these outcome measures were similar to those of earlier years except for potentially avoidable hospitalizations, for which data were mostly missing for the last demonstration time period. Based on multivariable analyses, we found no statistically significant differences between MLTC mandatory enrollment and any of the outcomes.

The fact that we found no evidence of associations between mandated enrollment and the outcomes is particularly important given that such associations could have arisen because of changes in practice among existing MLTC plans or better management among new MLTC plans. In addition, MLTC creates financial incentives for plans. For example, to the extent that MLTC plans are responsible for health care costs not covered by Medicare, such as PACE, MAP, and FIDA plans, they have an incentive to minimize those health care events. The consequences of such incentives would have been captured by our key independent variable, the fraction of enrollees subject to the mandate. In our analysis, we applied plan-level fixed effects to control for time-invariant plan-level factors; to a large extent, this allowed us to capture a plan's underlying clinical management capabilities. But this approach did not address the time-varying plan-level factors. For example, if plans entering a new region at the time of mandate rollout

improved their clinical management and, as a result, their quality of care over time, this change could be mistaken as the effect of the MLTC mandate.

The fact that new enrollees under the mandate may differ from existing plan members who enrolled voluntarily in MLTC is another factor that may confound the association between the mandate and the outcomes. For example, if enrollees under mandatory enrollment are healthier in ways not captured by risk adjustment, then we might expect to observe an improvement in outcomes—for example, a decrease in emergency room visits or falls requiring medical intervention. Whether this is the case depends on the performance of the risk adjustment methodology employed by NYS DOH for its annual MLTC performance reports. The methodology utilizes enrollee demographics, chronic medical conditions, and physical and mental functions. If there are important unobserved factors that predict both clinical outcomes and individuals' enrollment in MLTC, the differences in outcome measures could potentially arise from those factors.

We did not find a significant association between the mandate and the percentage of enrollees who had no emergency room visits, the percentage of enrollees who had no falls that required medical intervention or resulted in major or minor injuries, or potentially avoidable hospitalizations. Although these can be costly events, Partial Capitation plans do not cover medical costs, and for other plan types medical costs are borne primarily by Medicare. As a result, MLTC plans may not have large financial incentives to improve the management of costly medical events. Financial incentives associated with influenza vaccinations are mixed, with the costs of the vaccinations being offset by reductions in costs associated with influenza, many of which are also covered by Medicare. Dental services are covered by MLTC, so there may be a direct financial incentive to reduce visits that increase costs, and we did find a negative association between MLTC mandatory enrollment and dental visits, but it was not statistically significant.

There are limitations to our analyses. First, we had to rely on the risk adjustment embedded in the outcome measures, and the data and risk adjustment methodology changed over time. In addition, influenza vaccinations and dental exams were not risk-adjusted. As a result, we were not able to control for risk selection that may have affected the outcomes. For example, the population of new enrollees under the mandate may have differed in ways that affect the outcomes, and those differences could not be accounted for with risk adjustment within our analyses.

Furthermore, there are several challenges in measuring outcomes over time. The measures of no emergency room visits, no falls requiring medical intervention, and receiving an influenza vaccine were reported throughout our study period, but the definitions of emergency room visits and falls changed over time. These changes reflect decisions to improve the value of these measures, but they make it difficult to evaluate changes over time. In addition, annual risk adjustment may yield a fairer comparison of plans each year, but it also results in plan-level measures that are not comparable from year to year. We addressed these challenges by limiting

our evaluation of changes to time periods for each outcome that are measured consistently and by focusing on each plan's performance relative to the statewide average each year.

Consumer Satisfaction

Our analysis examined customer satisfaction, or the extent to which customers' needs were fulfilled: accessibility of dental care; satisfaction in the overall health plan, care manager, and home health aide; and the timeliness of care provided. Overall, customer satisfaction, as measured by the outcomes of this analysis, is high among the respondents regardless of plan type across the years of the survey. While consumer satisfaction measures may have dipped slightly during the years of the implementation of the mandate, only satisfaction with quality of care manager/case manager services had a statistically significant decrease associated with the mandate. Compared with earlier years, the overall trends were similar for the time period in the most recent demonstration period covered by the data in this analysis, years 2017 and 2019.

This analysis had several limitations. First, there were many Partial Capitation plans but very few PACE and MAP plans. The small and uneven sample size likely reduced the statistical power, limiting our ability to detect the overall impact of the mandate, as well as our ability to make comparisons between plan types (PACE, MAP, and Partial Capitation). The ability to detect the mandate's impact was further compromised by the low variability in the outcome measures themselves. There was a high degree of satisfaction at the start of the survey in 2007 that remained relatively high throughout the years.

Another limitation of the analysis was the lack of comparability of data between different survey administrations. Areas of concern include changes in the survey items and inconsistent implementation procedures. As mentioned earlier, the survey item for the measured outcome in Goal 3 changed the wording and response categories. In addition, in 2011, the survey was mailed in two waves, the first in February and the second in April, whereas in 2015, the first wave was mailed in December and the second in March. Ideally, the survey should have been administered on the same date each year to reduce possible confounders or impact on response rates.

Finally, the survey response rate fell over the years it was implemented, from 32.1 percent in 2011 to 23.1 percent in 2019, and thus may have increased potential bias in responses. It is also possible that satisfied MLTC enrollees were more likely to respond to the survey or, conversely, that dissatisfied enrollees were less likely to do so, and such a self-selection into the survey changed over time.

Data Limitations

Across the analyses discussed, there are also several limitations associated with the lack of individual-level data, as well as data for some study years. Individual-level data were not included within the RFP and not made available as part of the evaluation. To the extent that such data had been available, we would have been able to use a larger number of observations in the analysis, control for individual-level characteristics, apply risk adjustment directly to allow for

comparisons over time, and, most importantly, identify outcomes for individuals by mandatory enrollment status.

In the absence of individual-level data, statistical power to detect the effects of MLTC is limited for two reasons. First, the outcome data are at the aggregate plan year level, with a limited number of observations; that is, the sample size for each analysis is small. Second, because of the limitations of existing aggregate data, a majority of available data points are for the time period after July 2015, when the mandate implementation was completed. Thus, no variation in the key independent variable (the fraction of plan enrollees under the mandate) is available after July 2015. This further reduces the precision of our estimates of the impact of MLTC on outcomes.

The fact that we did not observe statistically significant results does not mean MLTC had no impact on the outcomes of interest. Because of the lack of statistical power, we are failing to reject the null hypothesis (i.e., no effect), but we are not accepting the null hypothesis either. For example, the 95 percent confidence interval of receipt of dental care includes a reduction of 19.7 percentage points, which is clearly a substantively important reduction, and the point estimate would have to be an increase of 8.6 percentage points in order to reject the null. In other words, the data generated particularly uncertain estimates.

Moreover, given that the aggregate data were risk-adjusted using a different model each year, we had to re-center outcomes in order to make relevant comparisons across years. That is, our approach was to compare how a plan's relative performance changed each year compared to all other plans. Although our approach allowed us to identify how relative plan performance is associated with mandatory enrollment, it prevented us from characterizing how overall quality evolved over time. We were not able to control for the effect of other state initiatives on the outcomes whose variation could be captured by calendar time indicators.

Finally, to utilize the aggregate data for the causal inference, we were limited to the use of the fraction of enrollees under the mandate for each plan as the intervention variable. This involved an assumption that enrollees contributed uniformly to plan-level outcomes, which may or may not be true.

Summary

Our results show that the MLTC mandate's effect on enrollment stabilized at month 19 after the mandate start (Table 7), , i.e., by the time the most recent demonstration period started in December 2016. The enrollment trends were dominated by Region 1 (New York City), but there was wide variation across the mandate rollout regions. We found no evidence of increases or reductions in patient safety and quality of care among enrollees because of the MLTC mandate, according to the measures used in this study. Customer satisfaction was high across the years and across the measures, except for access to dental care. We found no evidence of increases or reductions in perceived access to dental care, satisfaction with MLTC plan, timeliness of services, or satisfaction with service quality due to the MLTC mandate. We did find, however, a

statistically significant decrease in enrollees' satisfaction with their care manager associated with the MLTC mandate.

Table 7. Summary of Evaluation Results for Domain 1, Component 1

Domain	Goal	Outcome	Results	
Domain 1, Component 1: Managed Long-Term Care (MLTC)	Goal 1: Expand access to MLTC for Medicaid enrollees in need of LTSS	RQ1. Time for the MLTC mandate's effect on enrollment to stabilize	↑	19 months, stabilizing at +0.6 percentage points per year; a 12-percentage point increase in enrollment rates during the first 79 months post-mandate ($p < 0.05$)
	Goal 2: Demonstrate stability or improvement in patient safety	RQ1. Percentage of enrollees who had no emergency room visits	—	+0.8 percentage points ($p > 0.05$)
		RQ2. Percentage of enrollees who had no falls that required medical intervention or resulted in major or minor injuries	—	–1.8 percentage points ($p > 0.05$)
	Goal 3: Demonstrate stability or improvement in quality of care	RQ1. Receipt of timely care	—	–0.8 percentage points ($p > 0.05$)
		RQ2. Influenza vaccination	—	+0.2 percentage points ($p > 0.05$)
		RQ2. Dental exam	—	–5.6 percentage points ($p > 0.05$)
	Goal 4: Stabilize or reduce preventable acute hospital admissions	RQ1. Potentially avoidable hospitalizations	—	–1.3 hospitalizations per 10,000 enrollee days ($p > 0.05$)
	Goal 5: Demonstrate stability or improvement in consumer satisfaction	RQ1. Satisfaction with MLTC plans	—	–1.8 percentage points ($p > 0.05$)
		RQ2. Satisfaction with care managers	↓	–3.1 percentage points ($p < 0.05$)
		RQ3. Satisfaction with provider timeliness	—	–2.2 percentage points ($p > 0.05$)
		RQ4. Satisfaction with service quality	—	–1.2 percentage points ($p > 0.05$)

NOTE: The color code: green represents favorable results, red unfavorable, and yellow neither. RQ = research question.

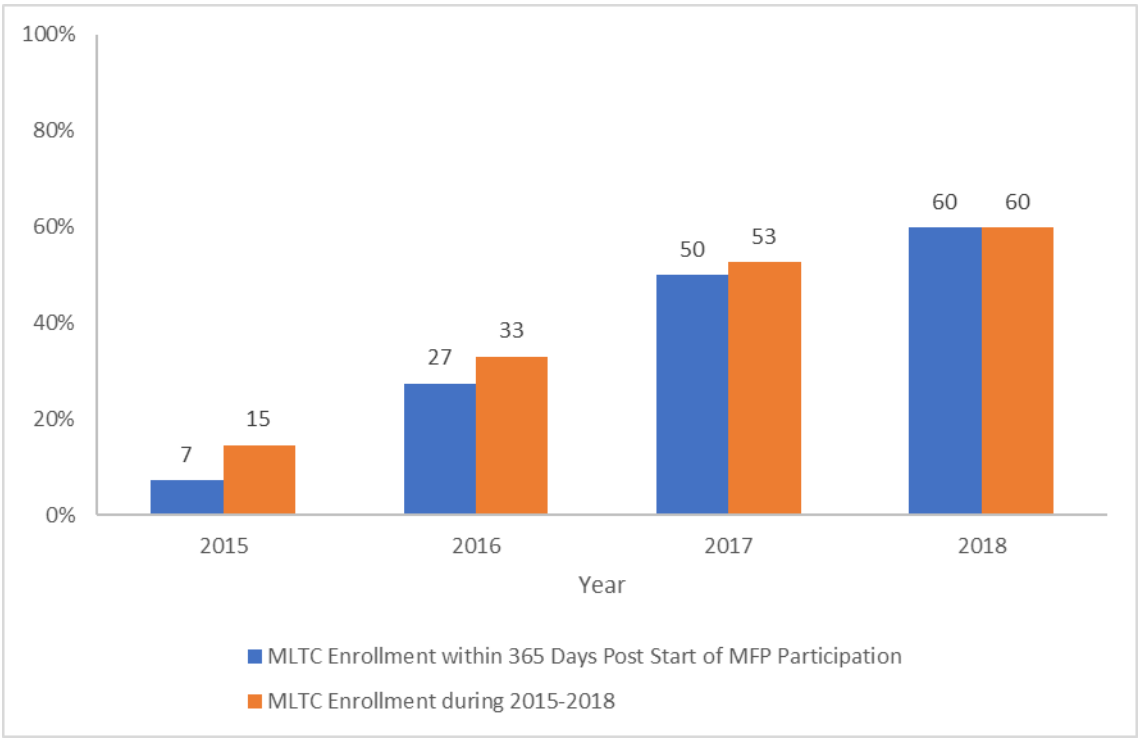
Domain 1, Component 2: Individuals Moved from Institutional Settings to Community Settings for Long-Term Services and Supports

Goal 1, Research Question 1: MLTC Enrollment Among MFP Participants

For those who transition from an institutional setting to the community, did the percentage enrolling in MLTC increase over the Demonstration?

The percentage of MFP participants who were enrolled in MLTC, by year, is presented in Figure 21. MLTC enrollment increased rapidly from 2015 to 2018, from 7 percent to 60 percent for enrollment within 365 days of MFP participation, and from 15 percent to 60 percent for enrollment anytime during the study window. For individuals newly participating in MFP during 2015–2017, we found a statistically significant trend in MLTC enrollment among those who enrolled for the first time in MLTC within 365 days post-start of MFP participation ($p < 0.001$) and among those who enrolled in MLTC anytime during 2015–2018 ($p < 0.001$). The sample size of MFP participants was relatively small in 2015 (220). Because some individuals who participated in MFP in 2018 may have enrolled in MLTC in the second half of 2019, for which MLTC enrollment data were not available, 2018 was excluded from the trend tests.

Figure 21. Percentage of the MFP Population Enrolled in MLTC During 2015–2018



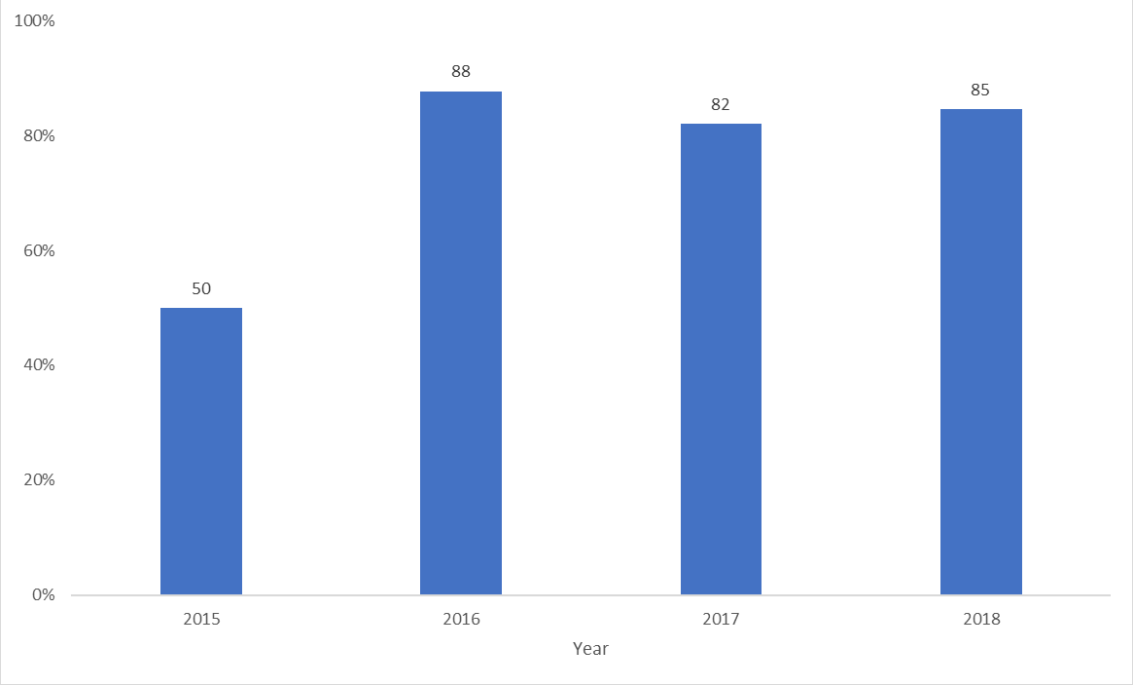
NOTE: The number of new MFP participants by year: 220 (2015), 354 (2016), 368 (2017), 478 (2018). A trend test was performed for 2015–2017 MLTC enrollment within 365 days post-start of MFP participation (Pearson's $\chi^2 = 120.760$, $p = 0.0001$) and MLTC enrollment during 2015–2018 (Pearson's $\chi^2 = 89.384$, $p = 0.0001$).

Goal 2, Research Question 1: Emergency Room Visits Among the HCBS Expansion Population

Is the percentage of the HCBS expansion population without any emergency room visits in the last 90 days stable or improving over the course of the Demonstration?

The percentage of the HCBS expansion population (those enrolled in MFP and MLTC) who did not have an emergency room visit in the last 90 days was stable at 82 percent to 88 percent in the years 2016–2018 (Figure 22). The 2015 rate was lower, at 50 percent, as was the sample size (four assessments after enrollment start). We did not find a statistically significant trend in the percentage of MFP participants who did not have an emergency room visit ($p = 0.5892$).

Figure 22. Percentage of the HCBS Expansion Population Without Any Emergency Room Visit in the Last 90 Days



NOTE: The number of latest MLTC assessments conducted after enrollment start: 4 (2015), 57 (2016), 206 (2017), 447 (2018). A trend test for the years 2015–2018 was performed for MFP participants who did not have an emergency room visit (Pearson's $\chi^2 = 0.292$, $p = 0.5892$).

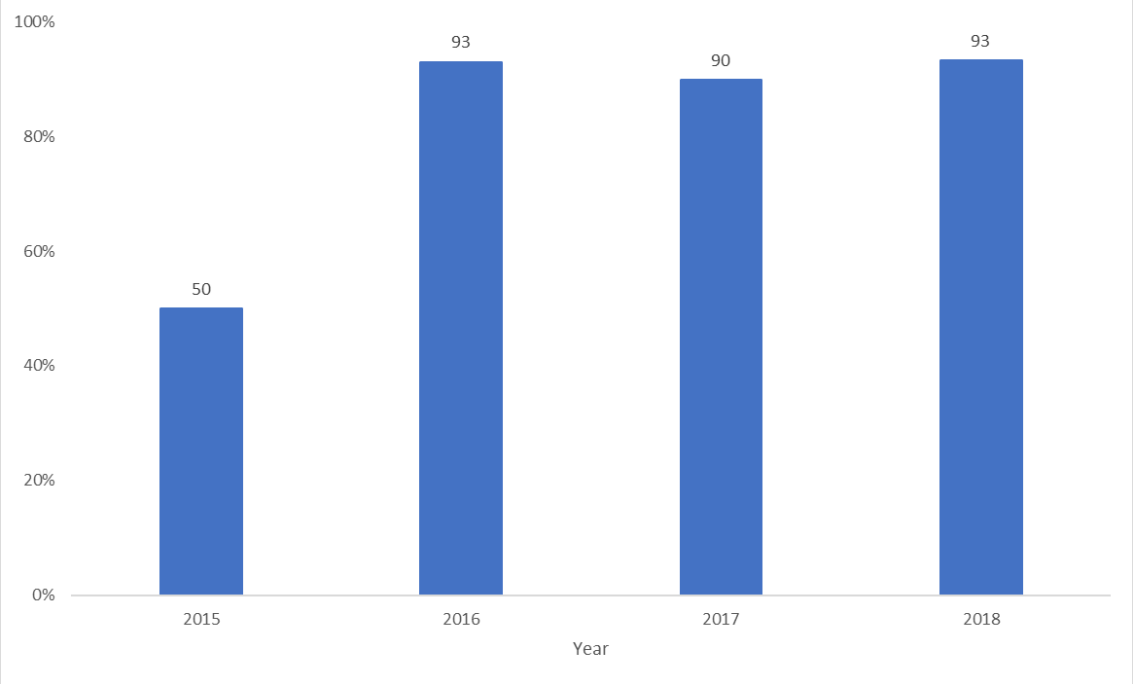
Goal 2, Research Question 2: Falls Among the HCBS Expansion Population

Is the percentage of the HCBS expansion population without any falls, as defined by the department's fall measure, stable or improving over the course of the Demonstration?

The percentage of the HCBS expansion population who did not have falls requiring medical intervention or resulting in major or minor injuries in the last 90 days followed a similar pattern (Figure 23). The rates were also stable at 90 percent to 93 percent in 2016–2018, with a lower

rate of 50 percent in 2015. Although the measure definition changed from falls requiring medical intervention in the 2018 UAS-NY CHA data to falls resulting in major or minor injuries, we did not observe a significant change in the measure in 2018 compared to 2016–2017. We tested but did not find a statistically significant trend in the percentage of MLTC enrollees who did not have a fall requiring medical intervention or resulting in major or minor injuries (p = 0.0777).

Figure 23. Percentage of the HCBS Expansion Population Without Any Falls Requiring Medical Intervention or Resulting in Major or Minor Injuries in the Last 90 Days



NOTE: The number of latest MLTC assessments conducted after enrollment start: 4 (2015), 57 (2016), 206 (2017), 447 (2018). A trend test for the years 2015–2018 was performed for MFP participants who did not have a fall requiring medical intervention or resulting in major or minor injuries (Pearson's $\chi^2 = 3.113$, p = 0.0777).

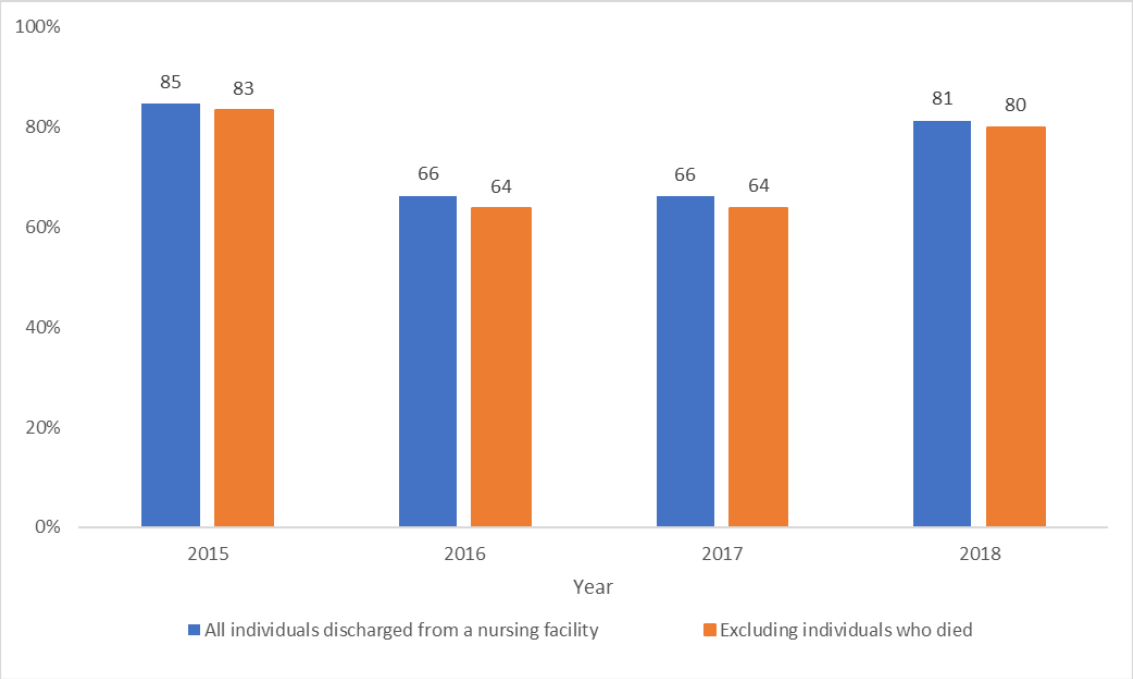
Goal 3, Research Question 1: Community Residence Among the HCBS Expansion Population

For the HCBS expansion population who entered MLTC after transitioning from an institutional setting, what percentage return to the nursing home within a year of discharge, what was their average level of care need, and, for those who return within a year, how long on average did they reside in the community?

Overall, we found that the percentage of the HCBS expansion population who remained in the community in 2015 was higher, at 85 percent, than in 2016 and 2017 (both at 66 percent), and we found another increase in 2018 (see blue bars in Figure 24). The 2015 result has a smaller denominator (13 MFP participants) than those of subsequent years, and the 2018 data are not complete because individuals re-institutionalized in the second half of 2019 were not included in

the data. The sensitivity analysis excluding those who died but were not re-institutionalized before death showed a similar pattern. We did not find a statistically significant trend in the rates during 2015–2017 for the main analysis (p = 0.389) or for the sensitivity analysis excluding those who died but were not re-institutionalized (p = 0.382). We also examined the results by including those who died but were not re-institutionalized in the denominator but not in the numerator, assuming they re-entered a nursing facility. The results are 77 percent, 59 percent, 60 percent, and 75 percent for each of the four years, respectively (data not shown, p = 0.452).

Figure 24. Percentage of the HCBS Expansion Population Who Remained in the Community for One Year Post-Discharge from a Nursing Facility



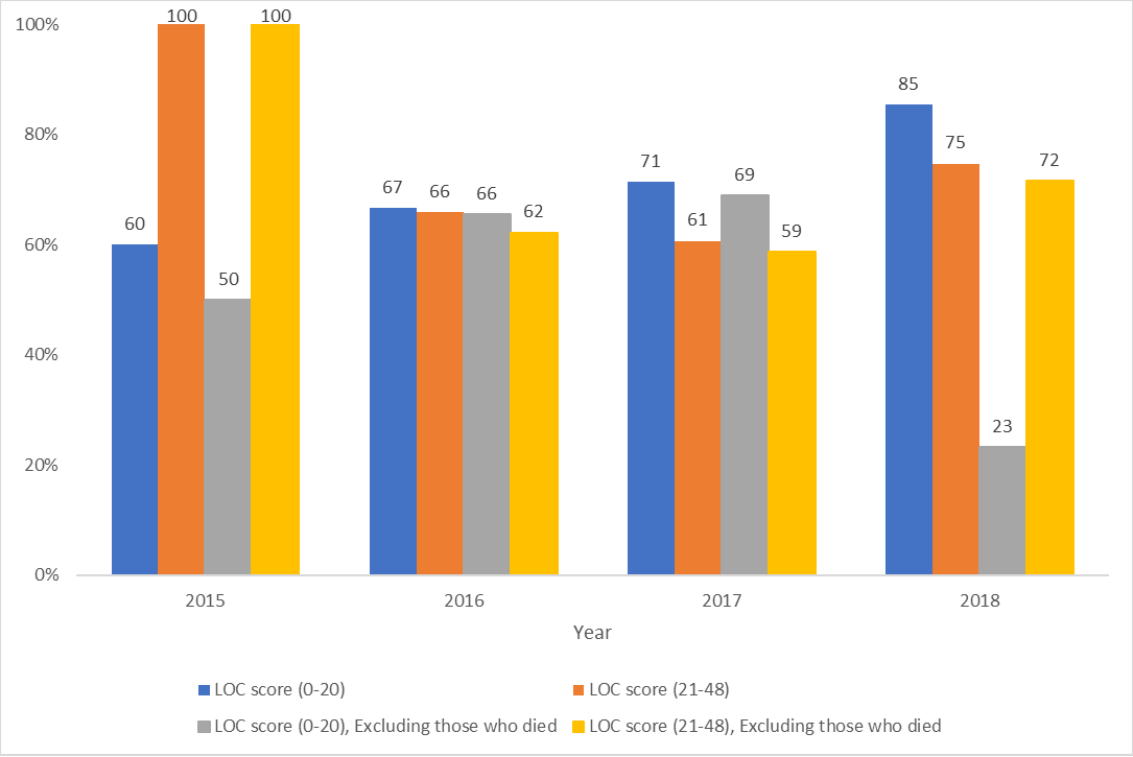
NOTE: The number of MFP participants for analysis by year: 13 (2015), 71 (2016), 124 (2017), 213 (2018), with the number of individuals who died before re-entering a nursing facility being: 1 (2015), 5 (2016), 8 (2017), 14 (2018). Trend test results for all individuals: Pearson's $\chi^2 = 0.805$, p = 0.3891; trend test results for the sensitivity analysis excluding those who died but were not re-institutionalized: Pearson's $\chi^2 = 0.765$, p = 0.3819. The year 2018 was excluded from trend analysis due to incomplete data.

Next, MFP participants who remained in the community for one year post-discharge were assessed by level of care (Figure 25). Trend tests were performed from 2015 to 2017 (2018 was excluded because of incomplete data) for all participants, as well as for the subgroup of participants excluding those who died prior to re-institutionalization.

MFP participants with a lower level of care score had a higher rate of remaining in the community during the study period, except for 2015; this was consistent in both the main analysis and the sensitivity analysis. There was large variation in the 2015 rates, which is likely due to small denominators. From 2016 to 2018, there may be an upward trend in the likelihood of remaining in the community among individuals with a lower level of care score; however, the

2018 data are incomplete, and this trend may not hold once the data for the second half of 2019 are included. No statistically significant trends were found for each level of care category in either the main analysis or the sensitivity analysis.

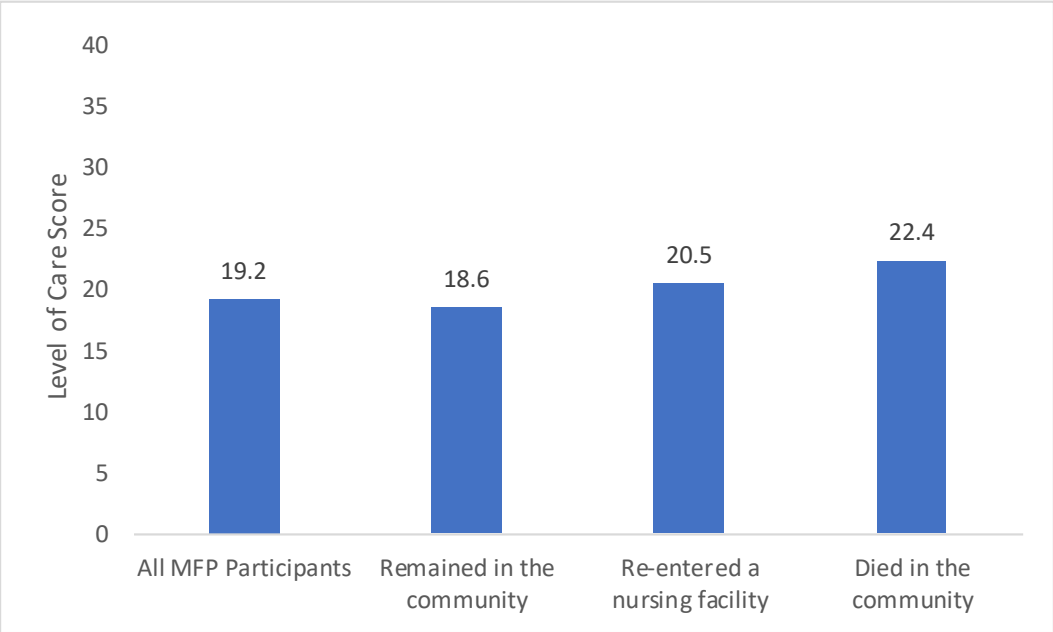
Figure 25. Percentage of the HCBS Expansion Population Who Remained in the Community for One Year Post-Discharge from a Nursing Facility, by Level of Care



NOTE: LOC = Level of Care. LOC score ranges from 0 to 48 and is determined based on a 22-item assessment of cognition, communication and vision, mood and behavior, functional status, continence, and nutritional status. The number of MFP participants for analysis by year: 13 (2015), 71 (2016), 124 (2017), 213 (2018), with the number of individuals who died before re-entering a nursing facility being: 1 (2015), 5 (2016), 8 (2017), 14 (2018). Trend tests performed for years 2015 through 2017 for LOC score 0–20 (Pearson's $\chi^2 = 0.667$, $p = 0.5117$); LOC score 21–48 (Pearson's $\chi^2 = 3.295$, $p = 0.0695$), LOC score 0–20 excluding those who died (Pearson's $\chi^2 = 0.491$, $p = 0.4836$), and LOC score 21–48 excluding those who died (Pearson's $\chi^2 = 3.174$, $p = 0.0748$).

As illustrated in Figure 26, overall, MFP participants had an average level of care score of 19.2. Participants who remained in the community for one year post-discharge from a nursing facility had the lowest average level of care score (18.6), whereas those who died but did not re-enter a nursing facility before death had the highest average level of care score (22.4). MFP participants who were re-institutionalized within one year post-discharge had an average level of care score between these two groups (20.5). The differences between different subpopulations are not statistically significant at the 5 percent level.

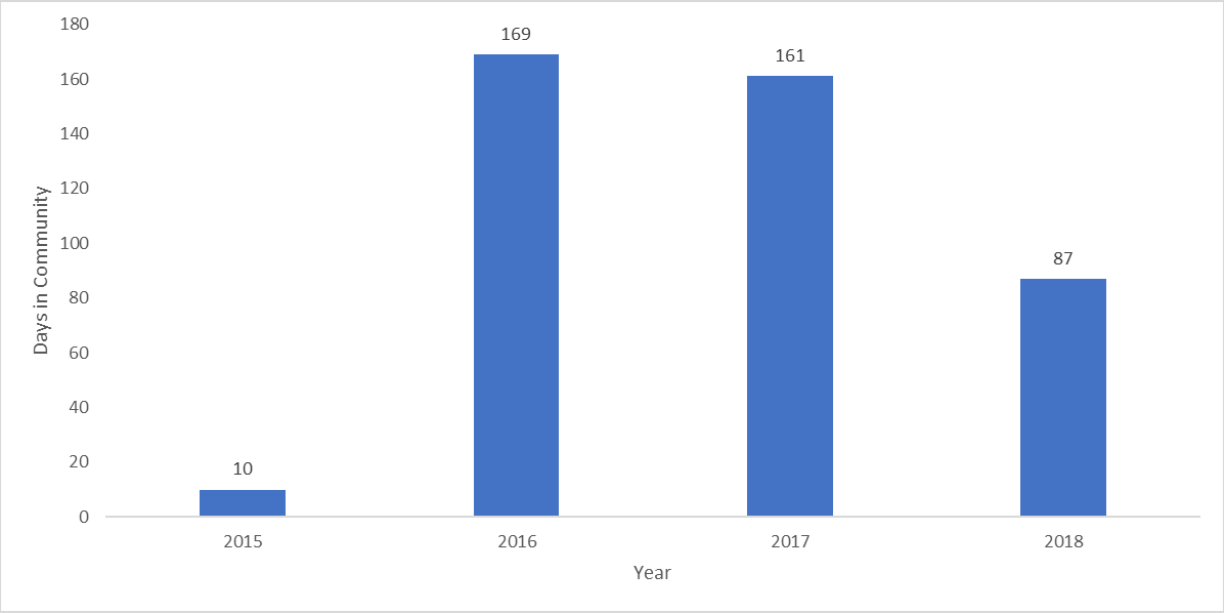
Figure 26. Average Level of Care Score for Those Who Remained in the Community Compared to Those Who Did Not Within One Year Post-Discharge from a Nursing Facility



NOTE: The number of MFP participants for analysis by group: 421 (all MFP participants), 313 (remained in the community for 365 consecutive days), 80 (re-entered a nursing facility within 365 days post-discharge), 28 (died in the community). The standard deviation of level of care score is 8.9, 8.7, 8.6, and 10.6 for each of the four groups, respectively. Student t-tests were performed to compare those who remained in the community with those who re-entered a nursing facility ($t = 1.76$, $p = 0.0811$), those who remained in the community with those who died in the community ($t = 1.84$, $p = 0.0753$), and those who re-entered a nursing facility with those who died in the community ($t = 0.86$, $p = 0.3976$).

The average residency time in the community among MFP participants who were re-institutionalized was very small in 2015; there was only one participant who re-entered a nursing facility. The average residency time was similar between 2016 and 2017, at 169 and 161 days, respectively (Figure 27). The average residency time in the community was 87 days for 2018, but the data for that year were not complete. We tested and did not find a statistically significant trend in average residency time in the community for the years 2016–2017 among participants who returned to a nursing facility within one year post-discharge ($p = 0.552$). The trend analysis excluded both 2015, due to sample size, and 2018, due to incomplete data.

Figure 27. Average Residency Time in the Community for the HCBS Expansion Population Who Returned to a Nursing Facility Within One Year



NOTE: The number of MFP participants included for analysis by year: 1 (2015), 19 (2016, standard deviation [SD] = 122 days), 34 (2017, SD = 107 days), 26 (2018, SD = 85 days). A trend test was performed for 2016–2017: Pearson's $\chi^2 = 0.354$, $p = 0.5519$. The year 2015 was excluded from the trend test due to its small sample size, and the year 2018 was excluded due to incomplete data.

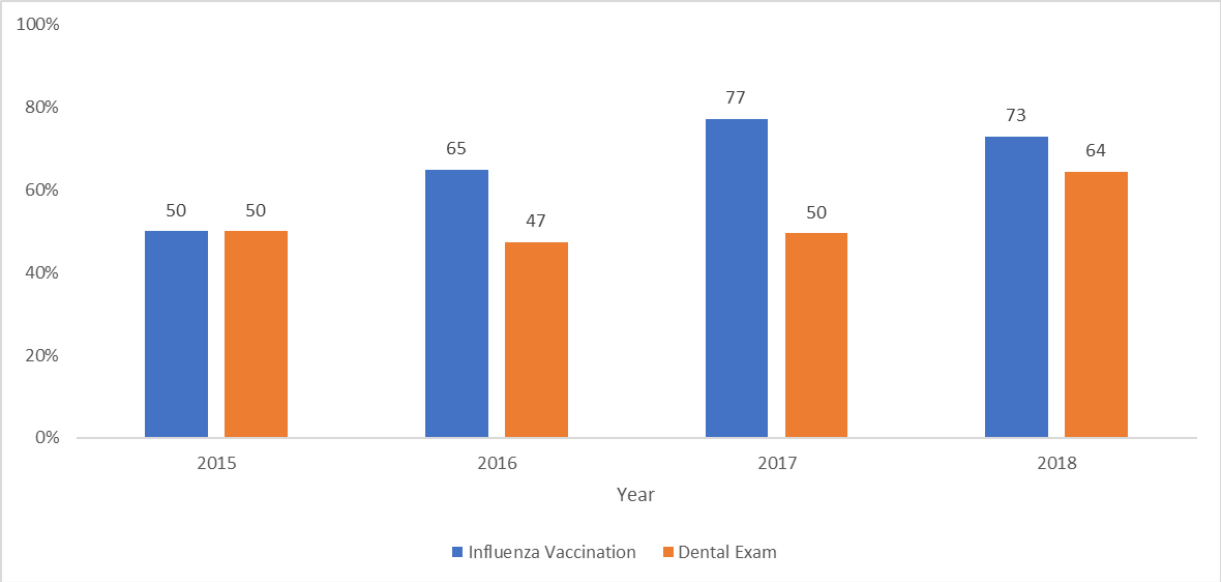
Goal 3, Research Question 2: Preventive Services Among the HCBS Expansion Population

Is the percentage of the HCBS expansion population accessing preventive care services, such as the flu shot and dental care, consistent or improving?

While there was a general increase in the proportion of the HCBS expansion population who self-reported receiving an influenza vaccination in the past year, from 50 percent in 2015 to 73 percent in 2018, most of that increase occurred by 2016 (Figure 28). Overall, the trend was not statistically significant ($p = 0.553$). However, the proportion of the HCBS expansion population who self-reported receiving a dental exam in the last year showed a statistically significant increase from 2015 to 2018, from 50 percent to 64 percent ($p < 0.001$).[20]

[20] In Domain 1, Component 1, Goal 3, Research Question 3, we also observed an upward trend in members of three out of four plan types (Figure 15). In particular, the dominant partial capitation plans showed an increase from 47.0 percent in 2014 to 61.1 percent in 2019. In the multivariable regression analysis, the MLTC mandate showed a non–statistically significant decline of 5.6 percentage points in the percentage of individuals receiving dental care in the last year (Figure 10). Note that both Figure 15 and Figure 28 illustrate a general time trend in receipt of dental care, but they are different from Figure 10, which is intended to show the effect of the MLTC mandate on receipt of dental care.

Figure 28. Percentage of the HCBS Population Who Received an Influenza Vaccination or Dental Exam in the Last Year



NOTE: The number of latest MLTC assessments conducted after enrollment start: 4 (2015), 57 (2016), 206 (2017), 447 (2018). Trend tests for 2015–2018 were performed for influenza vaccinations (Pearson's $\chi^2 = 0.351$, $p = 0.5534$) and dental exams (Pearson's $\chi^2 = 14.083$, $p = 0.0002$).

Domain 1, Component 2: Individuals Moved from Institutional Settings to Community Settings—Discussion and Conclusions

Since 2015, the MFP program has assisted Medicaid beneficiaries with MLTC enrollment. The proportion of MFP participants who were enrolled in an MLTC plan within 365 days post-MFP participation increased rapidly from 7 percent in 2015 to 60 percent in 2018. The actual MLTC enrollment among the individuals newly enrolled in MFP in 2018 was likely larger than 60 percent because some participants may not have enrolled until the second half of 2019.

Of note, additional participants enrolled in MLTC even after the end of the 365 days post-MFP participation, at which point the assistance from MFP ended. This is apparent for new MFP participants in 2015: 7 percent enrolled in MLTC within 365 days, but an additional 8 percent enrolled after the end of MFP assistance. MLTC enrollment increased by 6 and 3 percentage points after 365 days among 2016 and 2017 MFP participants, respectively.

The MFP program's increasing impact on MLTC enrollment over time may have been a result of increased awareness of MLTC among both MFP transition specialists and Medicaid beneficiaries. It is conceivable that as transition specialists became more familiar with the MLTC program, they knew which individuals they should target. Similarly, individuals eligible for MLTC may have reached out to the MFP program as they became aware of its benefits.

Based on our communication with subject-matter experts on MFP and MLTC within the NYS DOH, aside from the inclusion of managed care as a qualified constituent program for MFP participation in 2015, there were no major policy changes during 2015–2018 regarding the MFP

implementation. But one relevant MLTC policy change could have played a role in the MLTC enrollment increase among MFP participants: the mandatory MLTC enrollment of new nursing home residents, which started in February 2015. From that point on, all individuals who were newly admitted to a nursing home after February 2015 had to enroll in an MLTC plan; when they were subsequently discharged, they were already in MLTC. This policy change could be associated with an increase in the proportion of MFP participants enrolled in an MLTC plan, although more evidence is needed to confirm such a hypothesis.

Overall, we did not observe a statistically significant change in patient safety measures during 2015–2018, including percentage of enrollees with no emergency room visits and percentage of enrollees with no falls that required medical intervention or resulted in major or minor injuries. The proportions of the HCBS expansion population without an emergency room visit or fall were about 85 and 90 percent, respectively, for 2016–2018, although these were lower in 2015, which could simply be due to the small number of members that year. The 2016–2018 results are consistent with our results for Domain 1, Component 1, of this 1115 Demonstration evaluation, which showed that among the general MLTC population, the percentage without an emergency room visit did not change significantly (89 percent in 2015 to 91 percent in 2018), nor did the percentage without falls (from 93 percent to 94 percent in 2015 and 2018, respectively).

The proportion of the HCBS expansion population remaining in the community seemed to be stable at about 66 percent during 2016–2017, and excluding participants who died without re-entering a nursing facility did not change the conclusions. It is possible that enrollment in MLTC is not necessarily associated with the community residence duration among individuals who transitioned from institutions to communities. Our evaluation has not addressed this because of a lack of a comparison group and a lack of data prior to the inclusion of MLTC in MFP among this population.

When examining the results by the level of care needs, we found a non–statistically significant trend showing that MFP participants with a higher level of care needs were less likely to stay in the community compared with participants with a lower level of care needs. When examining the level of care needs by subgroups, there was a non–statistically significant association that MFP participants staying in the community for 365 days had the lowest level of care needs, followed by those re-entering a nursing facility and those who died without re-entering a nursing facility. But, likely due to small sample sizes, our statistical tests of these differences are not statistically significant at the 5 percent level. Compared with those with a lower level of care needs, it would not be surprising that participants with a greater level of care needs are often more frail, have a higher chance of re-entering a nursing facility, and have a higher mortality rate.

MFP participants who re-entered a nursing facility stayed on average slightly less than half a year in the community in both 2016 and 2017. The sample for 2015 MFP participants included only one observation, and the data for 2018 MFP participants were not complete. When the

second half of the 2019 data are available, the number of days in the community could double, reaching a level similar to that of 2016 and 2017. Thus, we found no evidence of variation during the study period in the average residency time among the HCBS expansion population re-entering a nursing facility within one year post-discharge.

The proportion of the HCBS expansion population who reported the receipt of influenza vaccination in the last year was relatively stable at 65 percent to 73 percent during 2016–2018, whereas an increasing trend in the receipt of a dental exam was observed for the same time period, from 47 percent to 64 percent. Again, the denominator for 2015 was small, and thus the results are not considered very reliable. The improvement in the dental exam measure may be attributed to the performance improvement project for MLTC enrollees during 2015–2018. This was a quality improvement initiative, implemented during this time period, that covered depression management, pain management, falls, advanced directives, emergency preparedness, and preventive screenings for eye, ear, and dental exams. MLTC plans had the option to choose one of the quality measures covered, but many of them selected preventive screenings for eye, ear, and dental exams. This initiative might be associated with the increased receipt of dental exams among MLTC enrollees.

There are two major limitations of our analysis. First, the results are descriptive in nature. Per the evaluation plan approved by CMS, the data were limited to state aggregated outcomes by plan, and we were therefore not able to estimate multivariable regression models to control for individual-level characteristics such as demographics and health status. Without multivariable analyses, the results we obtained may be biased by potential confounders. For example, we concluded that the proportion of the HCBS expansion population remaining in the community was similar across 2016–2017. If, hypothetically, the MFP participants in 2017 were sicker for some reason, the proportion in 2017 could have been higher than what we observed after adjusting for participants' health status. Second, our data did not cover the pre-MLTC mandate period (prior to 2012) or the mandate implementation period (2012–2015). That is, we were not able to draw any conclusions regarding the association between the MLTC mandate and various outcome measures examined here. The results we observed were general time trends only, and they are limited by a small sample size in 2015 and incomplete data for 2018.

Summary

From 2015 to 2018, the proportion of MFP participants enrolled in an MLTC plan increased rapidly, and we found no evidence of a decline in patient safety and quality of care measures (Table 8). These outcomes remained stable except for the significant increase in the proportion of the HCBS expansion population receiving a dental exam, which may be attributed to a quality improvement project with a focus on preventive screenings for eye, ear, and dental exams.

Table 8. Summary of Evaluation Results for Domain 1, Component 2

Domain	Goal	Outcome	Results	
Domain 1, Component 2: Individuals Moved from Institutional Settings to Community Settings for LTSS	Goal 1: Improve access to MLTC for those who transitioned from an institutional setting to the community	RQ1. Enrollment in MLTC within one year post-discharge from an institution	↑	7% in 2015; 60% in 2018 ($p < 0.05$)
	Goal 2: Stability or improvement in patient safety	RQ1. Percentage of enrollees who had no emergency room visits	—	50% in 2015; 85% in 2018 ($p > 0.05$)
		RQ2. Percentage of enrollees who had no falls that required medical intervention or resulted in major or minor injuries	—	50% in 2015; 93% in 2018 ($p > 0.05$)
	Goal 3: Stability or improvement in quality of care	RQ1. Percentage in community within one year post-discharge from an institution	—	85% in 2015; 81% in 2018 ($p > 0.05$)
		RQ2. Influenza vaccination	—	50% in 2015; 73% in 2018 ($p > 0.05$)
		RQ2. Dental exam	↑	50% in 2015; 64% in 2018 ($p < 0.05$)

NOTE: The color code: green represents favorable results, red unfavorable, and yellow neither. RQ = research question.

Domain 2: Mainstream Medicaid Managed Care

Goal 1: Express Lane Eligibility

Research Questions

- Goal 1, Research Question 1. How many recipients are enrolled in Express Lane Eligibility?
- Goal 1, Research Question 2: Are there differences in the demographic and clinical characteristics of Medicaid beneficiaries enrolled through Express Lane–like eligibility as compared to those not enrolled through this mechanism?
- Goal 1, Research Question 3: What portion of the beneficiaries enrolled through Express Lane–like eligibility were later deemed not eligible for this coverage?

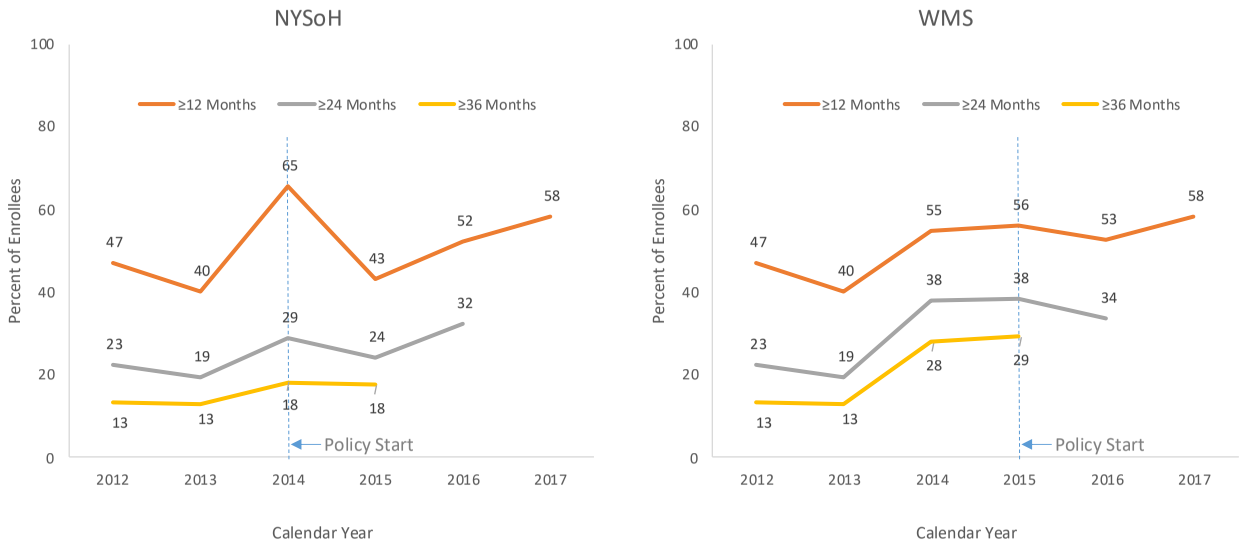
Express Lane Eligibility was implemented through a State Plan amendment instead of a part of the 1115 Demonstration. This goal was removed, and no results are available.

Goal 2, Research Question 1: Distribution of Continuous Enrollment

What is the distribution of enrollees within select continuous enrollment categories, i.e., 12 months, 24 months, etc.?

For each calendar year, we calculated the percentage of enrollment spells that lasted at least 12, 24, and 36 months, respectively (Figure 29).[21] In the NYSoH population, the percentage of individuals in each year enrolled continuously for at least 12 months increased over time from 47 percent in 2012 to 58 percent in 2017, with a peak of 65 percent for enrollment starting in 2014 when NYSoH was launched and 12-month continuous eligibility policy was implemented. There was also an increase in the percentage of individuals in a given year who were enrolled continuously for at least 24 months (23 percent in 2012; 32 percent in 2017) or 36 months (13 percent in 2012; 18 percent in 2017). The WMS population shows a similar overall pattern except that it did not experience a peak in 2014 or a drop in 2015. Instead, the increase in enrollment started to show in 2014 rather than in 2015 when the 12-month continuous eligibility policy started to implement in the WMS population; this is consistent across all three enrollment durations: 12, 24, or 36 months or more of continuous enrollment. Compared to NYSoH, WMS had a much higher percentage of enrollment with 36 months or more in 2014 and 2015 (28 and 29 percent, respectively). Note that NYSoH and WMS share the same pre-policy population in 2012 and 2013, so the results are exactly the same for these two years.

Figure 29. Distribution of Continuous Enrollment Among Individuals Targeted by 12-Month Continuous Eligibility



NOTE: We do not present the data points for ≥12, 24, and 36 months for 2018, 2017, and 2016, respectively, because the time window is too short to ensure meaningful data. A comparison of the 2012 enrollment distribution to

[21] Note that not all durations are applicable to all the years. For example, when examining an enrollment duration of 12 months or more, we reported only for the years 2012–2017 because our data do not cover a 12-month period for enrollment episodes starting in February 2018. Similarly, we did not report a duration of 24 or 36 months or more for the years 2017–2018 and 2016–2018, respectively.

the enrollment distribution of 2017, 2016, and 2015 for each enrollment duration has a p value of <0.01.

Goal 2, Research Question 2: Distribution of Continuous Enrollment by Characteristics

Does the continuous enrollment differ by demographic or clinical characteristics?

We compared enrollment time by demographic groups, namely age, race, and region (see Appendix D, Tables A5 and A6). Prior to 2014, individuals (including both WMS and NYSoH) younger than 18 were more likely to stay enrolled longer than individuals in other age groups. After 2014, in WMS, individuals 18 and younger were enrolled at higher rates than those age 18–35, but lower rates than those age 36–65 for the WMS population. For example, in 2014, 57 percent of individuals younger than 18 were enrolled for at least 12 months, compared to 46 percent for those age 19–35 for the WMS population. In contrast, after 2014, the individuals younger than 18 were enrolled at higher rates than those 18–55 and similar rates to those age 56–65 for the NYSoH population. For example, in 2014, 76 percent of individuals younger than 18 were enrolled for at least 12 months, compared with 63, 66, 68, and 72 percent for those age 19–35, 36–45, 46–55, and 56–65, respectively, for the NYSoH population. Individuals in New York City tended to be enrolled at similar ranges to those outside of New York City for both WMS and NYSoH except for 2016–2017 in the WMS population, during which New York City had a much higher rate of being enrolled for 12 months or more. In 2014, 54 and 65 percent of individuals in New York City were enrolled for at least 12 months in WMS and NYSoH, respectively, compared with 55 and 65 percent outside of New York City. During 2012–2013, enrollment rates were similar across race and ethnicity in both WMS and NYSoH, but during 2015–2017, individuals who are Hispanic had higher enrollment rates than individuals who are white or black.

We examined enrollment duration by CRG health status score; low scores represent a relatively healthy status (see details in Chapter 3, Domain 2, Goal 2, Study Population and Data Source). In general, enrollment durations were lower for individuals with a CRG score of 1 or 2 than those with a CRG score of 3 or higher (Figure 30). Over half of individuals with a CRG score of 3 or above were enrolled for at least 12 months. This pattern is consistent across NYSoH and WMS populations except that the percentages for enrollment of 24 or 36 months or more were higher among WMS individuals with a CRG score of 7 to 9. Individuals in the post-12-month continuous eligibility policy period (2014–2017 for NYSoH and 2015–2017 for WMS) tended to be enrolled for less time than those in the pre-policy period, the year 2012 or 2012 to 2013 for NYSoH and WMS, respectively.

Figure 30. Percentage with a Continuous Enrollment of 12, 24, or 36 Months or More Among Individuals Targeted by 12-Month Continuous Eligibility, by Health Status

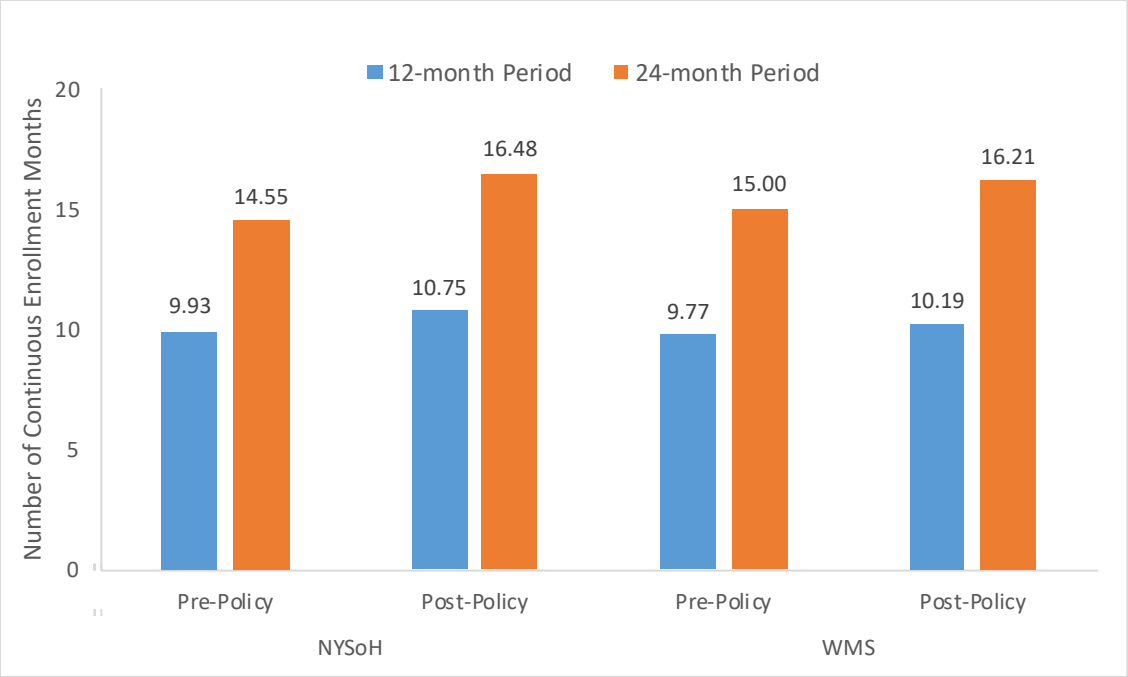
NOTE: CRG = Clinical Risk Groups. Nine health statuses are used in this analysis. A comparison of the 2012 distribution to that of 2017, 2016, and 2015 for each enrollment duration has a p value of <0.01.

Goal 2, Research Question 3: Average Months of Continuous Enrollment

Did Medicaid's average months of continuous enrollment increase following the implementation of continuous eligibility as compared to pre-implementation?

Figure 31 presents the differences in enrollment duration between the pre- and post-policy period, adjusting for demographics and health status and using the child population as a comparison group who were eligible for the 12-month continuous eligibility for the entire study period (2012–2018). That is, they represent the differences between what actually happened and what would have happened had it not been for 12-month continuous eligibility. In the pre-policy period (2012–2013 for NYSoH; 2012–2014 for WMS), individuals in the policy target population were, on average, enrolled for 9.9 (NYSoH) and 9.8 (WMS) months over the course of 12 months, compared to 10.8 (NYSoH) and 10.2 (WMS) months for the post-policy period. In other words, the 12-month continuous eligibility policy resulted in an increase of 0.9 (or 8.2 percent) and 0.4 (or 4.2 percent) continuous enrollment months in a 12-month period in NYSoH and WMS, respectively ($p < 0.05$). Similarly, over a 24-month span, individuals in the policy target population were enrolled for an average of 14.6 (NYSoH) and 15.0 (WMS) months in the pre-policy period and 16.5 (NYSoH) and 16.2 (WMS) months in the post-policy period. In a 24-month period, the 12-month continuous eligibility policy resulted in an increase of 1.9 (or 13.3 percent) and 1.2 (or 8.1 percent) enrollment months in NYSoH and WMS, respectively ($p < 0.05$).

Figure 31. Average Enrollment Duration in Months Before and After the Implementation of 12-Month Continuous Eligibility Among the Policy Target Population, by Time Horizon



NOTE: The first two sets of bars include all individuals with NYSoH coverage in the 1 percent sample, while the last two sets of bars limit the sample to those with WMS coverage. The difference in pre-policy and post-policy enrollment duration for 12 and 24 months is statistically significant at the 5 percent level.

To further examine disenrollment patterns, we visualized the probability of disenrollment by enrollment duration (Appendix D, Figure A1). The results showed that among NYSoH individuals, post-policy disenrollment rates remained consistently lower than pre-policy ones in the first 12 months after enrollment start, became higher in month 13 and similar in months 14 through 18, and became lower again in month 19 through 24. Similar patterns existed in WMS individuals except that post-policy rates were higher in months 2 and 3, 13 through 18, and became lower only after month 21. There were peaks of disenrollment in months 11 through 13 and months 23 and 24, when eligibility was recertified. Appendix D, Figure A2 illustrates the probability of continuous enrollment by duration, and the area between two curves represents the cumulative effect of the policy on the number of enrollment months in a 24-month period as illustrated in Figure 31.

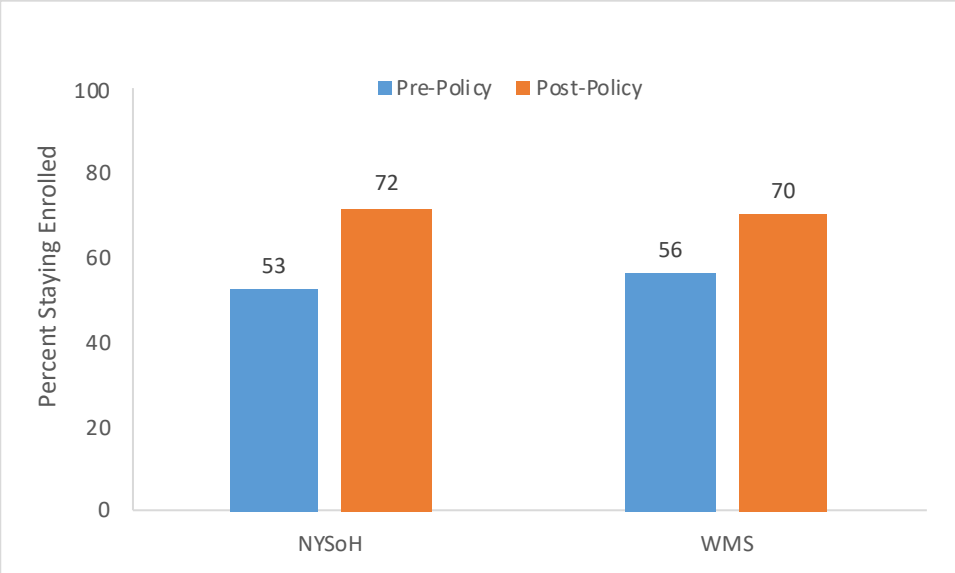
To assess whether the population who became newly eligible under the Medicaid expansion confounds the results, we ran our analysis by including and excluding this subpopulation and found that the results were nearly identical (data not shown). The final results presented here do not include the Medicaid expansion, to ensure "clean" estimates of the policy's impact on enrollment.

Goal 2, Research Question 4: Probability of 12-Month Continuous Enrollment

Was there an increase in the percentage of Medicaid beneficiaries continuously enrolled for 12 months following the implementation of continuous eligibility as compared to pre-implementation?

Similar to the results for Research Question 3, individuals in the NYSoH target population had a 72 percent chance of being continuously enrolled for 12 months post–policy implementation, compared to a 53 percent chance before policy, indicating the policy was associated with an increase of 19 percentage points ($p < 0.05$) in the probability of being enrolled (Figure 32). For WMS, we observed an increase of 14 percentage points in the probability of staying enrolled in Medicaid because of the 12-month continuous eligibility policy.

Figure 32. Probability of Having a Continuous Enrollment of 12 Months or More



NOTE: The difference in the probability of enrolling for at least 12 months between the orange and blue bars represents the difference-in-differences estimates for the 12-month continuous eligibility policy for NYSoH and WMS. The analysis is based on the 1 percent sample, including both the policy target population and a comparison group of children who were eligible for the policy both pre- and post-2014. The difference between the pre-policy and post-policy probability of enrollment is significant at the 5 percent level.

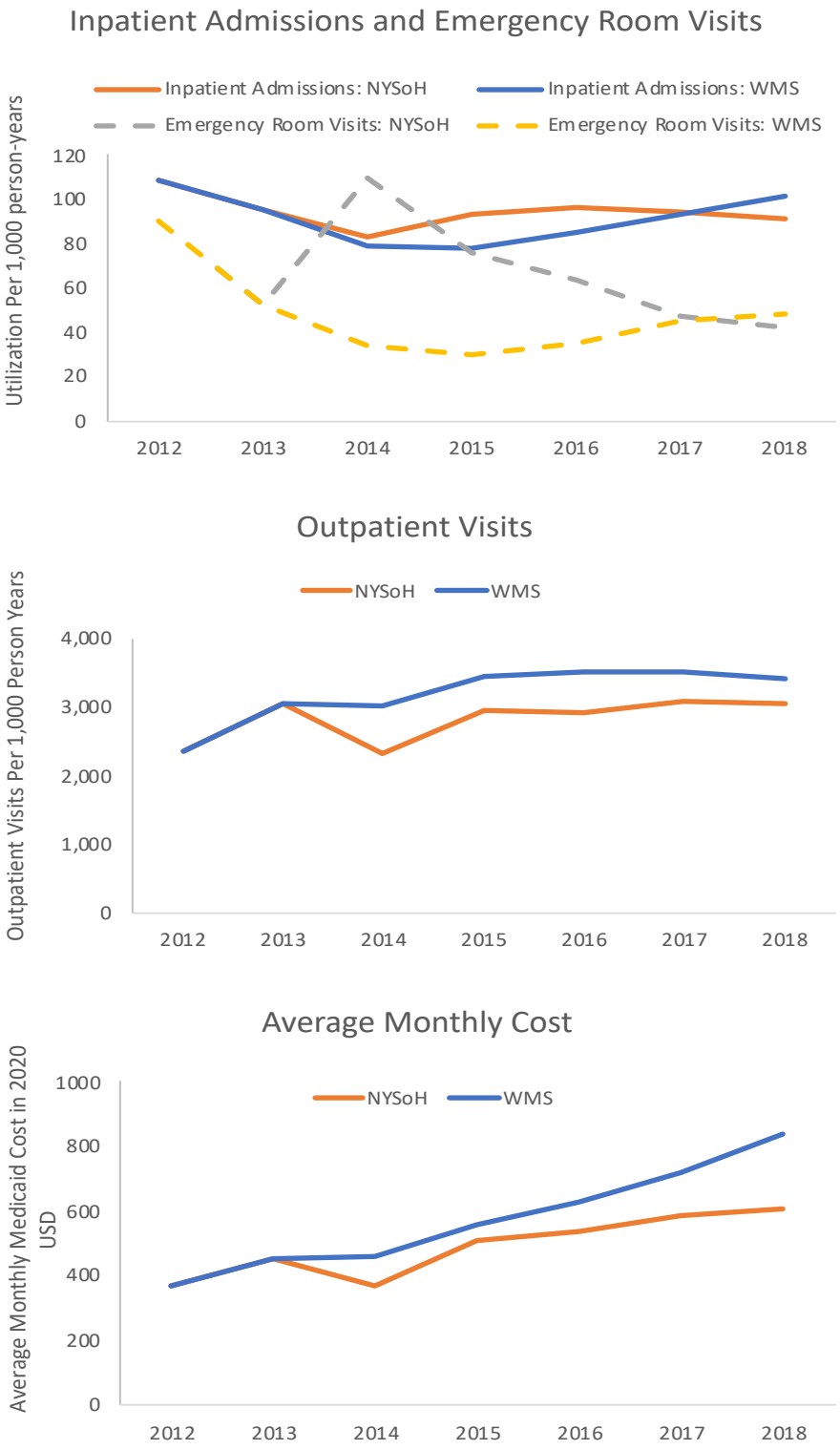
Goal 2, Research Question 5: Utilization and Cost

How do outpatient, inpatient, and emergency department visits compare pre- and post-implementation of this policy? How have costs been impacted because of the change in utilization?

Figure 33 shows unadjusted trends in annual health care utilization and monthly Medicaid cost. In the NYSoH population, there was a slight declining trend in inpatient admissions with a dip in 2014, emergency room visits peaked in 2014 and came down to the level prior to 2014, but outpatient visits increased slightly over time after a dip in 2014. In the WMS population, a

decline in inpatient admissions and emergency room visits occurred in 2014 and 2015, which increased toward the end of the study period, whereas outpatient visits showed a steady increase over time. In both populations, monthly Medicaid cost increased during the study period, with a higher rate among WMS than NYSoH.

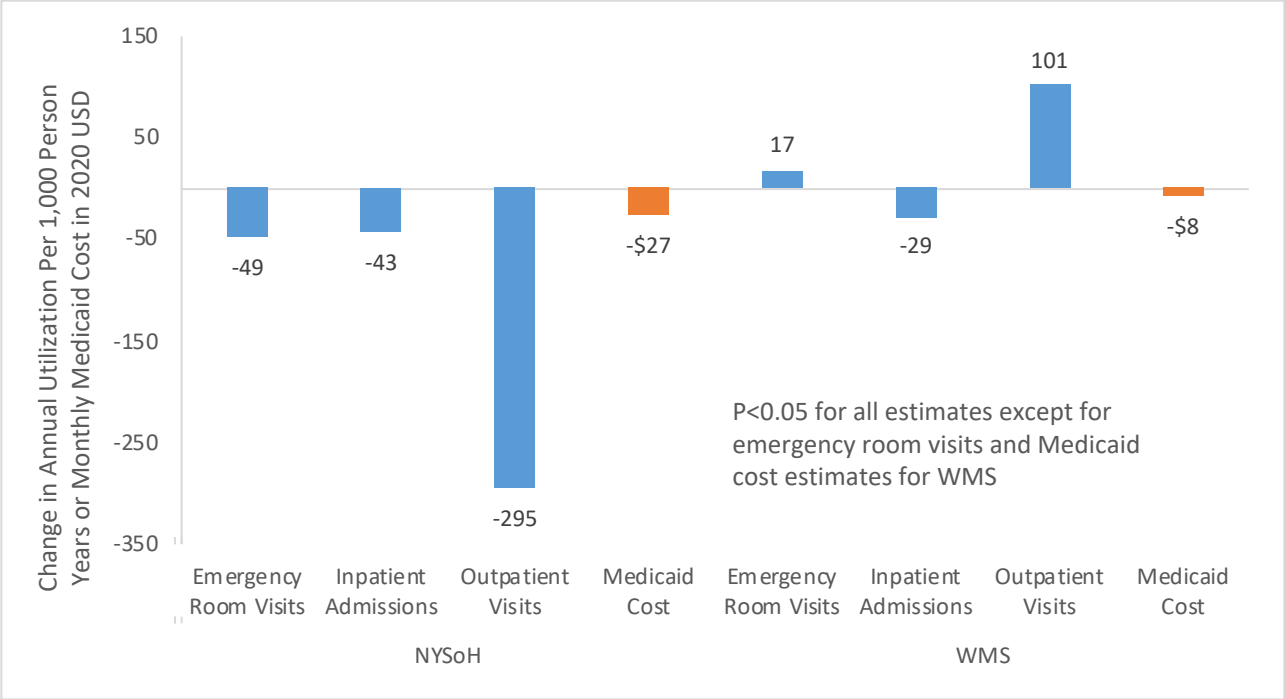
Figure 33. Unadjusted Trends in Health Care Utilization and Cost



NOTE: The trends in utilization reflect average yearly utilization per 1,000 person-years for inpatient, emergency room, and outpatient visits. Costs are in 2020 U.S. dollars. The analysis is based on a 25 percent sample from the NYSoH and WMS populations, including both the policy target population and a comparison group of children who were eligible for the policy both pre- and post-2014.

Figure 34 presents the change in average yearly utilization and average monthly cost associated with the 12-month continuous eligibility policy. We analyzed the differences in inpatient, outpatient, and emergency room visits, as well as Medicaid costs after statistical adjustments for demographics and health status. In the NYSoH population, we saw declines in all annual utilization measures ($p < 0.05$), with the largest decline in outpatient visits (295 visits per 1,000 member-years), which translate into a $27 (or 4.7 percent) reduction in per member per month Medicaid cost ($p < 0.05$). In the WMS population, the utilization estimates are mixed, with a statistically significant increase in outpatient visits but a decrease in inpatient admissions ($p < 0.05$). Overall, there was a reduction of $8 (or 1.5 percent) in per member per month Medicaid cost, but it is not statistically significant. The results from models controlling for CRG health status did not change the conclusions.

Figure 34. Effect of 12-Month Continuous Eligibility on Health Care Utilization and Medicaid Cost



NOTE: These are regression results using the child population as a comparison group and adjusting for demographics and health status. The estimates represent the differential changes between the adult population and the comparison child population by comparing the pre- (2012–2013 for NYSoH; 2012–2014 for WMS) and post-policy (2014–2018 for NYSoH; 2015–2018 for WMS) periods. All of the results are statistically significant at the 5 percent level except for emergency department visits and Medicaid cost for the WMS population.

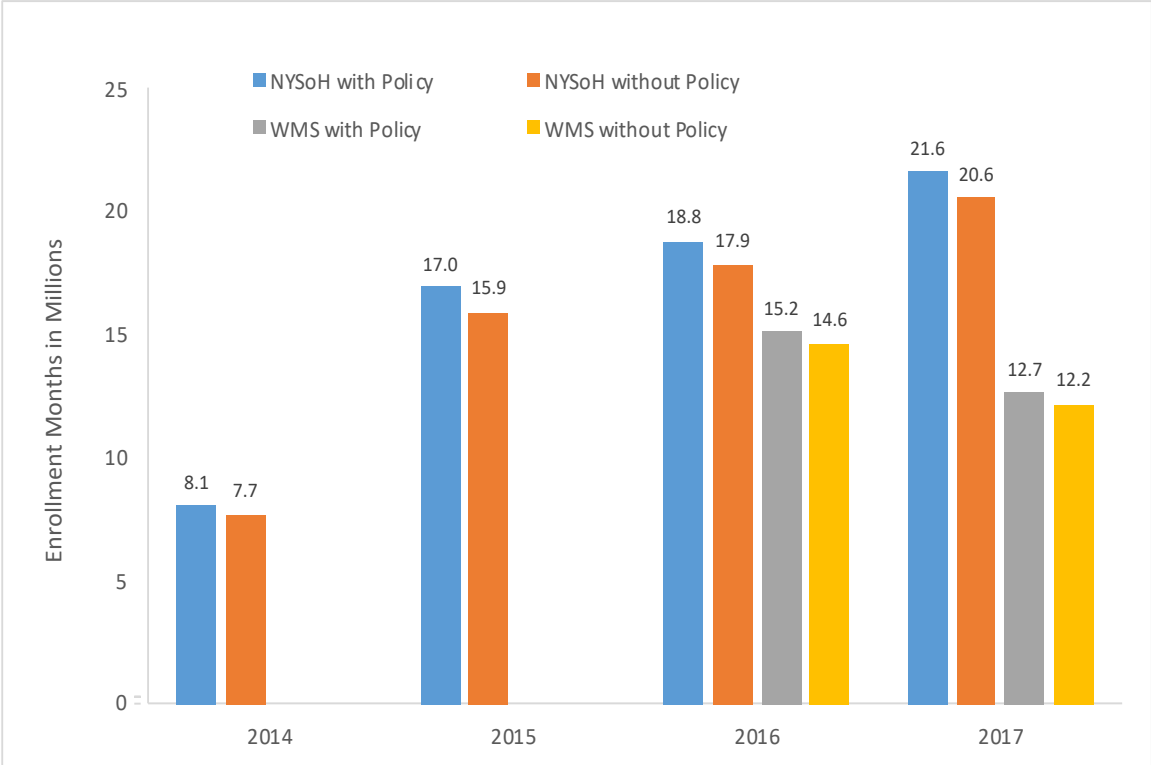
Goal 2, Research Question 6: Change in Enrollment Due to Continuous Eligibility

How many of the beneficiaries covered under continuous eligibility would have been ineligible for coverage if not for the waiver?

We used the model estimates from Research Question 3 to simulate counterfactual scenarios: What would have happened in the years 2014 through 2017 for NYSoH and the years 2015 through 2017 for WMS if the continuous eligibility policy had not been enacted? For each year, we predicted the expected number of individual months of enrollment, assuming we observe 12 months for each enrollment episode and the policy did not go into effect. Note that we did not predict for 2018 because most enrollees did not have a complete 12-month observation window; neither did we predict for the years 2014 and 2015 for WMS, since the policy was implemented in April 2015 in this population.

The policy has a positive impact for each of the calendar years and for both NYSoH and WMS populations. For example, for NYSoH, there were 8.1 million enrollment months in the policy target population in 2014 (Figure 35). The predicted counterfactual indicated there would have been 7.7 million individual-months, i.e., an increase of 0.4 million (or 4.9 percent) enrollment months under the policy. The enrollment months in NYSoH increased by 6.5, 5.4, and 5.1 percent for the years 2015 through 2017, respectively. Similarly, the enrollment months increased by 3.6 and 4.0 percent for 2016 and 2017, respectively. The magnitude of increases in terms of percentage points for calendar years is smaller than that of the overall estimate for Research Question 3. For Research Question 3, we followed a new episode for 12 or 24 months, assuming all individuals started their enrollment in January 2014, whereas for Research Question 6, we examined each of the calendar years individually, and many episodes did not have a full 12-month period in a calendar year.

Figure 35. Change in Enrollment Months Due to 12-Month Continuous Eligibility, in Millions



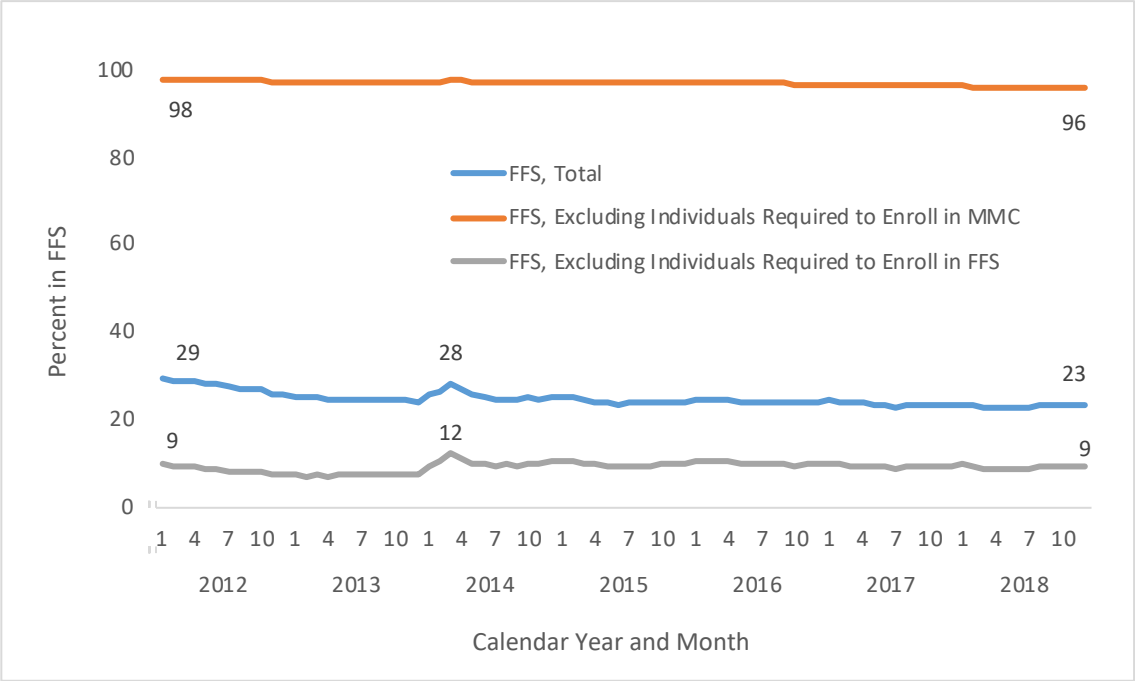
NOTE: We did not predict the counterfactual for the year 2018 because episodes that started in February 2018 did not have a 12-month observation window prior to the end of 2018, our study endpoint. For the NYSoH sample, the difference between the pre-policy and post-policy enrollment months is significant at the 5 percent level for years 2014 through 2017. For the WMS sample, the difference between the pre-policy and post-policy enrollment months is significant at the 5 percent level for year 2016 only.

Goal 2, Research Question 7: Trends in FFS Enrollment

Is overall fee-for-service (FFS) enrollment decreasing over time? (New Question 1)

We calculated the percentage of individuals in FFS overall, subtracting those who were required to enroll in MMC, and subtracting those who were required to enroll in FFS. In terms of overall FFS enrollment rates, there was a steady decrease in enrollment from January 2012 to December 2018, from 29 to 23 percent, though there was an increase in enrollment from December 2013 to April 2014, with a high of 28 percent around the third month of 2014 (Figure 36). Similarly, there was a decrease in FFS enrollment after excluding those required to enroll in MMC, from 98 percent in January 2012 to 96 percent in December 2018. Unlike total FFS enrollment, there was no large increase in enrollment from the end of 2013 through the beginning of 2014. Finally, there was no difference in enrollment in FFS after excluding those required to enroll in FFS, which was 9 percent at the beginning of 2012 and at the end of 2018. There was an increase in enrollment from December 2013 to April 2014, to a high of 12 percent, before trending back down.

Figure 36. Trends in Fee-for-Service Enrollment During 2012–2018



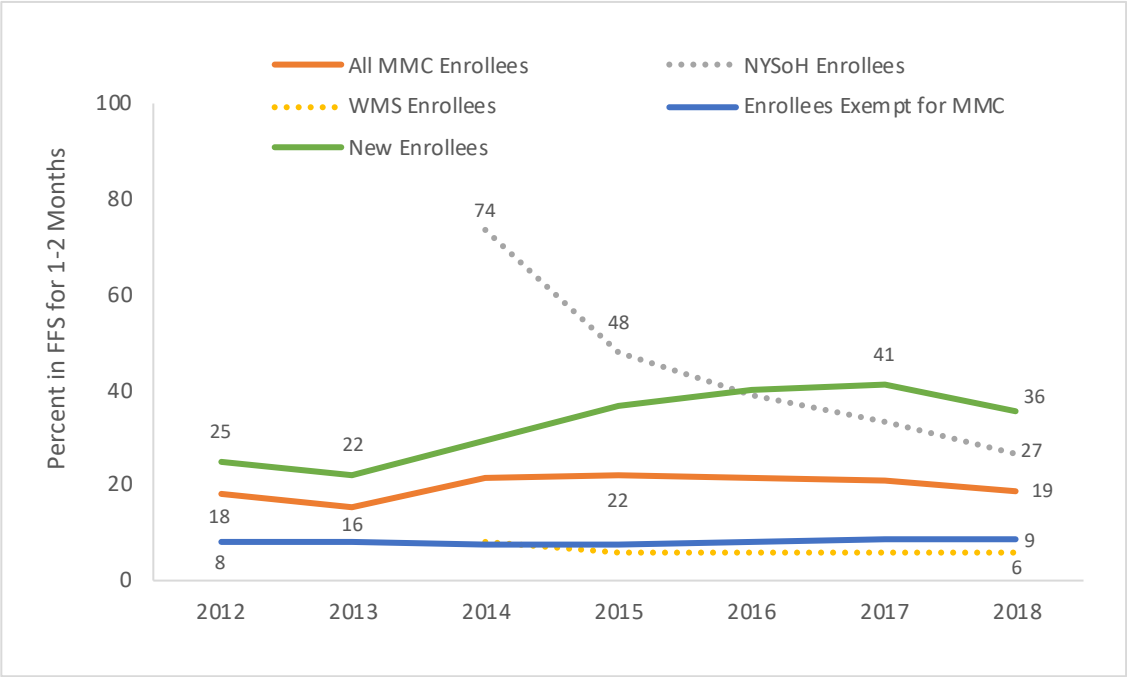
NOTE: Individuals under mandatory MMC are required to enroll in an MMC plan. These individuals accounted for 70 to 76 percent during 2012–2018. Their stay in FFS is on a temporary basis. In contrast, individuals excluded from MMC are not allowed to enroll in an MMC plan; these individuals accounted for 15 to 22 percent of the total Medicaid population in 2012–2018. A comparison of the 2012 distribution to that of 2018 for each population has a p value of <0.01.

Goal 2, Research Question 8: Short-Term FFS Enrollment

Is short-term FFS enrollment decreasing over time? (New Question 2)

We calculated the percentage of individuals who had at least some MMC coverage in a calendar year but were on FFS over a short period of time (1–2 months). Overall, individuals showed almost no change in the percentage enrolled short-term, from 18 percent in 2012 to 19 percent in 2018, with a slight increase in 2014 (Figure 37). The pattern is similar for those exempt from MMC, with a slight increase from 8 percent in 2012 to 9 percent in 2018. However, new enrollees behaved differently. They had an increase in short-term enrollment from 25 percent in 2012 to 36 percent in 2018. Short-term enrollment increased through 2017, with a high of 41 percent, but declined to 36 percent by the end of 2018. Also, subgroup analysis shows a dramatic decrease in short-term enrollment among individuals in NYSoH, from 74 percent in 2014 to 27 percent in 2018. The short-term enrollment rates of those in the WMS remained stable over time.

Figure 37. Short-Term Fee-for-Service Enrollment Among Individuals with at Least One Month of MMC Coverage in a Calendar Year

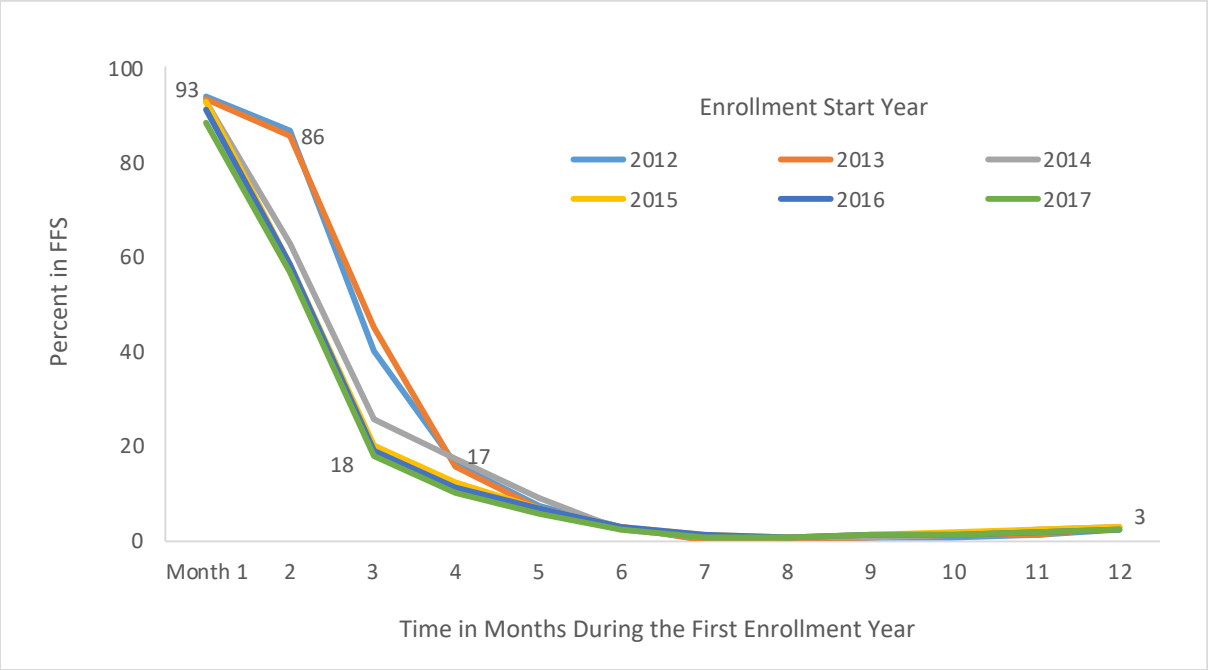


NOTE: *Short-term* is defined as 1 or 2 months. A comparison of the 2012 (or 2014) distribution for each population to that of 2018 has a p value of <0.01.

To understand the extent to which FFS enrollment was used on a temporary basis for MMC enrollees, we present the distribution of FFS enrollment duration during the first enrollment year among individuals who were newly, continuously enrolled in Medicaid with at least six months[22] in the MMC program (Figure 38). The percentage in FFS was similar for all years in month 1, starting at around 93 percent, but dropped over time to about 3 percent by month 12. In 2012–2013, the rate of decrease was slower in the first few months, with about 86 percent still enrolled in FFS in month 2, but the decrease accelerated in month 3 to a low of 17 percent by month 4. In contrast, the decrease in FFS enrollment accelerated faster for the years 2014–2017; by month 3, FFS enrollment had dropped to 18 percent, similar to the level in month 4 for the years 2012–2013. FFS enrollment rates for different years converged in month 5; by month 6, the rates became similar for all the years. The area between the 2012 curve (blue) and the 2017 curve (green) represents the reduction in FFS enrollment during the period, from 2.5 months to 1.9 months in the first enrollment year ($p < 0.01$).

[22] We examined the distribution among those who had at least six months of MMC enrollment to ensure that these individuals had a meaningful MMC enrollment in the first 12 months.

Figure 38. Distribution of Fee-for-Service Enrollment Among Individuals Who Were Newly, Continuously Enrolled in Medicaid and Had at Least Six Months in MMC in the First Enrollment Year



NOTE: We examined the distribution among those who had at least six months of MMC enrollment to ensure these individuals had a meaningful MMC enrollment in the first 12 months; varying the minimum number of months of MMC coverage did not change the results in a significant way. We did not report data for 2018 because most enrollment episodes starting in that year did not have a 12-month observation window by the end of 2018, our study endpoint. A comparison of the 2012 distribution to that of 2018 has a p value of <0.01.

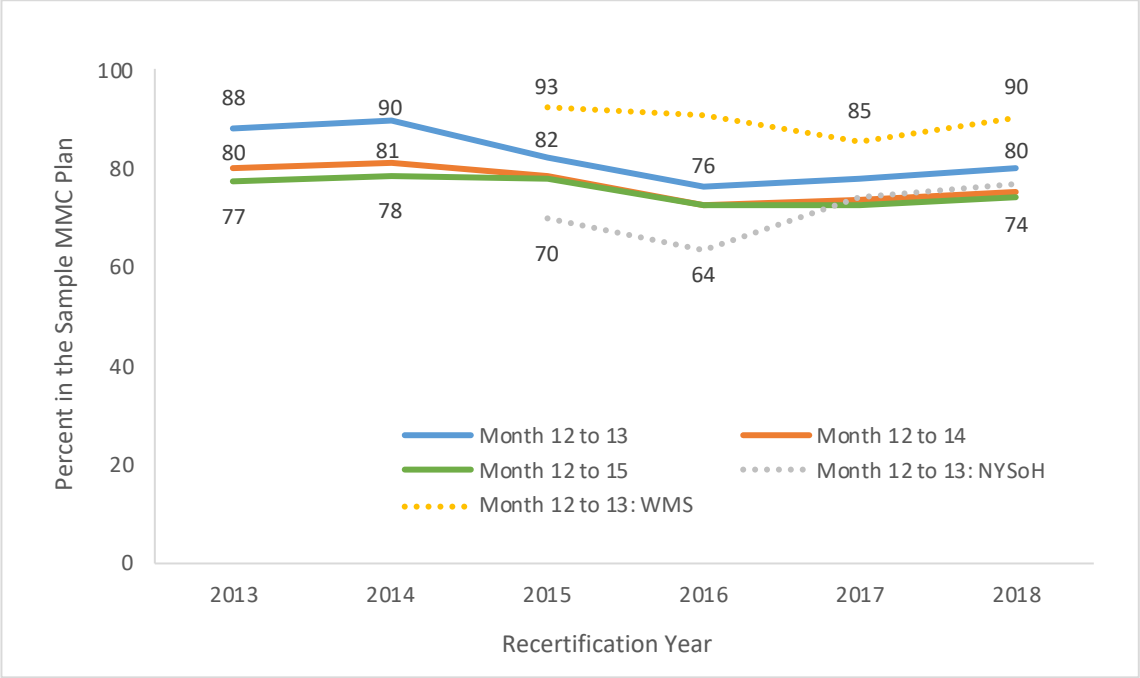
Goal 2, Research Question 9: Staying with Same MMC Plans After Recertification

What percentage of Medicaid managed care (MMC) enrollees remains in the same MMC plan after 12-month recertification? (New Question 3)

Figure 39 presents the percentage of all MMC enrollees who remained in the same plan after their 12-month recertification. The longer the time horizon (e.g., month 12 to 15 versus month 12 to 13), the smaller the percentage remaining enrolled in the same plan. Eighty-eight percent of individuals whose enrollment started in 2012 stayed in the same plan in months 12 and 13, 80 percent in months 12 to 14, and 77 percent in months 12 to 15. In addition, the percentage that stayed enrolled in the same plan decreased from year to year, to between 74 and 80 percentage in 2018. We also examined the percentage who continued enrollment in the same plan by enrollment and renewal venue: NYSoH and WMS. In general, WMS enrollees continued enrollment in their plan more than NYSoH enrollees. Ninety-three percent of individuals in WMS continued enrollment in 2014, compared to 70 percent of individuals in NYSoH. By 2018, 90 percent of individuals in WMS continued enrollment in the same plan, compared to 74 percent of individuals in NYSoH. When examining the percentage remaining in the same plan

among those who remained in MMC, about 97 to 99 percent stayed with the same plan after recertification during 2012–2018 (data not shown).

Figure 39. Percentage of MMC Enrollees at Month 12 Who Remained in the Same Plan After Recertification



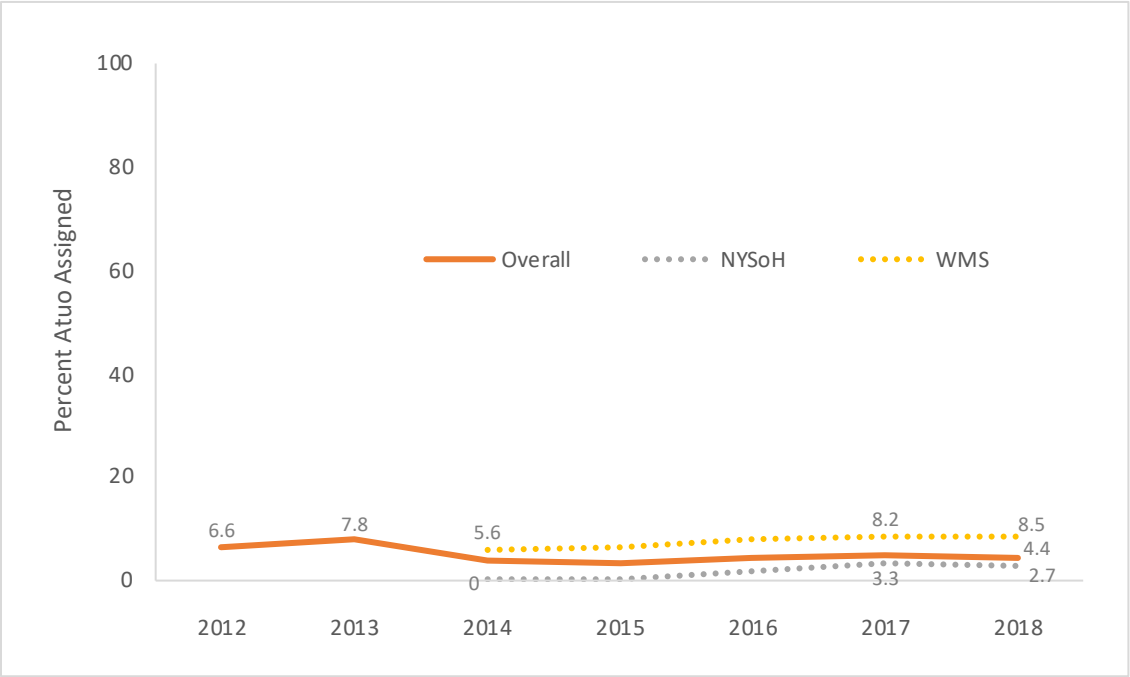
NOTE: The denominator includes all MMC enrollees at Month 12, some of whom switched to FFS or disenrolled from Medicaid. NYSoH was launched in 2012, but a majority of Medicaid beneficiaries started using NYSoH only after 2013; we therefore did not present WMS rates for 2012–2013, as they were largely the same as the overall rate. A comparison of the 2013 (or 2015) distribution to that of 2018 for each population has a p value of <0.01.

Goal 2, Research Question 10: Auto-Assignment to an MMC Plan

What percentage of MMC enrollees are auto-assigned to any health plan? (New Question 4)

We calculated the percentage of MMC enrollees who were auto-assigned to a plan at MMC enrollment start. Overall, the percentage who were auto-assigned to a plan remained low and decreased slightly from 6.6 percent in 2012 to 4.4 percent in 2018 (Figure 40). The decline is due to a lower auto-assignment rate among individuals enrolled through NYSoH than that for individuals enrolled through WMS. During 2014–2018, the percentage auto-assigned in both NYSoH and WMS increased modestly. In 2014, 5.6 percent of WMS enrollees were auto-assigned, compared to 8.5 percent in 2018. Similarly, close to zero percent of those in NYSoH were auto-assigned in 2014, compared to 2.7 percent in 2018.

Figure 40. Percentage of MMC Enrollees Who Were Auto-Assigned to a Plan at MMC Enrollment Start



NOTE: A comparison of the 2012 (or 2014) distribution to that of 2018 for each population has a p value of <0.01.

Domain 2, Goal 2: 12-Month Continuous Eligibility—Discussion and Conclusions

Our analyses showed that without any adjustments, the percentage of the population who were targeted by the 12-month continuous eligibility policy and enrolled for at least 12, 24, and 36 months increased over time since policy implementation in 2014 and 2015 in NYSoH and WMS, respectively. After adjusting for demographics and health status, as well as a baseline time trend reflected in a comparison group of children, we found that the policy was associated with an increase in the probability of staying enrolled, and the average number of months of continuous enrollment increased by 4.2 to 8.2 percent within 12 months post–enrollment start. This policy effect translates to 5.1 to 6.5 percent and 3.6 to 4.0 percent increases per year in total enrollment months in NYSoH and WMS individuals, respectively. We observed statistically significant declines in inpatient admissions but increases in outpatient visits in both NYSoH and WMS. The reduction in average monthly cost associated with the policy was statistically significant in NYSoH but not in WMS.

For the time period of the most recent demonstration covered by the data in this analysis, i.e., year 2017, the trends in continuous enrollment for at least 12 months or by individual characteristics were similar to those of earlier post-policy years. After adjusting for demographics, health status, and other individual characteristics, the percent increase in enrollment months due to the 12-month eligibility policy was similar in 2017 compared with that of 2014–2016 after the policy was implemented.

With the continuous eligibility policy, we anticipated that the dropout rates before the end of a 12-month enrollment would decrease because individuals would not become ineligible simply due to income fluctuations, and the dropout rate at the time of the recertification would increase because there would be "pent-up" dropouts at that time. That is, individuals who would have been disenrolled in the absence of the policy due to a family income that was too high stayed in Medicaid until the end of a 12-month period. This is exactly what we observed. In addition, after the first 12 months, post-policy disenrollment rates remained higher than pre-policy rates for several months, particularly among WMS individuals. One possibility is that it took longer for Medicaid agencies to recertify after the policy because volume was larger than before the policy.

The impact of the 12-month continuous eligibility policy based on our analysis is larger than that from previous research in children but smaller than that in adults. A national study in children covered by CHIP has shown an increase of enrollment duration by 2 percent after implementation of 12-month continuous eligibility (Ku, Steinmetz, and Bruen, 2013). In our findings, the impact of the policy is a 4 to 8 percent increase in enrollment months. There are some differences in data and methodologies between our analysis and the study by Ku, Steinmetz, and Bruen (2013). We examined the data for adults from only one state, whereas Ku et al.'s study analyzed the child population in seven states with a policy change during 2008 through 2010 using other states as a comparison. Also, Ku et al. used a continuity ratio—the average monthly enrollees divided by the total number of enrollees in a year—while we followed an individual's enrollment over time and used the survival analysis approach. In addition, compared to adults, children's income eligibility is typically higher, and their enrollment is less affected by income fluctuation, resulting in more stable enrollment. But this difference may lead to a smaller effect of the continuous eligibility policy in children than in adults. These methodologic and population differences may have led to different estimates. In contrast, a simulation study demonstrates that the policy could increase monthly enrollment among Medicaid adults by 17 percent (Swartz et al., 2015). The authors used the 2006 Survey of Income and Program Participation, a nationally representative survey, and the adult survey participants age 19 to 64. Our estimate ranges between 4 to 8 percent, which is much lower than that from this national simulation study, but again, our analysis covers only one state.

One potential confounder of the 12-month continuous eligibility policy is the establishment of the State's health insurance exchange, NYSoH, which facilitates both the enrollment and renewal processes. NYSoH has several advantages over the WMS system: Individuals can submit applications online, and the documentation requirement is reduced because NYSoH can use other existing data to verify eligibility and renew coverage without involving the beneficiaries. The simplification of the enrollment process under NYSoH has likely led to a lower disenrollment rate than that under WMS. This may have led to an over-estimation of the policy's impact under NYSoH. We cannot for certain determine the magnitude of the over-estimation, but if we assume the results under WMS are the "true" estimates, it seems the impact of NYSoH's on enrollment duration is about 4 (= 8.2 – 4.2) and 5.2 (= 13.3 – 8.1) percentage

points for a 12- and 24-month period, respectively—a sizable effect. This could also be among the reasons that our estimates are higher than that from Ku, Steinmetz, and Bruen's study.

A smaller policy effect in WMS individuals than NYSoH individuals could be due to the spillover effect from NYSoH. Unadjusted trends in enrollment duration showed that under WMS, the increase in enrollment duration started in 2014 rather than in 2015. If it were the case that the policy in the NYSoH population spilled over to the WMS population in 2014, our WMS policy effects are under-estimated. Such a smaller policy effect in WMS could also be caused by the differences in the two populations. Compared to NYSoH individuals, the WMS population were more likely to be female and non-White individuals, have an aid category related to TANF and safety net, and have a lower health status. Sicker individuals tend to enroll for a longer duration than healthy ones. Lower-income individuals are more likely to stay eligible for Medicaid than higher-income individuals. These factors could lead to more stable enrollment in WMS and thus a smaller effect of the continuous eligibility policy.

Medicaid expansion is another potential confounder. By definition, it increased the number of eligible individuals and thus applications. Because newly eligible individuals under the expansion had higher family income, their eligibility may be more uncertain and they may be more likely to disenroll than existing eligibility groups. However, when we compared the policy's impact on enrollment duration by including and excluding expansion individuals, the estimates were very similar. Therefore, Medicaid expansion does not seem to have confounded our results.

A related complication is that Medicaid applicants may be eligible for three months of retroactive coverage. The 12-month period of continuous eligibility, however, starts at the month of application and thus could extend up to the 15th month. Our estimates were consistent with this, showing increased rates of exits in several months post recertification at month 12. But this practice applied to both the policy target population and the control group; thus, it should not have affected the estimated effect of the 12-month continuous eligibility policy.

We expected that improved access to care due to the 12-month continuous eligibility would increase utilization in the short term. It is likely that new enrollees had pent-up demand for medical care when they joined Medicaid, especially inpatient admissions. But over time, members might increase their preventive care, as reflected in outpatient visits, and inpatient admissions and emergency room visits would decrease. This seems to be the case in the WMS population, among whom outpatient visits increased but inpatient admissions decreased. But the NYSoH population showed an across-the-board decline in utilization. The differential policy impact on utilization could be due to the differences in member acuity. That is, compared to NYSoH enrollees, those who stayed within WMS were sicker and required more routine as well as emergent care, and thus their outpatient and emergency room visits increased rather than decreased. But declines in inpatient admissions occurred in both populations, which is desirable. For the time period of the most recent demonstration covered by the data in this analysis, i.e.,

years 2017–2018, the overall unadjusted trends outpatient visits, inpatient admissions, and emergency room visits were similar to those of the post-policy years of 2014–2016.

Consistent with the changes in utilization, particularly inpatient admissions, the 12-month continuous eligibility is associated with a decrease of $27 (or 4.7 percent, $p < 0.05$) in per member per month Medicaid cost in the NYSoH population and $8 (or 1.5 percent, $p > 0.05$) in the WMS population. These results are consistent with an earlier analysis of the Medical Expenditure Panel Survey by Ku, Steinmetz, and Bysshe (2015), which showed that increases in the number of months of Medicaid coverage were associated with lower average monthly Medicaid costs. If we combine the changes in enrollment months and per member per month Medicaid cost, in the NYSoH population, an 8.2-percent increase in enrollment months with a 4.7 percent decrease in per member per month Medicaid cost leads to an increase of total Medicaid cost by 3.1 percent; by the same token, total Medicaid cost would increase 2.6 percent in the WMS population.

Our use of children as the control group has limitations. They are undoubtedly different from adult enrollees, and although they had 12 months of continuous eligibility during the entire study period, their enrollment episodes may have been affected differently by the policy, due primarily to income criteria. Children often have a broader income band so that there is more room for income to fluctuate though they remain eligible for Medicaid. Furthermore, our use of CRGs to examine the extent to which health conditions may have contributed to differences in enrollment dynamics and health care utilization is limited by the fact that CRGs are a function of utilization, which is a function of Medicaid enrollment. Finally, despite the difference-in-differences approach used in the analyses, we were not able to control for time-dependent changes that occurred simultaneously with the implementation of 12-month continuous eligibility policy and impacted the adult Medicaid population differently from the child population.

By examining the full Medicaid population, we found that FFS enrollment decreased over time, which is what the State desired. Overall, the percentage of individuals staying in the same health plan decreased over time, except for the rate in the NYSoH population. The overall rate of auto-assignment at MMC enrollment start decreased slightly, largely driven by a lower rate in the NYSoH population than that in the WMS population. From the State's perspective, shortening the duration in FFS, staying with the same plan over time, and reducing the auto-assignment are desirable. Continuous enrollment in MMC and with the same plan make the Medicaid budget more predictable because health plans are paid on a capitation basis, and, during the transition between plans, individuals are often enrolled in FFS. State MMC plans may be better at care coordination and management than the FFS system. The trends during the earlier years (2012–2016) continued into the later years (2017–2018) that were part of the most recent demonstration period.

Summary

Our results show that, overall, continuous enrollment increased significantly during the study period. After controlling for demographics, individual aid categories, and health status, we found that the 12-month continuous policy was associated with an approximately 4 to 8 percent increase in continuous enrollment. The policy's effect was smaller in the WMS population than in the NYSoH population, due possibly to the simplified and convenient enrollment and renewal process in NYSoH. The policy is associated with a decline in inpatient admissions, as well as in per member per month Medicaid cost. The descriptive trends show that, consistent with what the State would like to see, FFS enrollment and auto-assignment to MMC plans declined over time—but there was also a decline in the percentage of enrollees staying in the same MMC plan, except for those enrolled through the health insurance exchange.

Table 9. Summary of Evaluation Results for Domain 2, Goal 2

Domain	Goal	Outcome	Results	
Domain 2: Mainstream Medicaid Managed Care and Temporary Assistance to Needy Families (TANF)	Goal 1: Increase access to health insurance through Medicaid enrollment—Express Lane Eligibility	RQ1. Medicaid enrollment, RQ2. demographic characteristics, and RQ3. percentage of ineligible enrollees		Removed from the evaluation
	Goal 2: Limit gaps in Medicaid eligibility due to fluctuations in recipient income—12-month continuous eligibility	RQ1: Percentage with at least 12, 24, or 36 months of enrollment among the population affected by the continuous eligibility policy	↑	≥12 months: 47% in 2012; 58% in 2017 ($p < 0.01$) for NYSoH and 47% in 2012; 58% in 2017 for WMS ($p < 0.01$)
			↑	≥24 months: 23% in 2012, 32% in 2016 ($p < 0.01$) for NYSoH and 23% in 2012, 34% in 2016 for WMS ($p < 0.01$)
			↑	36 months: 13% in 2012; 18% in 2015 ($p < 0.01$) for NYSoH and 13% in 2012; 29% in 2015 for WMS ($p < 0.01$)
		RQ2: Difference in percentage with at least 12, 24, or 36 months of enrollment by enrollee characteristics	—	Demographics: Older members, White and Hispanic members, and members with a lower health status more likely to have longer enrollment duration for NYSoH and WMS populations (all $p < 0.01$)
			—	Geographic area: Individuals in New York City had longer enrollment durations than those not in New York City for NYSoH and WMS populations (all $p < 0.01$)

Domain	Goal	Outcome	Results	
		RQ3: Average number of continuous enrollment months	↑	+0.8 and +1.9 months in a 12- and 24-month post-policy period for NYSoH populations, respectively ($p < 0.05$)
			↑	+0.4 and +1.2 months in a 12- and 24-month post-policy period for WMS populations, respectively ($p < 0.05$)
		RQ4: Probability of being continuously enrolled for at least 12 months	↑	+0.19 probability of being enrolled for the NYSoH population ($p < 0.05$)
			↑	+0.14 probability of being enrolled for the WMS population ($p < 0.05$)
		RQ5: Effect of the continuous eligibility policy on outpatient, inpatient, and emergency department visits, and Medicaid cost of care	↓	Utilization: –43 inpatient admissions, –295 outpatient visits, and –49 emergency room visits per 1,000 member-years for the NYSoH population (all $p < 0.05$)
			↓	–29 inpatient admissions ($p < 0.05$), +101 outpatient visits ($p < 0.05$), and +17 emergency room visits per 1,000 member-years for the WMS population ($p > 0.05$)
			↓	Medicaid cost: –$27 per member per month for the NYSoH population ($p < 0.05$), –$8 per member per month for the WMS population ($p > 0.05$)
		RQ6: Increased number of enrollment months due to the continuous eligibility policy	↑	+378k ($p < 0.05$), +1,030k ($p < 0.05$), +959k ($p < 0.05$), +1,046k ($p < 0.05$) enrollees for 2014–2017, respectively for the NYSoH population
			↑	+530k ($p < 0.05$), +483k ($p > 0.05$) enrollees for 2016–2017, respectively for the WMS population

NOTE: RQ = research question. The color code: green represents favorable results, red unfavorable, and yellow neither. Due to a large sample size of about 1 to 6 million individuals, the descriptive trend tests for RQs 7–10 result in small p values.

5. Policy Implications

The broad goals of the Medicaid Section 1115 Waiver are to enroll a majority of Medicaid beneficiaries into managed care, increase access and service quality, and expand coverage to more low-income individuals in New York State. Similarly, the MLTC program aims to increase managed care enrollment among individuals eligible for LTSS and improve patient safety and quality of care. Given the rapid increases in MLTC enrollment, there might be concerns over patient safety and quality of care, and this final interim evaluation is intended to address relevant questions and inform decisionmaking. The goal of the 12-month continuous eligibility policy was to reduce frequent entries to and exits from Medicaid and thus increase enrollment and access to care. In this chapter, we discuss our findings on enrollment, patient safety, and quality of care and their implications for the State.

MLTC

Enrollment

The MLTC mandate increased enrollment with the program rapidly and dramatically. Within 19 months of the implementation of the mandate, its impact on statewide enrollment stabilized at a growth rate of about 0.05 percentage points per month, or 0.6 percentage points per year. However, increases in enrollment and the time to enrollment stabilization differed across regions, suggesting that idiosyncratic factors may have affected implementation across the State. New York City, the region in which the mandate was first implemented, had the most enrollees of any region, as well as the highest rate of pre-mandate enrollment, and thus its results drove the overall results. Enrollment increases in each of the other regions occurred more slowly, which could be due to lower pre-mandate enrollment rates in these regions or differences in enrollment capacity across the State.

The very large and rapid increases in enrollment, particularly in New York City, show that the mandate was able to substantially expand MLTC. These large increases in enrollment could have led to management challenges in existing or new MLTC plans. Also, FFS beneficiaries newly enrolled in managed care plans could encounter difficulties in navigating a system new to them and finding a provider or switching providers if their current providers are outside a plan's network. Both of these factors could raise concerns about the quality of services provided following the mandate. These concerns highlight the importance of the remaining components of the evaluation. Nevertheless, this evaluation found that mandating enrollment in MLTC successfully scaled up the MLTC program to include a large share of the potentially eligible population.

Patient Safety and Quality of Care

Policymakers may have concerns over patient safety and quality of care, given the large and rapid increases in MLTC enrollment. First, as mentioned above, it could be difficult for MLTC plans to manage the increased number of enrollees and ensure the quality of LTSS. Second, there was a change in the financial incentives as individuals transitioned from FFS to MLTC for LTSS. For example, to the extent that plans are incentivized to reduce access to services or the intensity of services, quality of care—such as the timeliness of receiving services—could be affected. Third, there might be spillover effects on medical utilization, such as emergency room visits, medical interventions for falls, and potentially avoidable hospitalizations. Better management of LTSS may improve safety (e.g., reductions in falls) and health outcomes (e.g., fewer avoidable hospitalizations), but there may be an incentive to reduce access to medical care services among MLTC plans that are responsible for health care costs not covered by Medicare (e.g., PACE, MAP, and FIDA plans).

However, our examination of patient safety (percentage of enrollees with no emergency room visits and percentage of enrollees with no falls that required medical intervention or resulted in major or minor injuries) and quality of care (measures of percentages with influenza vaccinations, with dental exams, and without potentially avoidable hospitalizations) found no evidence of significant changes in these key measures. Such results may be affected by the annual public reporting of patient safety and quality of care measures by NYS DOH. For branding and reputation reasons—MLTC plans have to compete for enrollees—MLTC plans may want to ensure that their publicly reported measures are positive.

The evidence from this evaluation, however, is weakened by important data limitations that reduced statistical power and precluded stronger study designs. For example, risk-adjusted outcomes data aggregated to the plan level by mandated enrollment status would have allowed a direct comparison of outcomes for those who enrolled via the mandate and those who voluntarily enrolled. Our models identified how risk-adjusted outcomes data aggregated to the statewide plan level varied by the percentage of the plan's enrollment that was mandated. Because of the importance of patient safety and quality of care, stronger empirical designs should be considered for future evaluations.

Consumer Satisfaction

Changes in the marketplace resulting from the large increases in MLTC enrollment, including the consequences of altered financial incentives, as well as additional administrative burdens for the plans or for consumers, raise concerns about consumers' ability to obtain timely care and their satisfaction with MLTC plans, case managers, and care providers. Again, the same factors affecting patient safety and quality of care discussed above, including public reporting, can apply to consumer satisfaction as well. Overall, satisfaction measures remained high with MLTC, with little evidence of decline from the measures included in our study. Only satisfaction

with case managers fell statistically significantly, and although each of the other measures declined, none were substantively or statistically significant. Thus, results indicate that MLTC plans were able to accommodate the large increases in enrollment without noticeably compromising consumer satisfaction with care.

As above, statistical power and causal inference were limited by data availability for the evaluation. Nevertheless, this evaluation found very limited evidence that the large increase in MLTC due to the implementation of mandatory MLTC enrollment resulted in reductions in patient safety, quality of care, or consumer satisfaction with care.

MLTC for the HCBS Expansion Population

The HCBS expansion population is a subset of MLTC enrollees who were transitioned from institutional to community settings. Because institutional care is often much more expensive than community-based care, this is an important population to examine, especially if the transition to the community can be facilitated by programs such as MFP. Concerns are legitimate over who should be eligible for transition, and whether patient safety and quality of care are affected after transition.

This evaluation only examined the trends among this HCBS expansion population after the policies were implemented and without a comparison group; therefore, our results are only descriptive in nature, and there are several important questions that remain unanswered. There were no significant changes in patient safety measures (percentages of enrollees with no emergency room visits and percentage of enrollees with no falls that required medical intervention or resulted in major or minor injuries), and a significant majority or more (65–85 percent) of the HCBS expansion population remained in the community within one year post-discharge.

Although we are unable to compare these results with those from an appropriate control group, the fact that residents were able to remain in the community for more than five months during 2016 and 2017, the years for which data were complete, is encouraging. Interestingly, there was a statistically significant trend of an increase in receipt of dental exams, which might be a consequence of the performance improvement project for MLTC enrollees during the study period. Questions remain, however, about whether MLTC has affected patient safety and quality of care among this subpopulation of MLTC enrollees; whether such an effect differs from that in the overall MLTC population; the extent to which MFP has played a role in the results we observed; whether the combination of MFP and MLTC improved the efficiency in delivering LTSS; and how the performance improvement project interacted with MLTC.

Twelve-Month Continuous Eligibility and Medicaid Enrollment

There was an overall increasing trend in average Medicaid enrollment duration after the implementation of the 12-month continuous eligibility policy. We found that the policy was

associated with an approximately 4 and 8 percent increase in enrollment duration among individuals enrolled in WMS and NYSoH, respectively. The policy impact in NYSoH could partially be attributed to the simplified and more convenient enrollment and renewal process under NYSoH versus WMS. The simultaneous implementation of the Medicaid expansion did not seem to affect the policy effect on enrollment because the estimates were similar after excluding the expansion population. In both NYSoH and WMS populations, we observed a statistically significant decline in annual patient admissions as well as in per member per month Medicaid cost. Combining the increase in enrollment months and the decrease in per member per month Medicaid cost, we estimated that the 12-month continuous eligibility policy has led to an increase in total Medicaid cost of about 3 percent. The State did make progress in reducing FFS enrollment and auto-assignment to a health plan at MMC enrollment start, although the proportion of MMC enrollees who stayed with the same plan after the 12-month recertification decreased during 2012–2018.

Policy Implications

An overarching question is whether the Medicaid Section 1115 Waiver Demonstration, specifically mandatory MLTC and 12-month continuous eligibility, has achieved its three goals of broadening access, increasing quality, and expanding coverage to more low-income New Yorkers. This interim evaluation assessed the first two goals. We observed a large and rapid increase in MLTC enrollment during 2012–2018, with about two-thirds of the mandate's effect realized in the first 19 months post-mandate. In addition, we found an approximately 4 to 8 percent increase in Medicaid enrollment duration attributable to the 12-month continuous eligibility policy, and we also observed a meaningful reduction in FFS enrollment in MMC enrollees during 2012–2018. No evidence was found of a decline in patient safety, quality of care, and consumer satisfaction associated with MLTC except for a decline in satisfaction with care managers. From a policymaker's perspective, increasing MLTC access without compromising care quality is certainly a win.

This evaluation of the effect of 12-month continuous eligibility on enrollment duration will likely contribute to the public knowledge of such programs, as there are only a few prior studies on the topic, and further evaluations using income data may generate additional insights that can inform CMS's decision. Since individuals' income can be updated on a real-time basis by beneficiaries in the NYSoH system and the State has other sources of income data, one possibility is to utilize these income data to evaluate the effect of continuous eligibility. Equipped with such data, we would be able to assess the extent to which income is updated in a timely manner in the NYSoH system and the proportion of individuals or enrollment months that would have been disenrolled from Medicaid had it not been for the continuous eligibility policy.

The third goal of the 1115 Demonstration is to improve efficiency so that more low-income New Yorkers can be covered. Although this is not covered in this final interim evaluation, it is an

important question to policymakers, and future evaluations may be warranted. It is plausible that MLTC generates efficiencies in spending. Because MLTC plans are paid on a capitated basis, they are incentivized to keep cost down. In particular, individuals newly admitted to nursing homes were required to enroll in MLTC during 2015–2018. MLTC plans would strive to keep nursing home–eligible individuals in the community, since nursing home care costs much more than HCBS does. If MLTC were more efficient in spending, the State would have more resources to expand coverage and access. Regarding the 12-month continuous eligibility policy among MAGI-eligible adults, it is expected that longer enrollment duration or a larger number of enrollment months would increase Medicaid spending. Such an increase in spending is partially offset by the decreased average monthly cost associated with the policy. Overall, we anticipate a net increase in Medicaid spending of about 3 percent. Policymakers may need to consider such cost implications when adopting a similar program.

One possible unintended consequence of managed care is decreased quality of care, and the disclosure of quality measures could be one way to address the concern. In fact, the State publishes annual MLTC reports, which has likely played an important role in our not finding that MLTC has compromised quality of care. Another approach is to utilize quality assurance programs. The performance improvement project adopted by the State is such an example. Every MLTC plan has to participate and work on one of the quality measures selected by NYS DOH. Public reporting of quality of care leverages the market mechanism to ensure the level of quality because plans have to compete for consumers; whether it can improve or stabilize quality of care hinges on the assumption that consumers need quality information to choose a plan and know where to find such information. In contrast, quality assurance programs utilize administrative processes, the success of which depends on their implementation. Of course, both public reporting of care quality and quality assurance programs could increase MLTC plans' operating cost. It is unclear to what extent public reporting of quality and quality assurance programs have affected patient safety and quality of care. Future evaluations may examine this question and give a definitive answer.

Summary

Our analyses suggest that the MLTC program under the 1115 Demonstration has achieved its goal of increasing access to LTSS via MLTC, as illustrated by the rapid expansion of MLTC across the State from 2012–2018. There is little evidence suggesting that the expansion has led to a significant change in patient safety, quality of care, or consumer satisfaction. We also found that the 12-month continuous eligibility policy was associated with statistically significant increases in enrollment duration, outpatient visits, and decreases in inpatient admissions and per member per month Medicaid cost. When considering both increases in enrollment and decreases in per member per month Medicaid cost, the 12-month continuous eligibility policy is associated with a small net increase in total Medicaid cost. Finally, during 2012 through 2018, descriptive

trends show that the State has been able to reduce the length of FFS enrollment among MMC enrollees, which is in line with the first goal of the 1115 Demonstration to enroll a majority of Medicaid beneficiaries into managed care. The results for the most recent demonstration period covered by the data under this interim evaluation, i.e., December 2016 to December 2018 or 2019, showed similar trends and patterns to those from earlier post-policy years except that the MLTC mandate's impact on enrollment had stabilized by the end of 2016.

In brief, the State has achieved the Demonstration's first goal: expanding access to managed care through mandatory MLTC enrollment and 12-month continuous eligibility. We did not find evidence to support the second goal—improving quality of care—but increasing access without compromising quality of care is a success in its own right. Questions remain about whether the MLTC mandate has achieved the third goal of the Demonstration—generating efficiencies in spending—and the extent to which public reporting and quality assurance programs have affected quality of care. Future evaluations may be conducted to answer these questions to guide state policies.

6. Interactions with Other State Initiatives

This chapter describes other State initiatives happening at the same time as the MLTC and 12-month continuous eligibility programs and then describes how they are related to each other and could have affected the results of this evaluation.

Other State Initiatives

The Performance Improvement Project for MLTC Plans

The Quality Strategy for the New York State MMC program is a requirement of New York State's 1115 Waiver to ensure the quality of care of Medicaid managed care plans (NYS DOH, 2018). As part of the Quality Strategy Program, since 2015, all MLTC plans are required to participate each year in the Performance Improvement Project (PIP). Plans can choose one of the approved PIP topics, work with an external quality review organization as well as NYS DOH, develop and conduct an intervention to improve the quality of care on the chosen topic, collect data, and submit a final report. PIP topics include both clinical and non-clinical areas. For example, the 2015–2016 PIP topics included depression management, pain management, falls, advanced directives, emergency preparedness, and preventive screenings such as eye, ear, and dental exams. Influenza and pneumonia immunizations, emergency room visit and hospitalization reductions, and diabetic care were added to 2017–2018 PIP topics, but pain management and emergency preparedness were dropped.

The Federal Money Follows the Person Rebalancing Demonstration Program

In 2007, the Federal Money Follows the Person Demonstration grants, authorized first by the 2005 Deficit Reduction Act and then by the 2010 Affordable Care Act, were secured by the State to shift LTSS delivery from institutional services to HCBS. This program helps Medicaid beneficiaries transition from institutions to communities by providing information about options for living in the community, identifying services and supports available in the community, and checking in with beneficiaries on a regular basis after the transition. See more details in Chapter 2 of this interim report.

The Long-Term Home Health Care Program

The Long-Term Home Health Care Program is a 1915(c) waiver to provide HCBS to individuals who would otherwise stay in a nursing facility (NYS DOH, 2012a). Its goal was to allow eligible individuals to stay in the community, prevent institutionalizations, and avoid costly medical events. The waiver was initially approved by CMS in 1983 and needed to be

renewed every five years. The most recent renewal required new policies and procedures in place to improve care planning, participant choice and satisfaction, and quality of care, and to provide case management by registered nurses. To qualify for the program, individuals were required to be eligible for Medicaid, need a nursing facility level of care, and obtain physician approval that they would be able to remain at home medically.

The program was terminated in 2013, and therefore would present possible interactions only at the beginning of our study period. All non–dually eligible participants in the program were required to be transitioned to a mainstream MMC or an MLTC plan if available (NYS DOH, 2013b). The dually eligible participants who were 21 years or older and needed LTSS for more than 120 days were required to join an MLTC plan.

Other HCBS-Related Initiatives

There are several other HCBS-related state initiatives, including

- the Nursing Home Transition and Diversion Medicaid Waiver
- the Traumatic Brain Injury Waiver
- the Office for People with Developmental Disabilities Comprehensive Waiver
- the Community First Choice Option.

The first three initiatives are 1915(c) waivers. The Nursing Home Transition and Diversion Medicaid Waiver provides HCBS services, including community transitional services, moving assistance, and home-delivered meals, to individuals 65 years and older or those age 18–64 with physical disabilities; the goal is to help beneficiaries transition to and stay in the community or avoid institutional services (diversion) (NYS DOH, 2008). The Traumatic Brain Injury Waiver provides HCBS to help individuals, age 18–64, upon application, with a traumatic brain injury transition from institutional care or stay in the community (NYS DOH, 2009). The Office for People with Developmental Disabilities Comprehensive Waiver provides community habilitation, live-in caregiving, and other supports to individuals with autism, intellectual disabilities, or developmental disabilities (NYS DOH, 2020c). However, the populations covered under these 1915(c) waivers is excluded from MLTC.

The Community First Choice Option was authorized by the Affordable Care Act and provides HCBS to individuals eligible for the State plan, such as assistance with activities of daily living, improving and maintaining individual skills to accomplish activities of daily living, and care management (Centers for Medicare & Medicaid Services, 2015). Participants must need an institutional level of care and be eligible for HCBS under the State Plan. Participants are not excluded from receiving services from other HCBS programs, but they should not receive duplicative services. So far, New York State has implemented only part of the waiver.[23]

[23] Based on our communication with NYS DOH in October 2020.

Initiatives That May Affect Patient Safety, Quality of Care, and Consumer Satisfaction

There are initiatives under the Affordable Care Act or the Medicare Access and CHIP Reauthorization Act that have likely affected patient safety and quality of care among individuals enrolled in MLTC, such as provisions that incentivize providers or insurers to improve quality of care. In particular, the State launched the Delivery System Reform and Incentive Payment Initiative, authorized by CMS as part of the State's Medicaid Section 1115 Waiver in 2014 (Weller et al., 2019). The initiative aimed to invest $6.4 billion to reduce avoidable hospital use by 25 percent during 2014–2019. The initiative uses incentive payments to promote delivery system transformation and improve clinical quality of care and population health.

Medicaid Expansion and Health Insurance Exchange

Under the Affordable Care Act, starting in 2014, NYS established new eligibility criteria and expanded its Medicaid program to cover more individuals (NYS DOH, 2013d). For example, the eligibility for childless adults increased from 100 to 138 percent of the federal poverty level; for pregnant women, it increased from 200 to 223 percent; for children age 6–18, it changed from 110 to 154 percent. By June 2019, the State had enrolled 1.8 million individuals under this Medicaid expansion (Kaiser Family Foundation, 2019).

In 2012, the State launched a health plan marketplace, NYSoH. During 2013, only 61,625 individuals eligible for Medicaid enrolled through NYSoH (NYSoH, 2014). Starting in January 2014, at the same time of the Medicaid coverage expansion, new MAGI-eligible individuals had to apply for Medicaid through NYSoH, and LDSS started to enroll and renew non-MAGI eligible individuals in the system as well. By the end of 2018, there were 3,287,846 individuals who enrolled in Medicaid through NYSoH (NYSoH, 2019).

The application, enrollment, and managed care plan selection process differs between NYSoH and WMS.[24] Prior to NYSoH, an individual who would become MAGI eligible starting in 2014 needed to submit a pre-populated paper form to a local department of social services, which would verify the information and provide a signature to enroll that individual into the Medicaid program. The renewal would go through a similar process. Under NYSoH, eligible individuals can create an account and submit and update information online, including their family income. When an individual's income changes, there will be no gaps in insurance coverage if that individual remains eligible for Medicaid. In addition, NYSoH staff are allowed to use other electronic databases to verify information such as income and renew enrollment directly, without needing to obtain any documentation from eligible individuals.

[24] Based on our communication with NYS DOH in February 2021.

Potential Interactions with Other State Initiatives

MLTC Enrollment and Quality of Care

All MLTC plans are required to participate in the PIP initiative, and these plans conduct various interventions to improve their operation through improving care coordination, increasing the utilization of assessment and home visits, and educating care managers (NYS DOH, 2018). These interventions could affect the outcomes of interest in this evaluation. For example, during 2017–2018, according to our communication with NYS DOH, 6 (16 percent), 8 (22 percent), and 9 (24 percent) out of 37 plans selected falls, preventive screenings (eye, ear, and dental exams), and emergency room visit and hospitalization reduction, respectively, for their interventions under PIP. In other words, the PIP initiative could contribute to the data we observed. However, a visual inspection of the descriptive figures in Domain 1 does not indicate a significant trend in the improvement of outcome measures, except the dental exam among the HCBS expansion population, and neither do our regression results.

The MFP program provides assistance to individuals transitioning from an institution to the community and helps eligible individuals enroll in an MLTC plan or other qualified constituent programs. In this regard, the MFP program could increase MLTC enrollment. However, given the relatively small number of beneficiaries served (3,259 during 2009–2020)[25] and the large MLTC enrollment (245,973 as of 2018), the overall impact on MLTC might not be significant.

Since the MLTC mandate implementation started in September 2012—and the Long-Term Home Health Care Program was terminated in 2013, and all dually eligible participants in the program were required to transition to MLTC—we do not expect it to have affected the data we observed, except that MLTC enrollment increased during the transition period. Similarly, other 1915(c) waivers are unlikely to affect MLTC because the populations served do not overlap with that of the MLTC program. The Community First Choice Option initiative is unlikely to have affected MLTC because it has been implemented partially.[26]

Finally, the value-based care initiatives under the Affordable Care Act, the Medicare Access and CHIP Reauthorization Act, and the Delivery System Reform and Incentive Payment Initiative could have impacted outcomes related to patient safety and quality of care. For example, emergency room visits, potentially avoidable hospitalizations, and influenza vaccination could be part of value-based payment initiatives, although the impact of these initiatives on outcomes among the MLTC population is difficult to quantify. Given the MLTC data limitations, we were not able to tease out the effect of these initiatives in our estimates.

[25] Based on the unpublished materials provided by NYS DOH in June 2020.

[26] Based on our communication with NYS DOH in October 2020.

Medicaid Enrollment

One of the key evaluation components is 12-month continuous eligibility, the effect of which is related to the Medicaid expansion under the Affordable Care Act and the use of NYSoH. Prior to the Medicaid expansion, the eligibility criteria of the State Medicaid program were not very different from those stipulated in the Affordable Care Act. As a result, the expansion increased the target population only slightly. Nonetheless, the expansion was implemented at the same time as 12-month continuous eligibility, and we might not be able to separate the effects of the two. Similarly, most managed care plan enrollees started using NYSoH after 2013. NYSoH has led to a large improvement in the processes for application submission, documentation requirements, enrollment, and renewal in comparison to the WMS system. These process improvements have the potential to reduce disenrollment and increase enrollment duration. Such simultaneous changes have imposed challenges in separating the effects of these improvements from that of 12-month continuous eligibility.

Appendix

A. Data Sources

Table A1. Data Sources Used in the Evaluation

Data Source	Description
MLTC enrollment data	The data contain 2010–2018 MLTC enrollment by county, by month, and by plan name and plan type.[27]
Medicaid Data Warehouse[28]	This data set includes Medicaid eligibility data, managed care enrollment, and encounter and payment data. In addition, it includes Clinical Risk Group, which reflects an individual's clinical risk.
Minimum Data Set (MDS 3.0)	MDS 3.0 is a federally required standardized, comprehensive assessment for all residents of long-term care facilities. It includes demographic information, as well as measures of health status and functional capability.
MLTC satisfaction data	In 2007, NYS DOH, in consultation with the MLTC plans, developed a satisfaction survey of MLTC enrollees. The survey was field tested and is now administered by NYS DOH's external quality review organization, Island Peer Review Organization. NYS DOH sponsors the biennial MLTC satisfaction survey, which contains three sections: health plan satisfaction; satisfaction with select providers and services, including timeliness of care and access; and self-reported demographic information.
Money Follows the Person (MFP) master data	In January 2007, CMS approved New York´s application to participate in the MFP Rebalancing Demonstration Program. The MFP Demonstration, authorized under the Deficit Reduction Act and extended through the Affordable Care Act, involves transitioning eligible individuals from long-term institutions, such as nursing facilities and intermediate care facilities, into qualified community-based settings.
Semi-Annual Assessment of Members (SAAM)[29]	The MLTC plans were required to collect and report to the NYS DOH information on enrollees' levels of functional and cognitive impairment, behaviors, and clinical diagnoses. SAAM is a modified version of the federal (Medicare) Outcome and Assessment Information Set (OASIS-B) and was utilized from 2005 to 2013. This information was collected at enrollment and then semi-annually thereafter or following any significant event. Effective October 1, 2013, the UAS-NY CHA replaced the SAAM.

[27] 2009–2011 files: NYS DOH, 2013a. 2012–2018 enrollment files: NYS DOH, 2020b.

[28] Descriptions are from the RFP for this work (NYS DOH, 2019a) Redesign Team, Section 1115 Demonstration.

[29] Description adapted from the NYS DOH webpages on MLTC Policy 13.09 (NYS DOH, 2019c) and 13.09(a) (NYS DOH, 2019d).

Data Source	Description
Statewide Planning and Research Cooperative System (SPARCS)	SPARCS is an all-payer hospital database in NYS. UAS-NY records can be matched to SPARCS data.
Uniform Assessment System for New York (UAS-NY) Community Health Assessment Data (CHA)	MLTC plans are required to collect and report to NYS DOH information on enrollees' levels of functional and cognitive impairment, behaviors, and clinical diagnoses. The UAS-NY CHA is one of the interRAI suite of assessment instruments. It is administered to MLTC enrollees both in facilities and in the community. This information is collected at enrollment and then semi-annually thereafter.

B. Regression Methods

Domain 1, Component 1, Goal 1: MLTC Enrollment

For the regression analysis of the MLTC enrollment, we specified the following model. Let Y_{jt} denote the enrollment rate for county j in month t, where

$$Y_{jt} = \alpha_j I_j + q(t;\beta) + S(s;\gamma) \qquad \text{Equation (1)}$$

In the above equation, Y_{jt} is the MLTC enrollment rate in region j in month t; I is a vector of indicator variables that identify regions, and the parameters α are the region-level fixed effects estimates; $q(t;\beta)$ is a flexible function of calendar time (t) and parameters (β). In our specification, calendar time was specified in months, which is a natural choice to delineate non-parametric trends given the nature of our data. $S(s;\gamma)$ is a function of time in months since MLTC enrollment became mandatory (s) and parameters (γ), allowing us to characterize the transition period from implementation until the policy's full effect (or steady state) is achieved. Note that the time at which MLTC became mandatory varied across the State, so s and t are not linearly dependent and the effects of each can be identified. For example, if t *i*s specified in months and the mandate became effective in a region in $t = 4$, then $s = 1$ in month 4 for that region, $s = 2$ in month 5, and so on. Note that indicators for mandatory regions versus non-mandatory regions and for the post-mandate time period are not needed in Equation (1) because they are absorbed in I and $S(s;\gamma)$, respectively. The parameter vector γ characterizes the difference-in-differences estimate of the mandate's effect on the MLTC enrollment in s. By specifying $S(s;\gamma)$ as a flexible function of s, γ can characterize the policy effect smoothly over time since implementation, allowing us to derive the length of time it took (on average) for the enrollment to stabilize.

Domain 1, Component 1, Goal 2–5: Patient Safety, Quality of Care, and Consumer Satisfaction Among the MLTC Population

The statistical model for the analysis of patient safety, quality of care, and consumer satisfaction was specified as

$$Y_{jt} = \beta_M M_{jt} + \gamma_j + \epsilon_{jt} \qquad \text{Equation (2)}$$

where Y_{jt} is the difference between a risk-adjusted outcome for plan *j* in time-period *t* (defined as six-month intervals based on the data provided by the State) and the statewide average outcome across all plans in period *t*; M_{jt} is a measure of the fraction of a plan's total enrollment that is subject to mandatory enrollment in the six months prior to *t*; γ_j is a fixed effect for plan *j;* and ε_{jt} is an error term.

Because Y_{jt} was constructed as the difference between the statewide average score across plans and a plan's score for each outcome and for each year, the mean of Y_{jt} across plans in each year is zero by construction. Thus, a meaningful time effect cannot be identified in any comparisons of Y_{jt} over time. In addition, we did not use analytic weights based on the plan size in terms of the number of enrollees. We aimed to examine how the variation in the fraction of enrollees under the mandate is associated with outcomes. Most of the enrollees are in the New York City region and plans in the region are large, so using analytic weights that account for the number of enrollees in each plan would lead to the dominance of New York City plans. Instead, the same weight for each of the observations was used to allow the variation in the fraction of enrollment under the mandate in order to identify the mandate's effect on outcomes. One concern of not using analytic weights may be heteroskedasticity in the error term, which could result in incorrect standard error estimates. To resolve this concern, we estimated Huber-White standard errors, clustered at the plan level (Huber, 1964).

Domain 2, Goal 2: 12-Month Continuous Eligibility

For question 3, we conducted a monthly level discrete time survival model using a logistic regression.

$$\text{logit}(p) = h(t;\alpha) + T * h(t;\gamma) + P * h(t;\eta) + T * P * h(t;\omega) + \delta X, \qquad \text{Equation (3)}$$

where $h(t)$ is the non-parametric baseline hazard at the monthly level; *P* is the post-policy indicator; *T* is a treatment group indicator variable that identifies individuals who are covered by the newly expanded 12-month continuous eligibility; and *X* is a vector of individual characteristics at enrollment start. Although we could operationalize Equation (3) with time-varying *P*, we assumed those who originally enrolled prior to January 2014 would likely have different post-policy period experiences than those that originally enrolled after December 2013. We also assumed that enrollment experiences after December 2013 for those with continuing spells would not be the same as if the continuous eligibility policy were not imposed. We therefore censored all pre-policy enrollment episodes in December 2013, resulting in a maximum duration of 24 months for the pre-policy period.

For question 4, we used estimates from Equation (3) to generate survivor function values for months 12 and 24 separately for the pre-policy and post-policy periods. These provide estimates of the probability of surviving 12 and 24 months, respectively, to address the question.

For question 5, we use generalized linear models to estimate the policy's impact on cost and utilization. Due to the sheer amount of data, we did not run enrollee-month level models.

$$g(Y_{it}) = q(t;\alpha) + \beta T_{it} + \theta * T_{it} * q(t) + \delta X_{it}, \qquad \text{Equation (4)}$$

where *g(.)* is a log link function; the family is Poisson for utilization or Gaussian for cost; *Y* is the average monthly cost or annual utilization; and $q(t;\beta)$ is a function of calendar time (t) and parameters (β). Other covariates are as defined in Equation (3). Because negative binomial models did not converge for utilization measures, we opted to use a two-part model, where the first part is a logistic regression to model whether there was any utilization, and the second part is a Poisson model with the dependent variable truncated at zero. If a Poisson model did not converge or the estimates were unstable, we used a linear regression model. We bootstrapped to obtain 95 percent confidence intervals for this two-part model based on 100 replications. We did not use individual fixed effects in this model because only the episodes that crossed over January 2014 would contribute to the estimate of the policy's impact.

C. Criteria Used to Identify Individuals Excluded or Exempt from Medicaid Managed Care

Table A2. Medicaid Populations Excluded from MMC Enrollment

Population	Definition
Resident of State-operated psychiatric facilities	Individuals in receipt of inpatient services at State-operated psychiatric facilities
Residents of State-certified or voluntary operated treatment facilities for children	Medical facilities certified by Office of Mental Health (OMH) that provide for long term psychiatric care for persons 21 years of age and younger
Medicaid eligible infants living with incarcerated mothers in state or local correctional facilities	Infants living in correctional facilities (Taconic Hills and Bedford Hills) with their mothers. Usually lasts up to age 1
Individuals who are expected to be Medicaid eligible for less than 6 months (except for pregnant women)	Medicaid case is closing within 6 months. This does not include cases that are scheduled to renew in 6 months
Blind or disabled children living separate from their parents for 30 days or more	Children under age 18, Certified Blind or disabled, living in a medical facility/separate residence from parents for 30 days or more
Permanent residents, under age 21, of residential health care facilities (RHCF) and temporary residents of RHCFs at the time of enrollment	Individuals under age 21 who are permanently placed in an RHCF are excluded, and individuals who are temporarily placed in an RHCF at the time of enrollment are excluded
Adolescents admitted to Residential Rehabilitation Services for Youth (RRSY)	The RRSY program serves chemically dependent individuals under age 21
Individuals receiving hospice services at time of enrollment	Individuals receiving hospice at time of enrollment are excluded. Current enrollees who begin to receive hospice remain enrolled

Population	Definition
Individuals with access to comprehensive private health insurance	Comprehensive insurance covers most medical services; Major Medical, Inpatient, ED, Physician, Durable Medical Equipment, Clinic, Substance Abuse, Mental Health.
Persons in receipt of Medicaid/Medicare	Medicare recipients are excluded from MMC but can enroll in Medicaid Advantage or MLTC
Foster care children placed by voluntary agencies or in the care and custody of the Office of Children and Family Services	Local Districts that utilize foster care voluntary agencies to place children in the community or facilities
Spend-down medically needy	Individuals who have to spend some of their own money for medical needs on a monthly basis to receive Medicaid
Individuals under 65 years of age who have been determined eligible by the Medicaid Cancer Treatment Program: Breast, Cervical, Colorectal, Prostate Cancer	Medicaid eligibility through District 99
Individuals receiving family planning services only	Individuals who are not fully eligible for Medicaid but are eligible to receive family planning services through the Family Planning Benefit Program
Individuals receiving assistance through an Assisted Living Program (ALP)	ALPs are jointly licensed as adult care facilities and licensed home care services agencies (LHCSAs) and provide room, board, personal care services, and medication case management.
District 97, Fiscal responsibility of State OMH	Medicaid eligibility through District Code 97
District 98, Fiscal responsibility of State Office of Persons with Developmental Disabilities (OPWDD)	Medicaid eligibility through District Code 98

NOTE: Provided by NYS DOH in December 2020.

Table A3. Medicaid Populations Exempt from MMC Enrollment

Population	Definition
Residents of Intermediate Care Facilities for the Developmentally Disabled	A resident of an Intermediate Care Facility (ICF/MR) who has a developmental disability and lives in a residence that is operated by the State or by a private agency such as ARC. At this residence, the person receives room and board, ongoing health services, and training in skills that encourage independence
OPWDD Home and Community Based Services (HCBS) Waiver	An individual has a diagnosis of a developmental disability, is eligible for an ICF/MR level of care, and has chosen HCBS waiver services over institutional care.
OPWDD Waivered Services	Individuals who are qualified and identified by OPWDD to receive any program services through OPWDD.
Individuals with chronic medical conditions being treated by a specialist not participating in any MA managed care plan in the service area (exemption limited to 6 months)	Individual who is not currently enrolled in an MMC health plan who has a medical condition and is currently under the care of a physician specialist, with at least a 6-month treatment plan for ongoing care. This includes individuals scheduled for surgery within 30 days of enrollment with a surgeon that does not participate with any managed care organization. See the Exemption Request Form for criteria to meet this exemption.
Residents of Title 14 NYCRR Part 819 Chemical Dependence Long Term Residential Program	Individuals residing in a facility including drug-free residential communities (therapeutic communities), recovery homes, community residences and supportive living facilities. A letter from residence Director or Program Supervisor on program letterhead that verifies that the individual is a resident is required. Exemption applies only until individual leaves residence.
Native American or Alaskan Native	Individuals who have Native American or Alaska Native heritage. Individual need only to attest to this heritage.
Nursing Home Transition and Diversion Medicaid Waiver	Individuals aged 18–64 with a physical disability, or age 65 and older upon application to the waiver. All individuals need to be assessed to need nursing home level of care and choose to live in the community rather than in a nursing facility.
Traumatic Brain Injury Medicaid Waiver (TBI)	Individuals aged 18–64 with a primary diagnosis of TBI or similar non-degenerative condition that results in deficits similar to a TBI such as stroke or anoxia. All individuals need to be assessed to need nursing home level of care and choose to live in the community rather than in a nursing facility

NOTE: Provided by NYS DOH in December 2020.

D. Additional Results

Table A4. Number of MLTC Plans by Region, Year, and Plan Type

	Geographic Region												
Year/Plan Type	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
2010													
FIDA	0	0	0	0	0	0	0	0	0	0	0	0	0
PACE	2	1	0	4	0	0	1	0	0	1	0	1	2
Partial Capitation	10	3	3	1	0	1	0	0	0	0	0	0	0
MAP	7	0	1	2	1	2	2	1	1	0	0	0	0

	Geographic Region												
Year/Plan Type	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Total	**19**	**4**	**4**	**7**	**1**	**3**	**3**	**1**	**1**	**1**	**0**	**1**	**2**
2011													
FIDA	0	0	0	0	0	0	0	0	0	0	0	0	0
PACE	2	1	0	4	0	0	1	0	0	2	0	1	2
Partial Capitation	10	3	2	1	0	1	0	0	0	0	0	0	0
MAP	7	0	1	2	1	2	2	2	1	0	0	0	0
Total	**19**	**4**	**3**	**7**	**1**	**3**	**3**	**2**	**1**	**2**	**0**	**1**	**2**
2012													
FIDA	0	0	0	0	0	0	0	0	0	0	0	0	0
PACE	2	1	0	4	0	0	1	0	0	2	0	1	1
Partial Capitation	18	12	4	4	2	2	1	3	0	1	0	0	1
MAP	9	2	1	2	1	2	2	2	1	0	0	0	0
Total	**29**	**15**	**5**	**10**	**3**	**4**	**4**	**5**	**1**	**3**	**0**	**1**	**2**
2013													
FIDA	0	0	0	0	0	0	0	0	0	0	0	0	0
PACE	2	1	0	4	0	0	1	0	0	2	0	1	1
Partial Capitation	25	18	8	7	5	4	2	3	1	2	1	1	1
MAP	10	4	0	2	1	2	2	2	1	0	0	0	0
Total	**37**	**23**	**8**	**13**	**6**	**6**	**5**	**5**	**2**	**4**	**1**	**2**	**2**
2014													
FIDA	0	0	0	0	0	0	0	0	0	0	0	0	0
PACE	2	1	0	4	0	0	1	0	0	1	0	1	1
Partial Capitation	25	18	9	9	5	6	4	5	2	5	2	1	2
MAP	10	4	0	1	0	1	1	1	0	0	0	0	0
Total	**37**	**23**	**9**	**14**	**5**	**7**	**6**	**6**	**2**	**6**	**2**	**2**	**3**
2015													
FIDA	21	13	0	0	0	0	0	0	0	0	0	0	0
PACE	2	1	0	4	0	0	1	0	0	1	0	1	1
Partial Capitation	25	17	10	11	7	7	4	9	3	8	5	2	4
MAP	8	4	0	2	0	1	1	1	0	0	0	0	0
Total	**56**	**35**	**10**	**17**	**7**	**8**	**6**	**10**	**3**	**9**	**5**	**3**	**5**
2016													
FIDA	20	13	0	0	0	0	0	0	0	0	0	0	0
PACE	2	1	0	5	0	0	1	0	0	1	0	1	1
Partial Capitation	24	17	10	12	8	6	5	9	4	9	6	2	4
MAP	8	5	0	1	0	1	1	1	0	0	0	0	0
Total	**54**	**36**	**10**	**18**	**8**	**7**	**7**	**10**	**4**	**10**	**6**	**3**	**5**

	Geographic Region												
Year/Plan Type	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
2017													
FIDA	17	11	0	0	0	0	0	0	0	0	0	0	0
PACE	2	1	0	5	0	0	1	0	0	1	1	1	1
Partial Capitation	23	17	9	11	8	6	4	9	4	8	6	2	4
MAP	8	5	0	1	0	1	1	1	0	0	0	0	0
Total	**50**	**34**	**9**	**17**	**8**	**7**	**6**	**10**	**4**	**9**	**7**	**3**	**5**
2018													
FIDA	13	7	0	0	0	0	0	0	0	0	0	0	0
PACE	2	2	0	5	0	0	1	0	0	1	1	1	1
Partial Capitation	22	17	9	11	8	6	4	9	4	8	6	2	4
MAP	9	4	0	2	0	2	2	2	0	0	0	0	0
Total	**46**	**30**	**9**	**18**	**8**	**8**	**7**	**11**	**4**	**9**	**7**	**3**	**5**

Note: Regions:

1–New York City (Bronx, Kings, New York, Queens, Richmond);
2–Nassau, Suffolk, Westchester;
3–Orange, Rockland;
4–Albany, Erie, Monroe, Onondaga;
5–Columbia, Putnam, Sullivan, Ulster;
6–Cayuga, Herkimer, Oneida, Rensselaer;
7–Greene, Saratoga, Schenectady, Washington;
8–Broome, Dutchess, Fulton, Montgomery, Schoharie;
9–Delaware, Warren;
10–Madison, Niagara, Oswego;
11–Chenango, Cortland, Genesee, Livingston, Ontario, Orleans, Otsego, Steuben, Tioga, Tompkins, Wayne, Wyoming;
12–Cattaraugus.
13–Allegany, Chautauqua, Chemung, Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, Schuyler, Seneca, St Lawrence, Yates

Table A5. Percentage with a Continuous Enrollment of 12, 24, or 36 Months or More Among Individuals Targeted by 12-Month Continuous Eligibility in WMS, by Demographics

Category	Enrollment Duration	2012	2013	2014	2015	2016	2017
Age							
<18	≥ 12 months	76	66	57	56	54	60
	≥ 24 months	27	18	29	35	35	-
	≥ 36 months	13	12	22	28	-	-
18–35	≥ 12 months	40	34	46	47	45	51
	≥ 24 months	17	14	29	29	24	-
	≥ 36 months	8	7	19	19	-	-
36–45	≥ 12 months	46	37	62	64	54	61
	≥ 24 months	20	16	46	46	34	-
	≥ 36 months	10	10	34	36	-	-
46–55	≥ 12 months	52	46	60	64	62	67
	≥ 24 months	28	25	44	48	44	-
	≥ 36 months	19	19	35	40	-	-
56–65	≥ 12 months	67	63	66	70	71	76
	≥ 24 months	50	47	54	57	58	-
	≥ 36 months	42	40	47	50	-	-
Race							
White	≥ 12 months	46	39	55	54	47	54
	≥ 24 months	22	19	39	37	32	-
	≥ 36 months	13	13	28	29	-	-
Black	≥ 12 months	45	39	48	51	53	59
	≥ 24 months	21	18	30	32	31	-
	≥ 36 months	13	13	21	24	-	-
Hispanic	≥ 12 months	46	42	57	63	63	70
	≥ 24 months	25	24	43	48	42	-
	≥ 36 months	17	16	33	35	-	-
Other	≥ 12 months	54	45	61	67	67	72
	≥ 24 months	28	24	47	51	48	-
	≥ 36 months	18	17	38	43	-	-
Region							
New York City	≥ 12 months	47	40	54	60	62	65
	≥ 24 months	22	19	39	44	39	-
	≥ 36 months	13	13	31	35	-	-
non-New York City	≥ 12 months	46	41	55	49	40	45
	≥ 24 months	23	21	36	29	26	-
	≥ 36 months	13	12	22	20	-	-

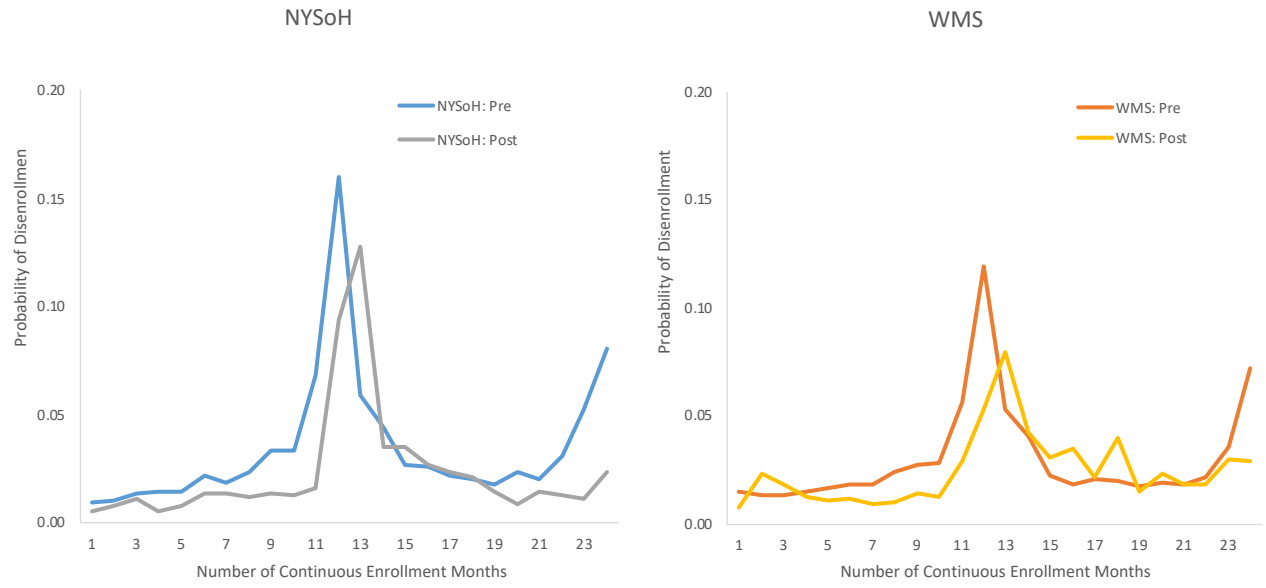
NOTE: "-" means not applicable.

Table A6. Percentage with a Continuous Enrollment of 12, 24, or 36 Months or More Among Individuals Targeted by 12-Month Continuous Eligibility in NYSoH, by Demographics

Category	Enrollment Duration	2012	2013	2014	2015	2016	2017
Age							
<18	≥ 12 months	76	66	76	73	61	50
	≥ 24 months	27	18	63	61	27	-
	≥ 36 months	13	12	45	50	-	-
18–35	≥ 12 months	40	34	63	41	50	55
	≥ 24 months	17	14	24	21	29	-
	≥ 36 months	8	7	13	14	-	-
36–45	≥ 12 months	46	37	66	41	52	60
	≥ 24 months	20	16	28	23	34	-
	≥ 36 months	10	10	17	17	-	-
46–55	≥ 12 months	52	46	68	44	56	62
	≥ 24 months	28	25	33	27	37	-
	≥ 36 months	19	19	22	20	-	-
56–65	≥ 12 months	67	63	72	52	62	65
	≥ 24 months	50	47	42	37	45	-
	≥ 36 months	42	40	3%	30	-	-
Race							
White	≥ 12 months	46	39	65	49	55	60
	≥ 24 months	22	19	31	28	34	-
	≥ 36 months	13	13	20	20	-	-
Black	≥ 12 months	45	39	67	49	52	55
	≥ 24 months	21	18	34	28	30	-
	≥ 36 months	13	13	22	20	-	-
Hispanic	≥ 12 months	46	42	75	62	66	73
	≥ 24 months	25	24	50	47	52	-
	≥ 36 months	17	16	43	42	-	-
Other	≥ 12 months	54	45	76	41	58	62
	≥ 24 months	28	24	35	26	40	-
	≥ 36 months	18	17	25	20	-	-
Region							
New York City	≥ 12 months	47	40	65	41	51	57
	≥ 24 months	22	19	28	23	32	-
	≥ 36 months	13	13	18	17	-	-
non-New York City	≥ 12 months	46	41	65	47	53	60
	≥ 24 months	23	21	31	26	32	-
	≥ 36 months	13	12	19	18	-	-

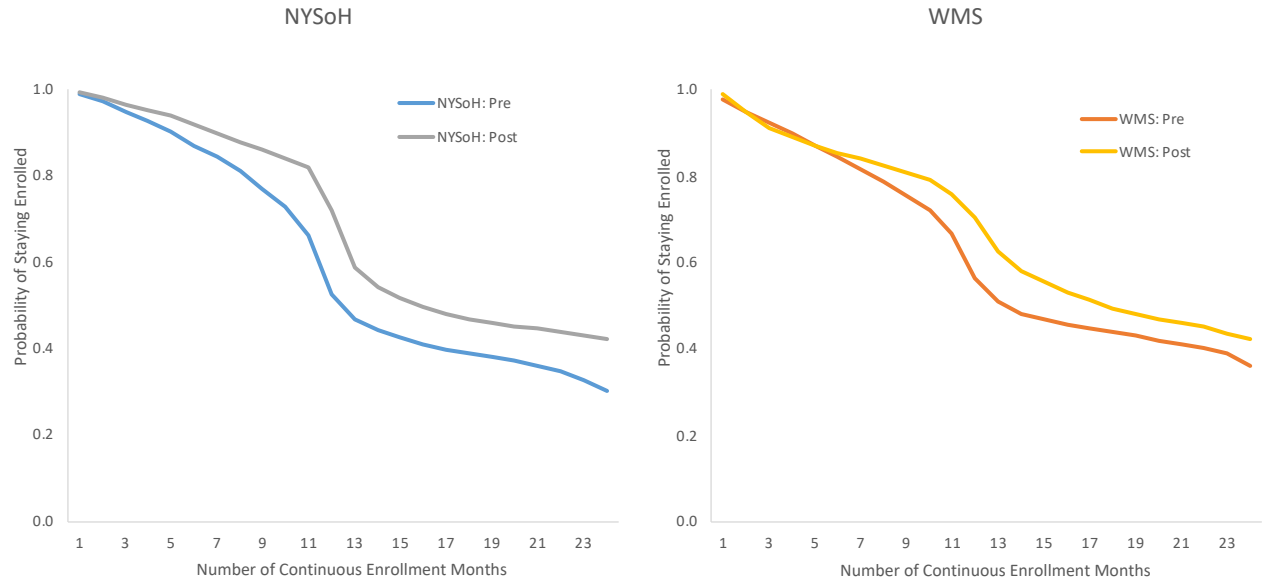
NOTE: "-" means not applicable.

Figure A1. Probability of Disenrollment, Adjusted for Demographics and Health Status



NOTE: The results are predicted monthly disenrollment probabilities based on regression output and reflect the difference-in-differences estimates of the 12-month continuous eligibility's impact.

Figure A2. Probability of Continuous Enrollment, Adjusted for Demographics and Health Status



NOTE: The results are predicted monthly probabilities of continuous enrollment based on regression output and reflect the difference-in-differences estimates of the 12-month continuous eligibility's impact. The area between the two curves represents the cumulative effect of the policy on the number of enrollment months in a 24-month period.

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