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Minnesota Demonstration to Align Administrative Functions for Improvements in Beneficiary Experience

Second Evaluation Report

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MINNESOTA DEMONSTRATION TO ALIGN ADMINISTRATIVE FUNCTIONS FOR IMPROVEMENTS IN BENEFICIARY EXPERIENCE: SECOND EVALUATION REPORT

by

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Executive Summary

The Medicare-Medicaid Coordination Office and the Innovation Center at the Centers for Medicare & Medicaid Services (CMS) have created the State Demonstrations to Integrate Care for Dual Eligible Individuals (SDIC) and the Medicare-Medicaid Financial Alignment Initiative to test, in partnerships with States, integrated care models for Medicare-Medicaid enrollees. CMS contracted with RTI International to monitor the implementation of the demonstrations and to evaluate their impact on beneficiary experience, quality, utilization, and cost. The evaluation will include a final aggregate report and State-specific evaluation reports.

The Minnesota Demonstration to Align Administrative Functions for Improvements in Beneficiary Experience is a statewide initiative intended to further strengthen integration of the existing plans participating in the long-running Minnesota Senior Health Options (MSHO), an integrated Medicare-Medicaid program that began in 1997. This demonstration (1) authorizes a set of administrative activities designed to better align the Medicare and Medicaid policies and processes involved in the MSHO program; and (2) formalizes certain prior informal agreements between CMS and Minnesota that allowed flexibility for the Medicare Advantage Dual Eligible Special Needs Plans (D-SNPs) participating in MSHO, because of the integrated nature of the program. The demonstration does not fundamentally change benefits packages, choice of plans and providers for beneficiaries, or the way in which the MSHO plans contract with either the State or CMS. Nor does it change the prevailing enrollment process for MSHO (MOU, 2013).

During the time frame covered by this report (demonstration initiation through June 2017), the following provisions of the CMS/Minnesota Memorandum of Understanding (MOU) were successfully implemented by CMS and Minnesota to improve integrated care delivery under the demonstration:

- Demonstration Management Team—a workgroup of State and CMS officials that oversees the demonstration.
- Network Adequacy—new standards and processes for determining plans' adherence with standards for assuring enrollee access to providers.
- SNP Model of Care—inclusion of state specific standards in each MSHO plan.
- Beneficiary Materials—development of enrollee materials that incorporate Medicaid and Medicare information.
- Provider Purchasing Agreements—used by plans to develop pay for performance contract provisions.
- Quality Measurement—development of a single Consumer Assessment of Healthcare Providers and Systems survey for both Medicare and Medicaid services.
- Performance Improvement—implementation of Quality Improvement projects.

Major successes achieved during the time frame covered by this report, and particularly since the first evaluation report, include refinement of a new process for assessing network

adequacy (see ***Section 3.2*** for more information); development of integrated beneficiary materials (***Section 3.4***); continued implementation of provider purchasing arrangements; renewed SNP model of care provisions; and new quality improvement projects.

We also analyzed utilization data of Minnesota demonstration eligible beneficiaries compared to the out-of-state comparison group, and provide the following information and results:

- Given the focus of the Minnesota demonstration on improving administrative processes, and therefore no expected impact on utilization measures, the focus of impact analyses was to assess the data for any unintended consequences of these administrative changes among Minnesota demonstration eligible beneficiaries relative to the comparison group.

- We found no unintended consequences of the demonstration. There were either no differences in utilization when compared with the comparison group, or any differences in utilization were consistent with prior utilization patterns in Minnesota, with lower institutional use and higher utilization of community-based providers (Anderson, Feng, & Long, 2016). See ***Table ES-1*** for a summary of results.

Table ES-1
Summary of changes under the Minnesota demonstration relative to the comparison group for demonstration period
(October 1, 2013–December 31, 2015)
($p < 0.1$ significance level)

Measure	All demonstration eligible beneficiaries	Demonstration eligible beneficiaries with LTSS use	Demonstration eligible beneficiaries with SPMI
Inpatient admissions	NS	NS	NS
Probability of ambulatory care-sensitive condition (ACSC) admissions, overall	Higher	Higher	Higher
Probability of ACSC admissions, chronic	Higher	Higher	Higher
All-cause 30-day readmissions	NS	NS	NS
Emergency room (ER) visits	Lower	Lower	Lower
Preventable ER visits	Lower	Lower	Lower
30-day follow-up after mental health discharges	NS	NS	NS
Skilled nursing facility (SNF) admissions	NS	Higher	NS
Probability of any long-stay nursing facility (NF) use	Lower	NA	NA
Physician evaluation and management (E&M) visits	Higher	Higher	Higher

LTSS = long-term services and supports; NA = not applicable; NS = not statistically significant; SPMI = severe and persistent mental illness.

SOURCE: RTI analysis of Medicare and Minimum Data Set data.

1. Introduction

The Medicare-Medicaid Coordination Office and the Innovation Center at the Centers for Medicare & Medicaid Services (CMS) have created the State Demonstrations to Integrate Care for Dual Eligible Individuals (SDIC) and the Medicare-Medicaid Financial Alignment Initiative to test, in partnerships with States, integrated care models for Medicare-Medicaid enrollees. The Minnesota Demonstration to Align Administrative Functions for Improvements in Beneficiary Experience is a statewide initiative intended to further strengthen integration of the existing plans participating in the long-running Minnesota Senior Health Options (MSHO), an integrated Medicare-Medicaid program that began in 1997. The demonstration is to implement administrative changes to better align the Medicare and Medicaid operational components of the program (Minnesota Department of Human Services [DHS], 2012; hereafter, Proposal, 2012). The MSHO plans are Medicare Advantage Dual Eligible Special Needs Plans (D-SNPs) that also contract with the State to serve as Medicaid managed care plans. This demonstration began on September 12, 2013, and was scheduled to continue until December 31, 2016 (CMS and the State of Minnesota, 2013; hereafter, Memorandum of Understanding [MOU], 2013). CMS has extended the Minnesota demonstration for four years, through December 31, 2020.

1.1 Evaluation Overview

CMS contracted with RTI International to monitor the implementation of the demonstrations under the State Demonstrations to Integrate Care for Dual Eligible Individuals (SDIC) and the Financial Alignment Initiative, and to evaluate their impact on beneficiary experience, quality, utilization, and cost. This second Evaluation Report analyzes implementation of the Minnesota demonstration through the conclusion of the second demonstration year on December 31, 2015. To capture relevant qualitative information obtained at the conclusion of the demonstration year or immediately afterward, this report includes updated qualitative information through June 30, 2017.

Because the goals of the Minnesota alternative model demonstration are to implement administrative changes meant to better align Medicare and Medicaid processes, it is unlikely that these changes will impact quality, use, or costs. However, those outcomes will continue to be monitored to assess the potential for unintended negative consequences under the demonstration in the care provided to Medicare-Medicaid enrollees. In this report, we present preliminary findings on Medicare service utilization and quality of care through December 2015. We focus on comparisons of the demonstration-eligible and comparison groups, as well as targeted analyses related to enrollees, health home service users, user of long-term services and supports (LTSS), users of behavioral health services, and special populations.

This report provides updates to the first Evaluation Report, which includes extensive background information about the demonstration and can be found here: https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/Downloads/MNFirstAnnualEvalReport.pdf

1.2 Data Sources

Data sources for this report include two site visits to Minnesota conducted by the evaluation team—one from July 30–31, 2016, and another from May 31–June 1, 2017. These site visits included interviews with staff of the State, CMS, and MSHO plans. Data sources also include quarterly phone calls with State demonstration staff; the MOU between the State and CMS (MOU, 2013); Minnesota's demonstration proposal (Proposal, 2012); a State presentation to stakeholders (Parker, 2013b); State comments on the Request for Information on Opportunities for Alignment under Medicaid and Medicare (Godfrey, 2011); an updated version of the Minnesota MOU Workplan (DHS, 2014); Minnesota's Integrated Care System Partnership (ICSP) Summary (DHS, 2015); county-level MSHO enrollment materials and plan information (DHS, September 2017); data and other materials shared by the State during the site visits; and data submitted by Minnesota to the evaluation team through the State Data Reporting System (SDRS).

1.3 Overview of the Demonstration

This demonstration (1) authorizes a set of administrative activities designed to better align the Medicare and Medicaid policies and processes involved in the MSHO program; and (2) formalizes certain prior informal agreements between CMS and Minnesota that allowed flexibility for the Medicare Advantage D-SNPs participating in MSHO, because of the integrated nature of the program. The demonstration does not fundamentally change benefits packages, choice of plans and providers for beneficiaries, or the way in which the MSHO plans contract with either the State or CMS. Nor does it change the prevailing enrollment process for MSHO (MOU, 2013).

2. Context for the Minnesota Demonstration

As noted above, the Minnesota demonstration builds upon the State's long-running MSHO program, which began providing care to Medicare-Medicare enrollees age 65 or older in 1997. MSHO is a voluntary program that provides an alternative delivery system for Medicare-Medicaid enrollees in the State's mandatory Medicaid managed care program—Minnesota Senior Care Plus (MSC+). Recognizing the stability of the MSHO program, the current demonstration focuses on administrative flexibility under MSHO.

2.1 Factors That Shaped the Minnesota Approach

According to State and MSHO plan officials, the factors that shaped the Minnesota approach to this demonstration included the following:

- Need for a joint role with CMS on D-SNP communications and oversight of MSHO. Although the State had been contracting with D-SNPs to coordinate Medicare and Medicaid benefits for almost a decade, it had no established communication channel with CMS on the implications of D-SNP policy on integrated plans.

- Desire to preserve the integrated operational features of the MSHO program and reduce reliance on informal agreements between the State and CMS on exceptions to Medicare D-SNP policy. To overcome barriers to integration, a range of informal agreements between CMS and Minnesota have evolved that address program operations.

- Support for approaches that would help D-SNPs achieve greater administrative efficiency and integration of Medicare and Medicaid policies and procedures.

- Affirmation for MSHO plans to participate in State payment and delivery system reforms.

- Maintenance of a seamless beneficiary care experience by having processes to integrate complex business functions so that they are invisible to beneficiaries.

2.2 Minnesota Senior Health Options

MSHO, the existing statewide voluntary Medicare-Medicaid managed care program for beneficiaries age 65 or older, serves as the platform through which the demonstration carries out its administrative Medicare-Medicaid program alignment activities. Minnesota requires Medicaid managed care enrollment for most Medicare-Medicaid enrollees age 65 and over; MSHO provides an integrated alternative to Medicaid-only plans. Its enrollment was 37,982 in September 2017, or 74 percent of the full-benefit Medicare-Medicaid enrollees age 65 or older enrolled in Medicaid managed care (DHS, September 2017). Enrollees receive all of their Medicare and Medicaid services from one plan with one membership card and one care coordinator.

Minnesota has included Medicare-Medicaid beneficiaries in its managed care programs since the mid-1980s. It became the first State to receive approval from the Health Care Financing Administration, as CMS was known at the time, to operate a managed care program integrating Medicare and Medicaid. The MSHO program was launched in 1997 under the authority of an 1115(a) demonstration and a Section 222 Medicare waiver. From the beginning, it was notable for a high degree of integration between Medicare and Medicaid. In 2005, the previous demonstration ended and MSHO plans became D-SNPs and Medicaid managed care plans. In addition, there were some provisions that were based on specialized rules permitting some integration by MSHO plans. By 2006, a majority of Minnesota's Medicare-Medicaid beneficiaries were enrolled in MSHO (Parker, 1997; Tritz, 2006).

MSHO plans operate under two separate contracts, unlike Medicare-Medicaid Plans in capitated model demonstrations under the Financial Alignment Initiative that use three-way contracts with CMS, the State, and the plan. MSHO plans contract with CMS as D-SNPs and comply with Medicare Advantage and SNP requirements. They also contract with the State as Medicaid plans, complying with Medicaid managed care requirements in the MSHO contract (MOU, 2013). MSHO plans provide all Medicare services, including Part D, and Medicaid services, including behavioral health services and home and community-based services under the Minnesota 1915(c) Elderly Waiver, plus the first 180 days of nursing facility services.

3. Demonstration Medicare-Medicaid Alignment Activities

The Minnesota demonstration authorizes a set of activities designed to achieve better alignment of Medicare and Medicaid policies and operating procedures. For each Medicare-Medicaid alignment activity included in the demonstration, this section summarizes its description in the Memorandum of Understanding (MOU) and reports on its implementation status. In 2015, the MOU was amended to permit MSHO plans to simultaneously operate cost plans.

This second Evaluation Report analyzes implementation of the Minnesota demonstration through the conclusion of the second demonstration year on December 31, 2015. To capture relevant qualitative information obtained at the conclusion of the demonstration year or immediately afterward, this report includes updated qualitative information through June 30, 2017.

3.1 Demonstration Management Team

The demonstration established a Demonstration Management Team, consisting primarily of the Minnesota State lead from the CMS Medicaid-Medicare Coordination Office, a CMS Regional Office representative, and a representative of the Minnesota DHS. This team was originally called the Contract Management Team in the MOU. CMS has renamed it the Demonstration Management Team because, under the demonstration, responsibility for management of the D-SNP contract remains with CMS as a three-way contract does not exist for the Minnesota demonstration. The contract responsibilities continue to separately lie with the State and the Center for Medicare (rather than the Medicare-Medicaid Coordination Office). The Demonstration Management Team is responsible for overseeing the demonstration, including addressing issues that would reduce integration of Medicare and Medicaid in MSHO, and helping to coordinate, rather than replace, existing oversight by CMS and the State.

Minnesota State officials consider the Demonstration Management to be a success as we reported in the first evaluation report (Justice, Weiss, Holladay, et al., 2016). of all components of the administrative alignment demonstration, State officials noted that the establishment of the Demonstration Management Team has had the most significant effect on the State's ability to align Medicare and Medicaid policies. State officials reported that the Demonstration Management Team has continued to be an extremely useful vehicle for addressing program misalignment issues such as beneficiary materials development and network adequacy.

The Demonstration Management Team has also given the State an identifiable communication channel with CMS that it had never had during the previous 9 years of managing an integrated D-SNP Medicare-Medicaid program. State and plan officials said a formal communications channel between CMS and State officials has enabled the State to connect with the right people at CMS, get questions answered, and resolve issues faced by MSHO plans quickly and effectively. CMS has noted that this communication vehicle has also been useful to CMS, providing a resource for discussions on the implications of various proposed policies.

More generally, the State also views the Demonstration Management Team as a vehicle for addressing potential areas of misalignment not addressed by the MOU that may result from

new SNP policies adopted during the course of the demonstration. Given their positive experiences to date, State officials suggested that States contracting with SNPs to manage integrated delivery systems would benefit from a Demonstration Management Team to improve communications and resolve areas of misalignment on an ongoing basis, regardless of their participation in a demonstration under the Financial Alignment Initiative.

3.2 Network Adequacy

As described in detail in the first evaluation report, plans were facing significant challenges in achieving CMS approval of their network adequacy submissions, with CMS granting numerous exceptions (the term used to indicate a plan does not meet network adequacy standards). The State noted that these exceptions were primarily due to the use of outdated provider listings by CMS and because CMS does not take the State's geography into account. As a result, the demonstration is testing new standards and processes for the Medicare Advantage network adequacy review for all MSHO plans. The new standards aim to more accurately reflect where the Medicare-Medicaid population resides. Also, the State has the opportunity to provide input on local health care delivery system considerations and to participate in reviews of MSHO plans' network submissions.

Since 2015 the State has been implementing the new network adequacy process. Using the Medicare Advantage methodology, CMS developed standards unique to Medicare-Medicaid enrollees, and sought input from the State on the pattern of care in the State and help validating the documentation the plans provide in the exception requests. CMS sets the criteria for defining when a plan does not meet network adequacy standards and how a plan needs to respond. The CMS-developed network adequacy standards that are being tested have revised the Medicare Advantage criteria to apply standards based on the number of Medicare-Medicaid enrollees in an area rather than the number of Medicare beneficiaries.

In addition, the State has a very active role in reviewing each plan's network adequacy exceptions identified by CMS to provide input on local circumstances that may have contributed to the exceptions. As a result of the State's involvement, the plans' exception rates plummeted, declining from the previous rates in the several 100s to less than 25 according to interviews with State officials. MSHO plan officials indicated that establishing an explicit role for the State in reviewing their network submissions and providing input to CMS on local delivery systems considerations is, in their view, one of the demonstration's most important provisions.

In 2017, CMS and the State began examining issues related to telehealth and mobile medical clinics. Specifically, CMS is exploring the specific evidence a plan might need to submit to enable telehealth and mobile medical clinics to counter a plan's potential exception. In consultation with the State, CMS supplies an exception template that instructs the plans on what evidence must be submitted.

Finally, the MOU was designed with the intent that CMS and the State would conduct Medicare and Medicaid network adequacy reviews concurrently; however, the State needed to proceed with Medicaid network reviews in spring 2014 because these reviews were tied to the 5-year MSHO plan procurement schedule, and CMS was unable to conduct the Medicare review at

that time. The Medicaid reviews in 2014 were not problematic because the state used up to date provider directors and reviewers understood Minnesota geography.

3.3 SNP Model of Care

The demonstration provided the State with an opportunity to submit to CMS suggested language for incorporation in the D-SNP model of care (MOC) matrix for MSHO plans that would reflect MSHO requirements and processes. In 2014 CMS accepted the State's language. The demonstration has been successful in tailoring the MOC matrix for MSHO plans to emphasize the existing role of MSHO plans in coordinating Medicaid home and community-based services and in conducting needs assessments and developing care plans that address both Medicaid and Medicare services. The State also had the opportunity to review and provide input on the plan responses to additional requirements and processes. The revised matrix language was used by all plans except one in their 2015 MOC submissions (submitted in 2014); these were approved by CMS and the State for a 3-year period. The other plan submitted the language in 2015 for its 2016 MOC submission; this was approved by CMS and the State for a 3-year period.

In 2017, the MOC approval period for all but one of the plans expired. The plans resubmitted their MOCs based on CMS and State requirements, and all were approved for a 3-year period by CMS and the State. The remaining plan will resubmit its language in 2018.

3.4 Beneficiary Materials

The demonstration allows MSHO plans to adopt simplified beneficiary materials—such as a member handbook and provider directory—that better integrate information about Medicare and Medicaid benefits and processes. MSHO plans are using some of the integrated materials developed for capitated model demonstrations under the Financial Alignment Initiative or are adapting those materials with CMS and State approval. The State convened its existing MSHO Plan Member Materials Workgroup to adapt the model materials. CMS also participated in the Workgroup. The plans have already been using integrated beneficiary materials for many years, including Summary of Benefits, Evidence of Coverage, provider directories, and notices. However, plan officials reported that incorporating information about Medicaid services prior to the demonstration was difficult at times because these materials had to be developed according to D-SNP standards intended to present information about Medicare services. The new materials address that problem.

The material development and review process was conducted through the CMS Health Plan Management System during the second and third demonstration year. This process provided an opportunity for CMS, the plans, and the State to concurrently review and edit materials, which does not occur in the standard review process for D-SNP materials (interviews with MSHO plan officials, April 2014, July 2015 and July 2016). The demonstration has led to an improved process for developing and reviewing beneficiary materials, which is a key accomplishment. This process was described in detail in the first evaluation report, and has continued to be implemented throughout 2017.

In 2017 the state commented that issues related to integrating Medicare and Medicaid information were largely resolved. Instead, the biggest challenge was updating the beneficiary

materials to ensure that the requirements of the new Federal Medicaid managed care regulations were incorporated into the materials.

3.5 Provider Purchasing Agreements

The demonstration highlights MSHO plans' opportunity to integrate Medicare and Medicaid primary care payments to certified Health Care Homes (HCH), Minnesota's term for medical homes. The demonstration also includes language about the adoption of Integrated Care Systems Partnerships (ICSPs), which are purchasing agreements between MSHO plans that provide additional options for plans to make performance payments to providers. As of January 1, 2016, MSHO plans had entered into 48 ICSP provider contracts. Most of the ICSP contracts are relatively small efforts focusing on pay for performance contracts for initiatives such as falls reductions, health risk assessments and comprehensive medication review. Plans were required to establish at least 2 ICSPs, one of which would be with a LTSS provider.

Minnesota contracted for a review of the ICSP initiative. It decided to maintain the ICSPs that were already in place and not to require plans to establish additional contracts. The State's priority for 2017 is to get a better handle on the percentage of enrollees and the level of funding that is engaged in ICSP.

3.6 Quality Measures

MSHO plans continue to report quality measures and data as required by their Medicare and Medicaid contracts and continue to participate in the Medicare Advantage Star Ratings system for quality measurement. The MOU specifies that CMS and the State will work together to develop and test measures that could be incorporated into an integrated care star measures model for MSHO plans serving seniors. This joint development has not occurred. However, CMS has discussed opportunities to test measures or other quality changes that may arise, and officials in Minnesota have expressed an openness to this approach.

CMS and the State negotiated the terms of a collaboration authorized by the MOU to administer a single Medicare Advantage and Prescription Drug Plan (MA & PDP) Consumer Assessment of Healthcare Providers and Systems (CAHPS) Survey to MSHO enrollees that meets State and Federal requirements and reflects Medicare and Medicaid services. A single CAHPS survey to meet both Medicare and Medicaid requirements has been implemented for the past 2 years in order to reduce duplicative beneficiary responses, but results were not available at the time this report was written. Results will be presented in the next evaluation report.

3.7 Performance Improvement

The demonstration eliminates duplicative reporting required through Medicare Quality Improvement Projects (QIPs) and Medicaid Performance Improvement Projects (PIPs). The State adopted language in its 2014 contracts with MSHO plans that permit plans to use Medicare QIPs to meet Medicaid PIP requirements. This alignment of QIPs and PIPs includes using the same measurement standards, reporting timelines, and templates. After the Minnesota MOU was adopted, CMS eliminated requirements for a separate PIP for plans exclusively serving Medicare-Medicaid enrollees.

In 2016 MSHO plans began implementing their new QIPs. They chose depression medication adherence management as the focus for each plan, which enabled the plans to work collaboratively in developing tangible hands on training materials and educational webinars for widespread distribution.

3.8 Medicare Bid Process

Under the demonstration, a new provision helps MSHO plans maintain zero member premiums. In situations where strict adherence to the Medicare Advantage bid margin requirements would result in a premium for enrollees, and where margins have a minimum of zero, an MSHO plan can use an aggregate bid margin that is either (1) no greater than 1.5 percent above the plan's margin for non-Medicare health insurance, or (2) less than or equal to the margin for the Medicaid portion of its MSHO rate (MOU, 2013, p. 18). The results of the 2015, 2016, and 2017 Medicare bid processes did not trigger this provision because through the bid process, MSHO plans were able to achieve zero member premiums.

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4. Existing Integrated MSHO Functions Formalized by the Demonstration

In addition to the new Medicare-Medicaid administrative alignment activities authorized by the demonstration, the MOU also formalizes continuation of certain integration functions conducted before the demonstration by the State and MSHO SNPs. As the MOU notes, "In some instances existing arrangement between CMS and the State of Minnesota have allowed flexibility for MSHO SNPs because of the integrated nature of the program. However, many of these flexibilities have been developed through informal agreements. The parameters of the demonstration, as outlined in the MOU and appendices set forth the policies by which CMS and the State will operate for the life of the Demonstration" (MOU, 2013, p. 19).

State officials viewed this aspect of the demonstration as significant as, if not more than, the new administrative alignment activities. Prior to the demonstration, CMS and the State worked together to develop administrative procedures to overcome some of the barriers to integrating Medicare SNP policies with Medicaid managed care policies. State officials spoke extensively about their fears that without this demonstration**,** these agreements—which they view as essential to making integration in their program work—could be overturned by new CMS staff unfamiliar with their effect, or by a change in SNP policy that would no longer permit these flexibilities. These informal agreements cover a range of integration functions, and this section highlights three of them: integrated enrollment systems, integrated grievance and appeals systems, and integrated claims adjudication.

4.1 Integrated Enrollment Systems

Through a series of complex manual and automated functions that are invisible to enrollees, State staff, serving as third party administrators for MSHO plans, access enrollment files for both Medicare and Medicaid and achieve simultaneous beneficiary enrollment in both the Medicare and Medicaid components of the MSHO plan, with identical enrollment effective dates for both sets of benefits. The MOU preserves that process as well as the existing exemption for MSHO plans from the D-SNP requirement that beneficiary enrollment requests be submitted to CMS within 7 days of verification of Medicare eligibility. This exemption allows time for verification of a beneficiary's Medicaid eligibility for MSHO, enabling a beneficiary to be enrolled simultaneously in MSHO for Medicare and Medicaid benefits. The State is also permitted to continue to limit MSHO enrollment to Medicare-Medicaid enrollees who meet the State's eligibility criteria for enrollment in Medicaid managed care, consistent with Medicare Improvements for Patients & Providers Act contracting policy. This process has been implemented for the past 17 years and continues to function smoothly.

4.2 Integrated Grievance and Appeals System

Over the past 17 years of MSHO program implementation, the State and CMS have collaborated to integrate the Medicare and Medicaid appeals process in MSHO. Enrollees file a Medicare or Medicaid appeal directly to the plan.

4.3 Integrated Claims Adjudication

MSHO plans can continue to permit providers to bill them for Medicare and Medicaid services delivered, without differentiating Medicare services from Medicaid services. Using an integrated adjudicated claims process, MSHO plans determine whether the expenditure is allocated to Medicaid or Medicare. Under the demonstration, CMS has drafted clear guidance to auditors specifying that integration of Medicare and Medicaid claims adjudication be allowed.

5. Service Utilization

The purpose of the analyses in this section is to understand changes under the Minnesota demonstration relative to its comparison group through demonstration year 2 (ending calendar year 2015) using difference-in-differences regression analyses. In addition, descriptive statistics on service utilization are provided for selected Medicare services in ***Appendix C***. Given the focus of the Minnesota demonstration on administrative processes, we do not interpret these estimates as the impacts of the Minnesota demonstration on MSHO enrollees. Rather, we focus on changes in the Minnesota demonstration relative to the comparison group, seeking to understand whether the demonstration led to any unintended consequences. None were found. There were either no differences in utilization when compared with the comparison group, or there were differences that were consistent with prior utilization patterns in Minnesota.

Table 1 presents an overview of the results from analyses using Medicare and Minimum Data Set (MDS) data through demonstration year 2. The relative direction of all statistically significant results for changes for the Minnesota demonstration group relative to the comparison group at the $p < 0.10$ significance level (derived from 90 percent confidence intervals) is shown.

Monthly emergency room (ER) visits, preventable ER visits, and the probability of long-stay nursing facility (NF) use all decreased for the Minnesota demonstration group relative to its comparison group, whereas the probability of overall and chronic ambulatory care-sensitive condition (ACSC) admissions and the number of physician evaluation and management (E&M) visits increased for the demonstration group. There were no differences between the demonstration and comparison groups in changes in monthly inpatient admissions, monthly skilled nursing facility (SNF) admissions, 30-day follow-up after mental health discharges per quarter, or all-cause 30-day inpatient readmissions per demonstration year.

For most outcome measures, the relative direction of the estimates for the population receiving long-term supports and services (LTSS) and for those with severe and persistent mental illness (SPMI) were similar to the findings for the overall demonstration eligible population. The one exception was for the LTSS population, where the change in the number of SNF admissions was higher for the demonstration group than for its comparison group, whereas there was no measurable difference in the changes over time in SNF admissions between the two groups for the overall population and the SPMI population.

Table 1
Summary of changes under the Minnesota demonstration relative to the comparison group for demonstration period
(October 1, 2013–December 31, 2015)
($p < 0.1$ significance level)

Measure	All demonstration eligible beneficiaries	Demonstration eligible beneficiaries with LTSS use	Demonstration eligible beneficiaries with SPMI
Inpatient admissions	NS	NS	NS
Probability of ambulatory care-sensitive condition (ACSC) admissions, overall	Higher	Higher	Higher
Probability of ACSC admissions, chronic	Higher	Higher	Higher
All-cause 30-day readmissions	NS	NS	NS
Emergency room (ER) visits	Lower	Lower	Lower
Preventable ER visits	Lower	Lower	Lower
30-day follow-up after mental health discharges	NS	NS	NS
Skilled nursing facility (SNF) admissions	NS	Higher	NS
Probability of any long-stay nursing facility (NF) use	Lower	NA	NA
Physician evaluation and management (E&M) visits	Higher	Higher	Higher

LTSS = long-term services and supports; NA = not applicable; NS = not statistically significant; SPMI = severe and persistent mental illness.

SOURCE: RTI analysis of Medicare and Minimum Data Set data.

5.1 Overview of Benefits and Services

Because the goals of the Minnesota demonstration are to implement administrative changes meant to better align Medicare and Medicaid processes, the demonstration does not fundamentally change MSHO benefit packages, choice of plans and providers for beneficiaries, or the way in which the MSHO plans contract with either the State or CMS. Consequently, the demonstration is not expected to change the use of benefits and services under MSHO. However, those outcomes are being monitored to assess the potential for unintended negative consequences under the demonstration in the care provided to MSHO enrollees.

5.2 Analyses on the Demonstration Eligible Population

The population analyzed in this section includes all beneficiaries who met demonstration eligibility criteria in Minnesota or in the comparison areas for Minnesota. For context, in Minnesota, approximately 69 percent of eligible beneficiaries in the demonstration period whose utilization was analyzed in this report were enrolled in the demonstration. ***Appendix A*** provides a description of the comparison group for Minnesota. Subsections following this section present

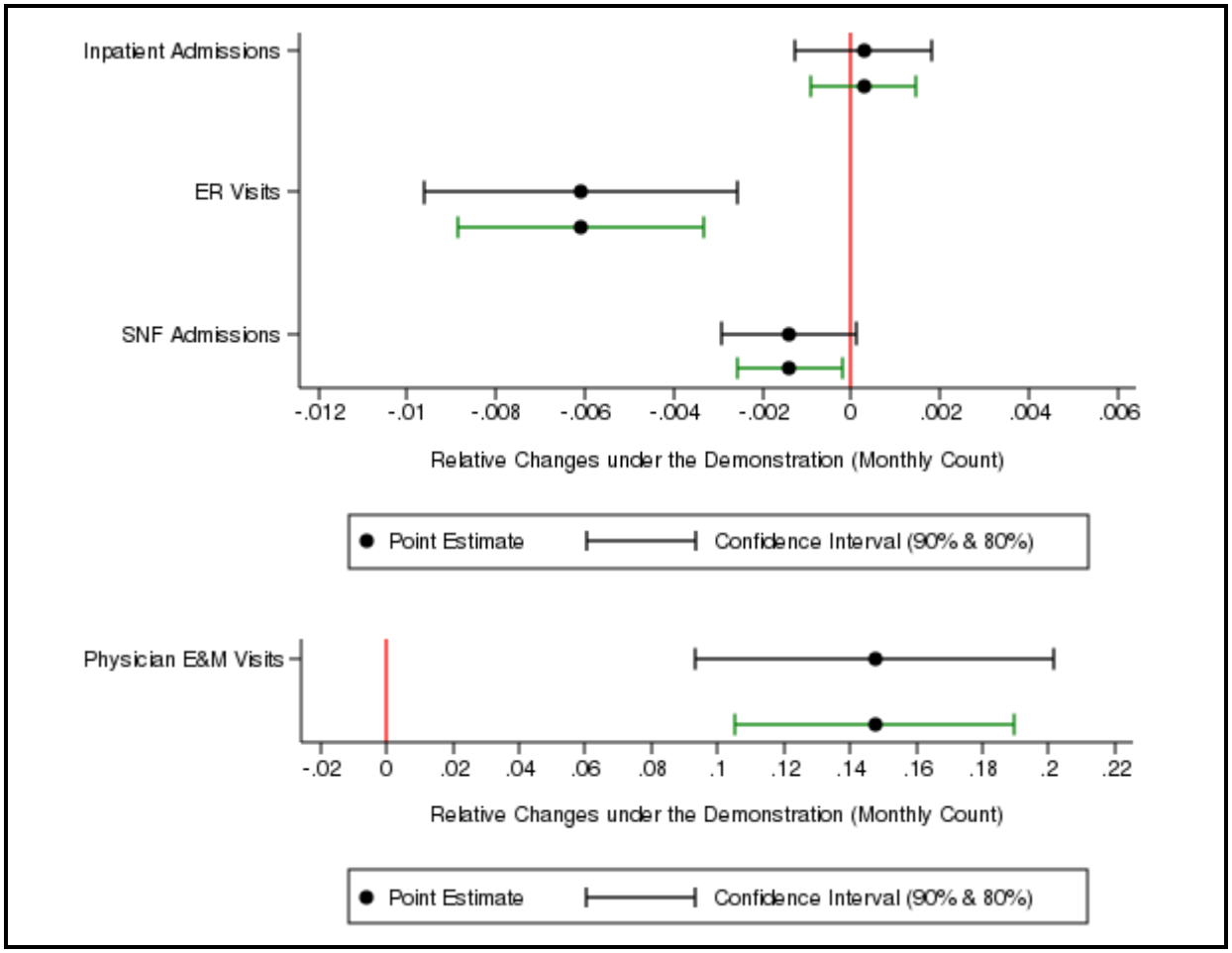
the results for demonstration eligible beneficiaries with any use of LTSS (defined as receipt of any institutional long-stay NF services or Medicaid HCBS services), and for demonstration eligible beneficiaries with SPMI.

Appendix B contains a description of the evaluation design, the comparison group identification methodology, data used, measure definitions, and regression methodology used in comparing changes over time for the demonstration group and the comparison group using a difference-in-differences approach. The regression methodology accounts for differences between the demonstration and comparison groups over the predemonstration period (September 1, 2011–August 31, 2013) and the demonstration period (October 1, 2013–December 31, 2015) to provide comparisons of changes in service utilization for similar enrollees in the Minnesota demonstration and comparison groups. The demonstration started in mid-September 2013; this month was excluded from the predemonstration and demonstration periods.

Regression results of key service utilization measures for all demonstration eligible beneficiaries over the entire demonstration period show at the 90 percent confidence interval (CI) that monthly ER visits decreased and monthly physician E&M visits increased under the Minnesota demonstration relative to its comparison group. These findings were also statistically significant in each of the demonstration years. The probability of any long-stay NF use also decreased, but the statistical significance of this effect varied by demonstration year.

Figures 1 and ***2*** display the changes under the Minnesota demonstration for key service utilization measures for the demonstration group relative to its comparison group through demonstration year 2. Relative to the comparison group, monthly ER visits decreased by 0.0061 visits per month (90 percent confidence interval [CI]: –0.0096, –0.0025) under the demonstration. After multiplying the monthly estimate by 12, the annual estimate corresponds to 0.0730 fewer ER visits per eligible beneficiary per year. Over the same period, physician E&M visits under the demonstration increased by 0.1169 visits per month (90 percent CI: 0.0741, 0.1597) relative to the comparison group, which corresponds to 1.4028 more physician E&M visits per eligible beneficiary per year. There were no statistically significant changes in monthly inpatient admissions, SNF admissions, or the probability of any long-stay NF use under the demonstration relative to the comparison group.

Figure 1
Changes under the Minnesota demonstration relative to the comparison group in service utilization—Difference-in-differences regression results for the demonstration period October 1, 2013–December 31, 2015
(90 and 80 percent confidence intervals)

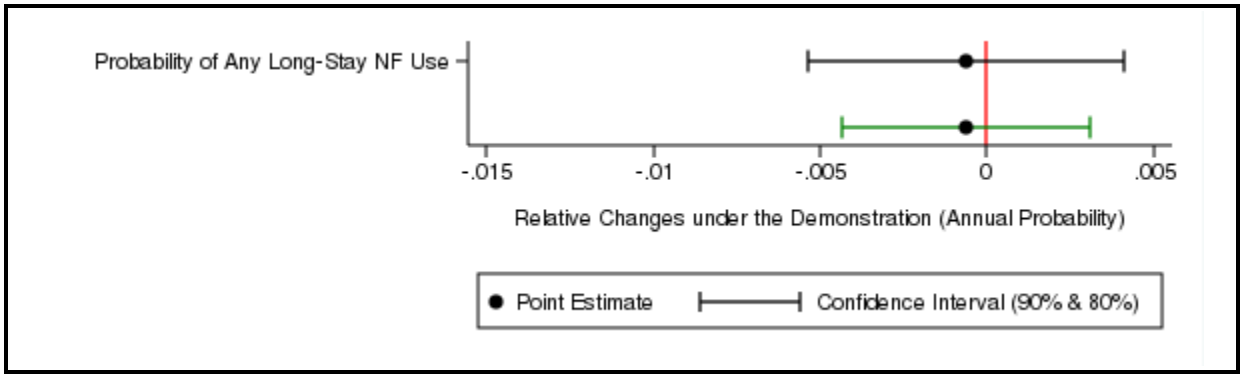


E&M = evaluation and management; ER = emergency room; SNF = skilled nursing facility.

NOTES: Standard statistical practice is to use confidence intervals of 90 percent or higher. 80 percent confidence intervals are provided here for comparison purposes only. The 90 percent intervals are black, and the 80 percent intervals are green.

SOURCE: RTI International analysis of Medicare data.

Figure 2
Changes under the Minnesota demonstration relative to the comparison group in long-stay nursing facility use for eligible beneficiaries—Difference-in-differences regression results for the demonstration period October 1, 2013–December 31, 2015
(90 and 80 percent confidence intervals)



NF = nursing facility.

NOTES: Standard statistical practice is to use confidence intervals of 90 percent or higher. 80 percent confidence intervals are provided here for comparison purposes only. The 90 percent intervals are black, and the 80 percent intervals are green.

SOURCE: RTI International analysis of Minimum Data Set data.

Tables 2 and ***3*** present changes under the Minnesota demonstration in service utilization for each of the demonstration years relative to the comparison group, which are largely consistent with the relative changes under the demonstration through demonstration year 2. Each number in ***Table 2*** presents the *monthly* change in the measure during each demonstration year reported, whereas the numbers reported in ***Table 3*** present the *yearly* change in the measure during each demonstration year reported. Monthly ER visits decreased by 0.0077 visits ($p = 0.0007$) in year 1 and by 0.0040 visits ($p = 0.0545$) in year 2 for the demonstration group relative to the comparison group, whereas monthly physician E&M visits increased by 0.1259 visits ($p < 0.0001$) in year 1 and by 0.0929 visits ($p = 0.0083$) in year 2. In demonstration year 1 only, there was a statistically significant reduction of 0.0037 monthly SNF admissions ($p < 0.0001$) in year 1 in the demonstration group relative to the comparison group. There were no statistically significant differences in changes in monthly inpatient admissions or the probability of any long-stay NF use in either demonstration year for the demonstration group relative to the comparison group.

Table 2
Changes under the Minnesota demonstration relative to the comparison group by year in service utilization for eligible beneficiaries
(* indicates significant at $p < 0.20$, ** indicates significant at $p < 0.10$)

Utilization measure (per month)	Demonstration year 1 (10/13–12/14)	Demonstration year 2 (1/15–12/15)
Inpatient admissions	−0.0001	0.0008
ER visits	−0.0077**	−0.0040**
Physician E&M visits	0.1259**	0.0929**
SNF admissions	−0.0037**	0.0015*

E&M = evaluation and management; ER = emergency room; SNF = skilled nursing facility.

NOTES: Standard statistical practice is to use confidence intervals of 90 percent or higher. Significance based on 80 percent confidence intervals are provided here for comparison purposes only.

SOURCE: RTI International analysis of Medicare data.

Table 3
Changes under the Minnesota demonstration relative to the comparison group by year in probability of long-stay nursing facility use for eligible beneficiaries
(* indicates significant at $p < 0.20$, ** indicates significant at $p < 0.10$)

Utilization measure (per demonstration year)	Demonstration year 1 (10/13–12/14)	Demonstration year 2 (1/15–12/15)
Probability of any long-stay NF use	−0.0021	0.0008

NF = nursing facility.

NOTES: Standard statistical practice is to use confidence intervals of 90 percent or higher. Significance based on 80 percent confidence intervals are provided here for comparison purposes only.

SOURCE: RTI International analysis of Minimum Data Set data.

Table 4 provides estimates of the regression-adjusted mean values of the utilization measures for the Minnesota demonstration and comparison groups for the predemonstration and demonstration periods for each service. The purpose of this table is to understand the magnitude of the difference-in-differences estimate relative to the adjusted mean outcome value in each period. The values in the third and fourth columns represent the post-regression, mean predicted value of the outcomes for each group in each period, based on the composition of a reference population (the comparison group in the demonstration period). These values show how different the two groups were in each period and the relative direction of any potential change in each group over time. In addition to the graphic representation above, the difference-in-differences estimate is also provided for reference, along with the *p*-value and the relative percent change of the difference-in-differences estimate compared to an average mean use rate for the comparison group over the entire demonstration period.

To interpret the adjusted mean values in the third and fourth columns, as an example, the adjusted mean for monthly ER visits was lower in the demonstration group than in the comparison group in both the predemonstration period and demonstration period. Alternatively,

the adjusted mean for monthly physician E&M visits was quite a bit lower for the demonstration group in the predemonstration period and only slightly lower in the demonstration period.

To help interpret the relative percentage difference reported in the fifth column, the difference-in-differences estimate for monthly ER visits implies an annual relative percentage decrease of 10.4 percent in the demonstration group relative to the comparison group, whereas the difference-in-differences estimate for monthly physician E&M visits implies an annual relative percentage increase of 11.8 percent.

Table 4
Adjusted means and relative changes over time for eligible beneficiaries in the demonstration and comparison groups for Minnesota through December 31, 2015

Measure	Group	Adjusted mean for predemonstration period	Adjusted mean for demonstration period	Relative difference (%)	Regression-adjusted difference-in-differences (90% confidence interval)	*p*-value
Inpatient admissions	Demonstration group	0.0366	0.0349	NS	0.0003 −0.0012, 0.0018	0.7659
	Comparison group	0.0417	0.0395			
ER visits	Demonstration group	0.0464	0.0455	−10.4	−0.0061 −0.0096, −0.0025	0.0047
	Comparison group	0.0525	0.0585			
Physician E&M visits	Demonstration group	0.7772	0.9597	11.8	0.1169 0.0741, 0.1597	<0.0001
	Comparison group	0.9048	0.9898			
SNF admissions	Demonstration group	0.0240	0.0211	NS	−0.0014 −0.0029, 0.0001	0.1298
	Comparison group	0.0197	0.0185			
Probability of any long-stay NF use	Demonstration group	0.2648	0.2331	NS	-0.0006 -0.00054, 0.0041	0.8275
	Comparison group	0.3494	0.3142			

E&M = evaluation and management; ER = emergency room; NF = nursing facility; NS = not statistically significant; SNF = skilled nursing facility.

NOTE: Standard statistical practice is to use confidence intervals of 90 percent or higher.

SOURCE: RTI International analysis of Medicare and Minimum Data Set data.

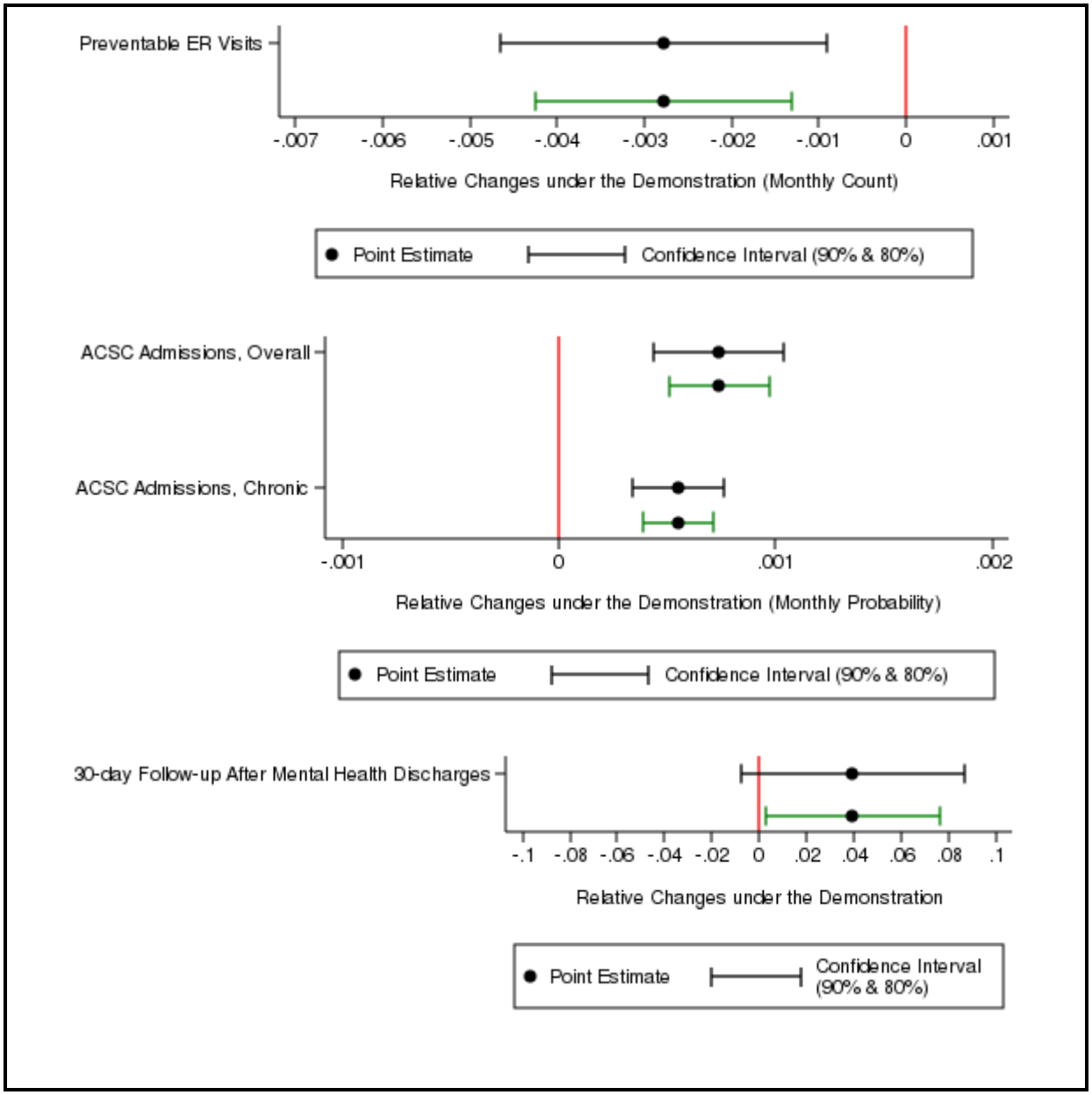
Regression results of RTI quality of care and care coordination measures for all demonstration eligible beneficiaries over the entire demonstration period show at the 90 percent CI that monthly preventable ER visits decreased in the Minnesota demonstration relative to the comparison group, which was a statistically significant finding in both demonstration years. By contrast, the probability of chronic and overall ambulatory care sensitive condition (ACSC) admissions increased in the demonstration group relative to the comparison group; the statistical significance of these changes varied by demonstration year.

Figure 3 displays the relative changes under the Minnesota demonstration in RTI quality of care and care coordination measures for the demonstration group relative to the comparison group through demonstration year 2. Monthly preventable ER visits decreased (lower by 0.0028 visits, 90 percent CI: −0.0047, −0.0009), and the probability of monthly inpatient ACSC admissions increased both for overall (higher by 0.07 percentage points, 90 percent CI: 0.04, 0.10) and chronic conditions (higher by 0.06 percentage points, 90 percent CI: 0.03, 0.08) in the demonstration group relative to the comparison group. There were no statistically significant differences in changes in 30-day follow-up after mental health discharges per quarter or the number of all-cause 30-day inpatient readmissions per demonstration year between the demonstration and comparison groups.

Figure 3

Changes under the Minnesota demonstration relative to the comparison group in RTI quality of care measures for eligible beneficiaries—Difference-in-differences regression results for the demonstration period October 1, 2013–December 31, 2015

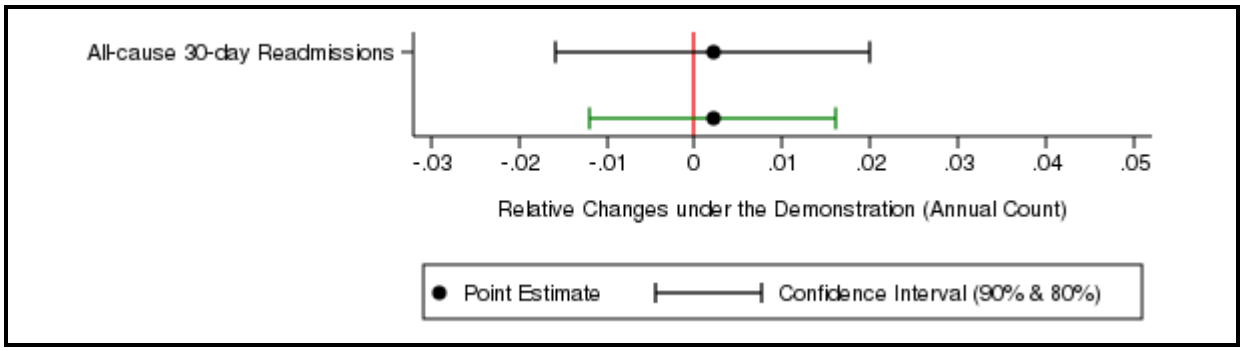
(90 and 80 percent confidence intervals)



(continued)

Figure 3 (continued)
Changes under the Minnesota demonstration relative to the comparison group in RTI quality of care measures for eligible beneficiaries—Difference-in-differences regression results for the demonstration period October 1, 2013-December 31, 2015

(90 and 80 percent confidence intervals)



ACSC = ambulatory care sensitive condition; ER = emergency room.

NOTES: Standard statistical practice is to use confidence intervals of 90 percent or higher. 80 percent confidence intervals are provided here for comparison purposes only. The 90 percent intervals are black, and the 80 percent intervals are green.

SOURCE: RTI International analysis of Medicare data.

Table 5 presents the changes under the demonstration in RTI quality of care and care coordination measures for each of the demonstration years for the Minnesota demonstration group relative to its comparison groups. Monthly preventable ER visits decreased in both demonstration year 1 (lower by 0.0034 visits, $p = 0.0047$) and year 2 (lower by 0.0020 visits, $p = 0.0808$) for the demonstration group relative to the comparison group. In demonstration year 2 only, there were statistically significant increases in the probability of monthly ACSC admissions for both overall (higher by 0.20 percentage points, $p < 0.0001$) and chronic conditions (higher by 0.13 percentage points, $p < 0.0001$). In demonstration year 1 only, there was a statistically significant increase in 30-day follow-up visits after mental health discharges per quarter (higher by 0.0885 visits, $p = 0.0037$) in the demonstration group relative to the comparison group. There were no statistically significant differences in changes over time for the demonstration and comparison groups in either demonstration year on the number of all-cause 30-day readmissions per demonstration year.

Table 5
Changes under the Minnesota demonstration relative to the comparison group by year in RTI quality of care and care coordination for eligible beneficiaries
(* indicates significant at $p < 0.20$, ** indicates significant at $p < 0.10$)

Quality of care and care coordination measures	Demonstration year 1 (10/13–12/14)	Demonstration year 2 (1/15–12/15)
Preventable ER visits	−0.0034**	−0.0020**
Probability of ACSC admissions, overall	−0.0002*	0.0020**
Probability ACSC admissions, chronic	−0.0001	0.0013**
30-day follow-up after mental health discharges	0.0885**	−0.0021*
All-cause 30-day readmissions	−0.0073	0.0112

ACSC = ambulatory care sensitive conditions; ER = emergency room.

NOTES: Standard statistical practice is to use confidence intervals of 90 percent or higher. Significance based on 80 percent confidence intervals are provided here for comparison purposes only.

SOURCE: RTI International analysis of Medicare data.

Table 6 provides estimates for the regression-adjusted mean value for the Minnesota demonstration and comparison groups for the predemonstration and demonstration periods for the RTI quality of care and care coordination measures. The purpose of this table is to understand the magnitude of the difference-in-differences estimates for quality of care outcomes relative to the adjusted mean values in each period. The values in the third and fourth columns represent the post-regression, mean predicted value of the outcomes for each group in each period, based on the composition of a reference population (the comparison group in the demonstration period). These values show how different the two groups were in each period and the relative direction of any potential effect in each group over time. In addition to the graphic representation above, the difference-in-differences estimate is also provided for reference, along with the *p*-value and the relative percent change of the difference-in-differences estimate compared to an average mean use rate for the comparison group during the entire demonstration period.

To interpret the adjusted mean values in the third and fourth columns, as an example, the adjusted mean for monthly preventable ER visits was slightly lower in the demonstration group than in the comparison group in the predemonstration period and much lower in the demonstration period. Alternatively, the adjusted means for the probability of monthly ACSC admissions (both overall and chronic) was lower in the demonstration group than in the comparison group in the predemonstration period and only slightly lower than the comparison group during the demonstration period.

To help interpret the relative percentage difference reported in the fifth column, the difference-in-differences estimate for monthly preventable ER visits implies an annual relative percentage decrease of 10.8 percent in the demonstration group, and for the probability of monthly ACSC admissions the difference-in-differences estimate implies an annual relative percentage increase of 11.0 percent (overall) and 15.1 percent (chronic) in the demonstration group.

Table 6
Adjusted means and relative changes over time for eligible beneficiaries in the demonstration and comparison groups for Minnesota through demonstration year 2

Measure	Group	Adjusted mean for predemonstration period	Adjusted mean for demonstration period	Relative difference (%)	Regression-adjusted difference-in-differences estimate (90% confidence interval)	*p*-value
Preventable ER visits	Demonstration group	0.0221	0.0214	−10.8	−0.0028 −0.0047, −0.0009	0.0148
	Comparison group	0.0234	0.0258			
Probability of ACSC admission, overall	Demonstration group	0.0048	0.0052	11.0	0.0007 0.0004, 0.0010	<0.0001
	Comparison group	0.0073	0.0067			
Probability of ACSC admission, chronic	Demonstration group	0.0025	0.0030	15.1	0.0006 0.0003, 0.0008	<0.0001
	Comparison group	0.0039	0.0036			
30-day follow−up after mental health discharges	Demonstration group	0.3590	0.4040	NS	0.0394 −0.0078, 0.0867	0.1700
	Comparison group	0.3695	0.3769			
All−cause 30-day readmission	Demonstration group	0.2617	0.2437	NS	0.0021 −0.0158, 0.0200	0.8490
	Comparison group	0.2750	0.2588			

ACSC = ambulatory care sensitive conditions; ER = emergency room.

NOTE: Standard statistical practice is to use confidence intervals of 90 percent or higher.

SOURCE: RTI International analysis of Medicare data.

5.2.1 Descriptive Statistics on the Demonstration Eligible Population

In addition to the findings presented for the demonstration eligible population in this section, ***Appendix C, Tables C-1*** through ***C-3*** present descriptive statistics for the demonstration eligible population for each service for the predemonstration and demonstration years to help understand the utilization experience over time. We examined 12 Medicare service utilization measures, seven RTI quality of care measures, and five nursing facility-related measures derived from the Minimum Data Set (MDS). No testing was performed between groups or years. The results reflect the underlying experience of the two groups, and not the difference-in-differences estimates presented earlier.

The Minnesota demonstration and comparison groups were similar across many of the service utilization measures in each of the predemonstration (baseline) years and the demonstration years (***Table C-1***). However, there were some outcomes for which utilization tended to be lower in the demonstration group. For example, inpatient admissions, ER use, primary care E&M visits, hospice use, and outpatient therapy were lower for the demonstration group than the comparison group. As with the service utilization measures, the Minnesota demonstration group was similar to the comparison group on many of the RTI quality of care and care coordination measures (***Table C-2***). The most notable differences were in preventable ER visits, which were lower in the demonstration group, and in rates of 30-day all-cause risk-standardized readmission and 30-day follow-up after hospitalization for mental illness, which were higher in the demonstration group. The demonstration group had lower NF utilization (***Table C-3***), with a lower percentage of long-stay users and rate of long-stay NF admissions. The characteristics of long-stay NF residents at admission also differed: relative to the comparison group, the demonstration group had better functional status (lower RUG-IV ADL score) and a lower percentage of beneficiaries with severe cognitive impairment.

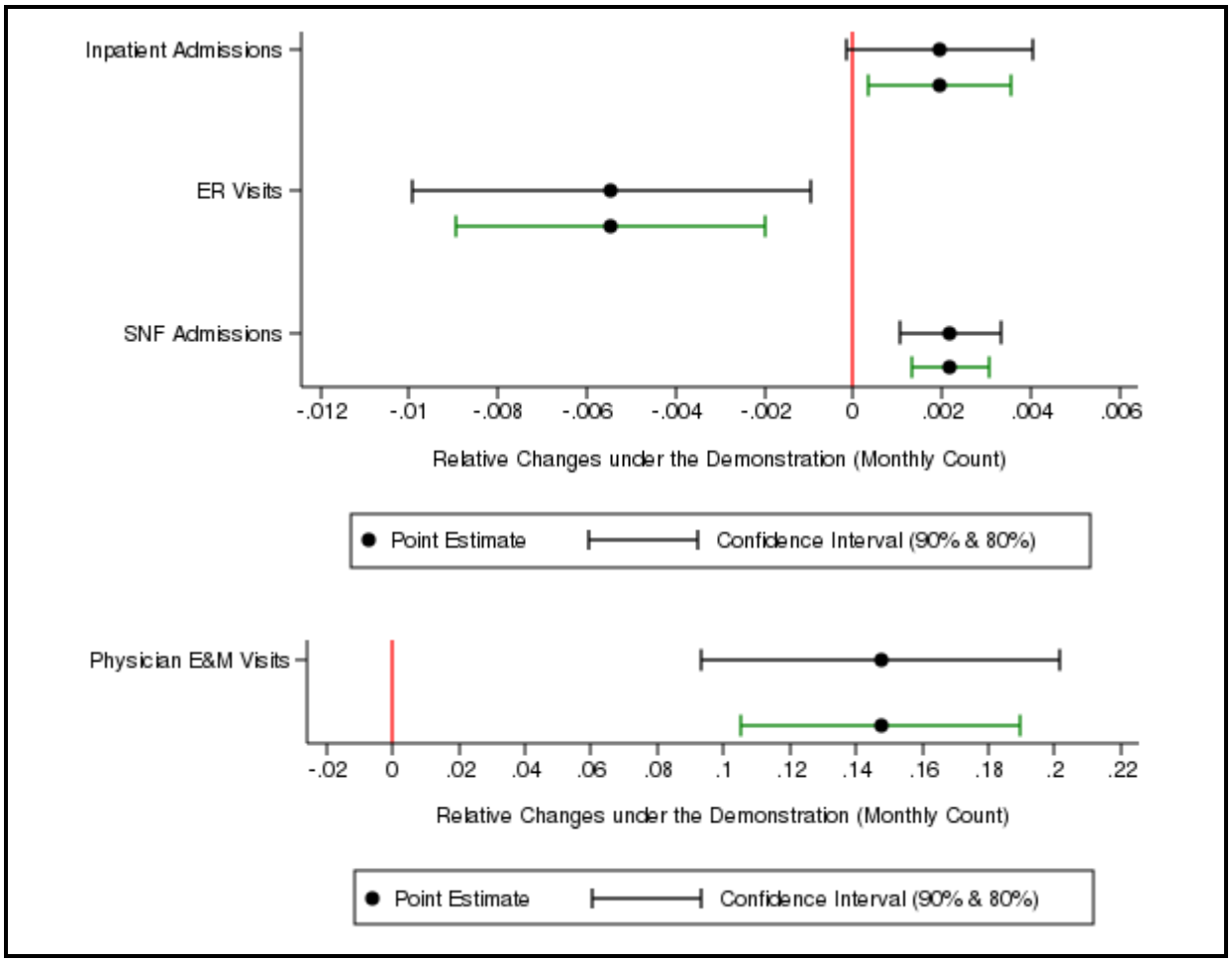
5.2.2 Analysis on Demonstration Eligible Beneficiaries with LTSS Use

Demonstration eligible beneficiaries were defined as those who used LTSS in a demonstration year if they received any institutional services or home or community-based services (HCBS). Approximately 73 percent of all eligible beneficiaries in both demonstration years were LTSS users. Monthly ER visits, including preventable ER visits, decreased over time for Minnesota demonstration group beneficiaries with LTSS use, compared to the comparison group beneficiaries with LTSS use. At the same time, the probability of overall and chronic ACSC admissions, monthly SNF admissions, and monthly physician E&M visits increased for the demonstration group LTSS users relative to the LTSS users in the comparison group. There were no differences between LTSS users in the demonstration and comparison groups in the changes in monthly inpatient admissions, the number of all-cause 30-day readmissions per demonstration year, or 30-day follow-up after mental health discharges per quarter.

Figure 4 displays the changes under the Minnesota demonstration in key service utilization measures among demonstration eligible beneficiaries who were LTSS users in the demonstration group relative to the comparison group through demonstration year 2. Monthly ER visits declined by 0.0055 visits (90 percent CI: –0.0099, –0.0010) for the demonstration group relative to the comparison group. After multiplying the monthly estimate by 12, the annual estimate corresponds to 0.0655 fewer ER visits per eligible beneficiary per year. Monthly

physician E&M visits increased by 0.1475 visits (90 percent CI: 0.0933, 0.2018) and monthly SNF admissions by 0.0022 admissions (90 percent CI: 0.0011, 0.0033) in the demonstration group relative to the comparison group. There was no statistically significant difference in changes over time for LTSS users in the demonstration and comparison groups in monthly inpatient admissions.

Figure 4
Changes under the Minnesota demonstration relative to the comparison group in service utilization for eligible beneficiaries with LTSS use—Difference-in-differences regression results for the demonstration period October 1, 2013–December 31, 2015
(90 and 80 percent confidence internals)



E&M = evaluation and management; ER = emergency room; SNF = skilled nursing facility.

NOTES: Standard statistical practice is to use confidence intervals of 90 percent or higher. 80 percent confidence intervals are provided here for comparison purposes only. The 90 percent intervals are black, and the 80 percent intervals are green. Beneficiaries who first met LTSS criteria during the demonstration period were removed from the regression model to address analytic issues in estimating results. Results should be interpreted with caution as there may be important observable and unobservable factors specific to the LTSS population that are not included in the propensity score model and weights.

SOURCE: RTI International analysis of Medicare data.

Table 7 presents changes in key service utilization for the LTSS users in the Minnesota demonstration eligible population with LTSS use relative to its comparison group for each demonstration year. Monthly physician E&M visits increased for the demonstration group relative to the comparison group in demonstration years 1 and 2 by 0.1569 visits ($p < 0.0001$) and 0.1206 visits ($p = 0.0234$), respectively. In demonstration year 2 only, for LTSS users in the demonstration group relative to the comparison group, monthly inpatient admissions increased by 0.0044 admissions ($p = 0.0008$) and monthly SNF admissions increased by 0.0069 admissions ($p < 0.0001$). In demonstration year 1 only, monthly ER visits decreased for LTSS users in the demonstration group relative to the comparison group by 0.0070 visits ($p = 0.0145$).

Table 7
Changes under the Minnesota demonstration relative to the comparison group by year in service utilization for eligible beneficiaries with LTSS use
(* indicates significant at $p < 0.20$, ** indicates significant at $p < 0.10$)

Utilization measure (per month)	Demonstration year 1 (10/13–12/14)	Demonstration year 2 (1/15–12/15)
Inpatient admissions	0.0008	0.0044**
ER visits	−0.0070**	−0.0024
Physician E&M visits	0.1569**	0.1206**
SNF admissions	−0.0006	0.0069**

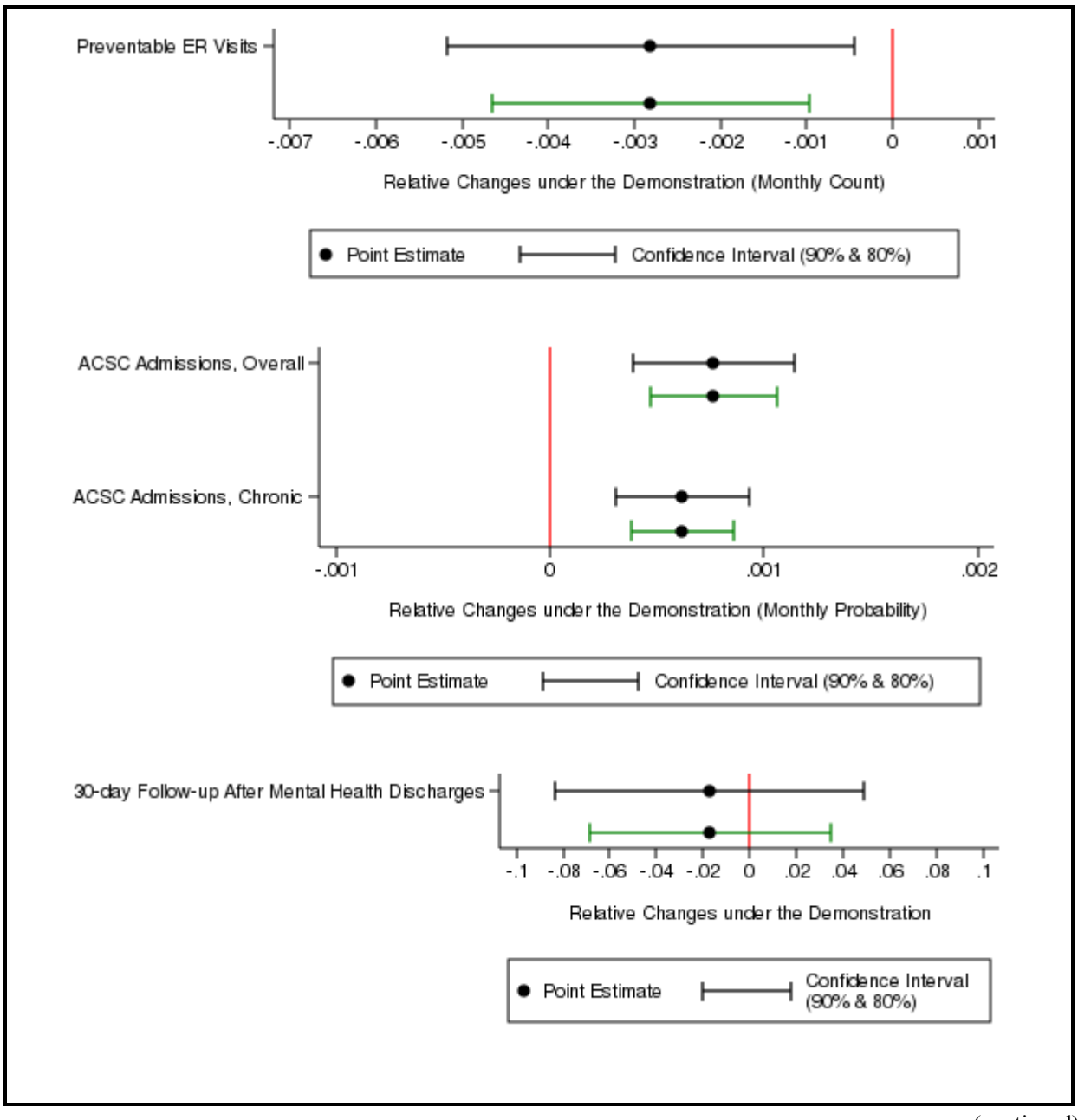
E&M = evaluation and management; ER = emergency room; SNF = skilled nursing facility.

NOTE: Standard statistical practice is to use confidence intervals of 90 percent or higher. Significance based on 80 percent confidence intervals are provided here for comparison purposes only. Beneficiaries who first met LTSS criteria during the demonstration period were removed from the regression model to address analytic issues in estimating results. Results should be interpreted with caution as there may be important observable and unobservable factors specific to the LTSS population that are not included in the propensity score model and weights.

SOURCE: RTI International analysis of Medicare data.

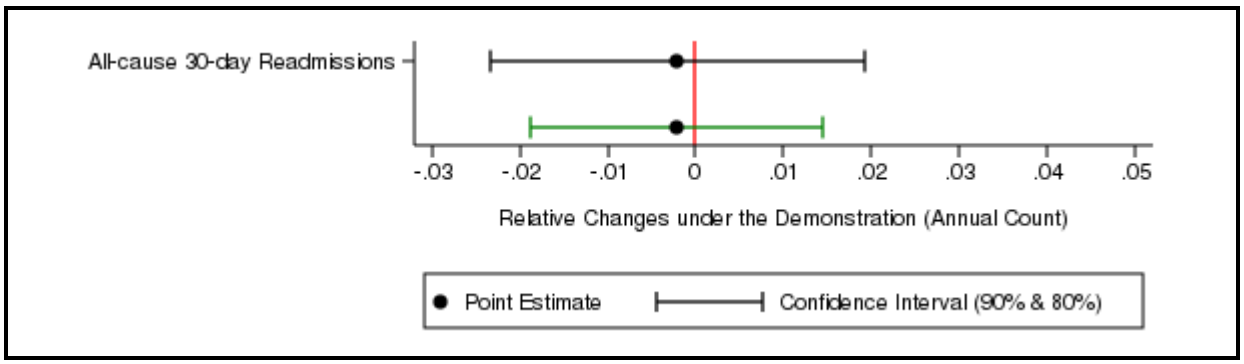
Figure 5 displays changes under the Minnesota demonstration relative to the comparison group in RTI quality of care and care coordination measures for the demonstration eligible population who were LTSS users through demonstration year 2. Relative to the LTSS users in the comparison group, monthly preventable ER visits declined by 0.0028 visits (90 percent CI: −0.0052, −0.0004) for LTSS users in the demonstration group. After multiplying the monthly estimate by 12, the annual estimate corresponds to 0.0337 fewer preventable ER visits per eligible beneficiary per year. The probability of both overall and chronic ACSC admissions for the demonstration group increased, by 0.08 percentage points (90 percent CI: 0.04, 0.11) and by 0.06 percentage points (90 percent CI: 0.03, 0.09), respectively, relative to the comparison group. There were no statistically significant demonstration differences for LTSS users in changes in the number of all-cause 30-day readmissions per demonstration year or 30-day follow-up after mental health discharges per quarter.

Figure 5
Changes under the Minnesota demonstration and the comparison group in RTI quality of care and care coordination for eligible beneficiaries with LTSS use—Difference-in-differences regression results for the demonstration period October 1, 2013–December 31, 2015
(90 and 80 percent confidence intervals)



(continued)

Figure 5 (continued)
Changes under the Minnesota demonstration and the comparison group in RTI quality of care and care coordination for eligible beneficiaries with LTSS use—Difference-in-differences regression results for the demonstration period October 1, 2013–December 31, 2015
(90 and 80 percent confidence intervals)



ACSC = ambulatory care sensitive conditions; ER = emergency room.

NOTES: Standard statistical practice is to use confidence intervals of 90 percent or higher. 80 percent confidence intervals are provided here for comparison purposes only. The 90 percent intervals are black, and the 80 percent intervals are green. Beneficiaries who first met LTSS criteria during the demonstration period were removed from the regression model to address analytic issues in estimating results. Results should be interpreted with caution as there may be important observable and unobservable factors specific to the LTSS population that are not included in the propensity score model and weights.

SOURCE: RTI International analysis of Medicare data.

Table 8 displays the changes under the Minnesota demonstration relative to the comparison group in RTI quality of care and care coordination measures for the demonstration eligible population with LTSS use for each demonstration year. Monthly preventable ER visits decreased for LTSS users in the demonstration group relative to the comparison group in demonstration year 1 only by 0.0031 visits ($p = 0.0439$). Although the probability of overall ACSC admission declined among LTSS users in the demonstration group relative to the comparison group by 0.05 percentage points ($p = 0.0768$) in demonstration year 1, it increased relative to the comparison group by 0.28 percentage points ($p < 0.0001$) in demonstration year 2. Finally, the probability of chronic ACSC admissions increased among LTSS users in the demonstration group relative to the comparison group by 0.18 percentage points ($p < 0.0001$) in demonstration year 2 only. There were no significant differences in changes over time in 30-day follow-up after mental health discharges per quarter or all-cause 30-day readmissions per demonstration year in either year for LTSS users in the demonstration and comparison groups.

Table 8
Changes under the Minnesota demonstration and the comparison group by year in RTI quality of care and care coordination for eligible beneficiaries with LTSS use
(* indicates significant at $p < 0.20$, ** indicates significant at $p < 0.10$)

Quality of care and care coordination measures	Demonstration year 1 (10/13–12/14)	Demonstration year 2 (1/15–12/15)
Preventable ER visits	−0.0031**	−0.0021*
Probability of ACSC admissions, overall	−0.0005**	0.0028**
Probability ACSC admissions, chronic	−0.0001	0.0018**
30-day follow-up after mental health discharges	0.0404	−0.0634
All-cause 30-day readmissions	0.0143	−0.0007

ACSC = ambulatory care sensitive conditions; ER = emergency room.

NOTE: Standard statistical practice is to use confidence intervals of 90 percent or higher. Significance based on 80 percent confidence intervals are provided here for comparison purposes only. Beneficiaries who first met LTSS criteria during the demonstration period were removed from the regression model to address analytic issues in estimating results. Results should be interpreted with caution as there may be important observable and unobservable factors specific to the LTSS population that are not included in the propensity score model and weights.

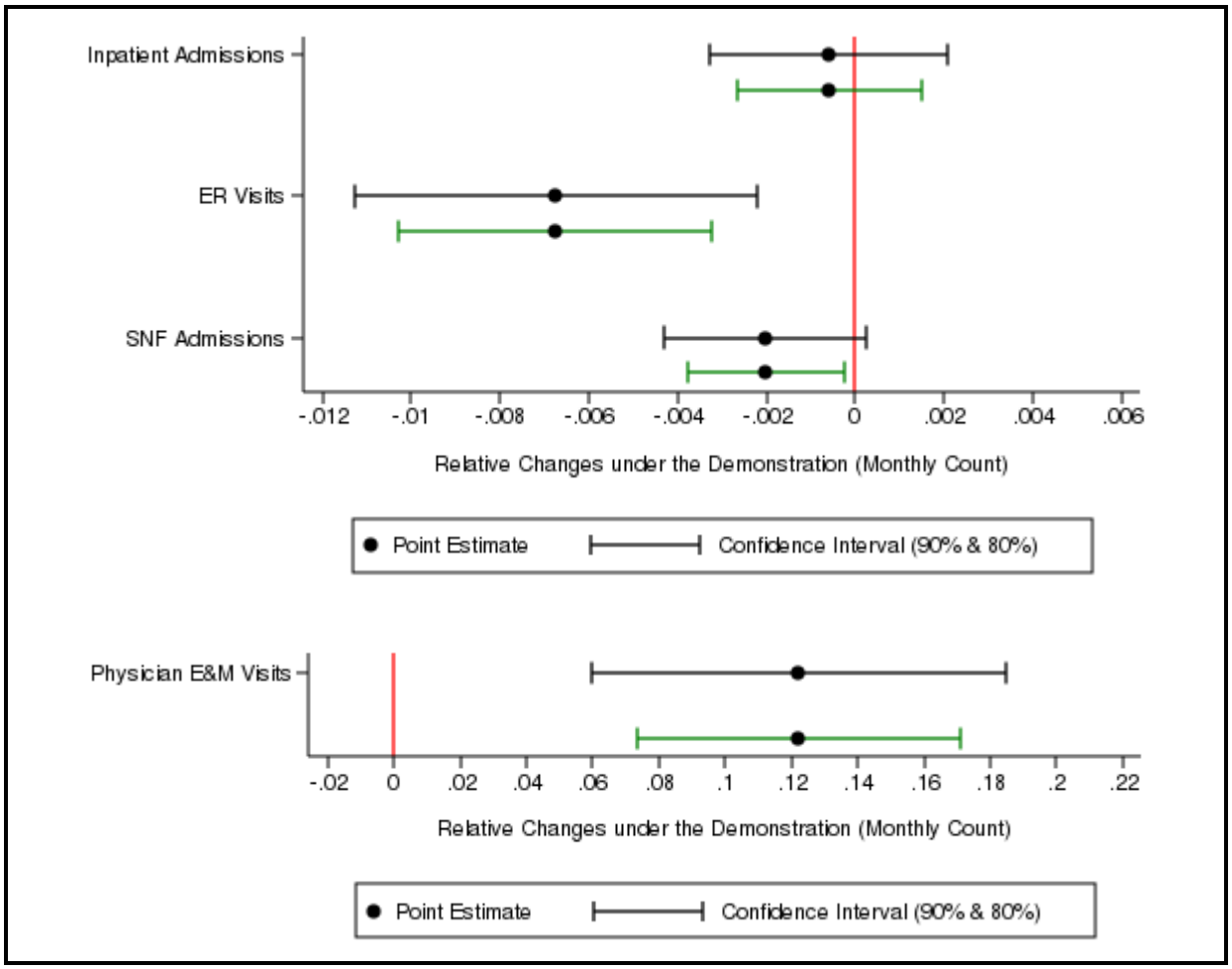
SOURCE: RTI International analysis of Medicare data.

5.2.3 Analyses on the Demonstration Eligible Population with SPMI

Demonstration eligible beneficiaries were defined for the FAI evaluation as having SPMI if there were any inpatient or outpatient mental health visits for schizophrenia or bipolar disorders in the last 2 years (see page 6 of ***Appendix B*** for additional information). Approximately 29 percent of all eligible beneficiaries across both demonstration years had SPMI. As was true for the overall demonstration eligible population, monthly ER visits, including preventable ER visits, declined for demonstration eligible beneficiaries with SPMI relative to the comparison group, whereas the probability of overall and chronic ACSC admissions and monthly physician E&M visits increased relative to the comparison group. There were no significant differences in the changes over time for the SPMI adults in the demonstration and comparison groups in monthly inpatient admissions, monthly SNF admissions, 30-day follow-up after mental health discharges per quarter, or all-cause 30-day readmissions per demonstration year.

Figure 6 displays the changes under the Minnesota demonstration in key service utilization measures for the SPMI adults in the demonstration group relative to the comparison group. Monthly ER visits decreased by 0.0067 visits (90 percent CI: –0.0113, –0.0022) among demonstration eligible beneficiaries with SPMI in the demonstration group relative to the comparison group. After multiplying the monthly estimate by 12, the annual estimate corresponds to 0.0810 fewer ER visits per eligible beneficiary per year. Monthly physician E&M visits increased by 0.1222 visits (90 percent CI: 0.0596, 0.1848) for SPMI adults in the demonstration group relative to the comparison group. There were no significant differences in the changes in monthly inpatient admissions or monthly SNF visits for SPMI adults in the demonstration and comparison groups.

Figure 6
Changes under the Minnesota demonstration relative to the comparison group in service utilization for eligible beneficiaries with SPMI—Difference-in-differences regression results for the demonstration period
October 1, 2013–December 31, 2015



E&M = evaluation and management; ER = emergency room; SNF = skilled nursing facility.

NOTE: Standard statistical practice is to use confidence intervals of 90 percent or higher. 80 percent confidence intervals are provided here for comparison purposes only. The 90 percent intervals are black, and the 80 percent intervals are green.

SOURCE: RTI International analysis of Medicare data.

Table 9 displays the changes under the Minnesota demonstration in key service utilization measures among SPMI adults in the demonstration group relative to the comparison group for each demonstration year. Monthly ER visits decreased in both demonstration years, by 0.0090 visits ($p = 0.0066$) in year 1 and by 0.0051 visits ($p = 0.0459$) in year 2, among SPMI adults in the demonstration group relative to the comparison group. Monthly physician E&M visits increased by 0.1401 visits ($p < 0.0001$) in demonstration year 1 and by 0.0790 visits ($p = 0.0889$) in year 2 in the demonstration group relative to the comparison group. In demonstration year 1 only, there was a reduction of 0.0065 monthly SNF admissions ($p = 0.0001$) in the demonstration group relative to the comparison group among beneficiaries with SPMI. There were no statistically significant differences in changes in monthly inpatient admissions for either demonstration year for SPMI adults in the demonstration and comparison groups.

Table 9
Changes under the Minnesota demonstration relative to the comparison group by year in service utilization for eligible beneficiaries with SPMI
(* indicates significant at p < 0.20, ** indicates significant at p < 0.10)

Utilization measure (per month)	Demonstration year 1 (10/13–12/14)	Demonstration year 2 (1/15–12/15)
Inpatient admissions	−0.0007	−0.0008
ER visits	−0.0090**	−0.0051**
Physician E&M visits	0.1401**	0.0790**
SNF admissions	−0.0065**	0.0021*

E&M = evaluation and management; ER = emergency room; SNF = skilled nursing facility.

NOTE: Standard statistical practice is to use confidence intervals of 90 percent or higher. Significance based on 80 percent confidence intervals are provided here for comparison purposes only.

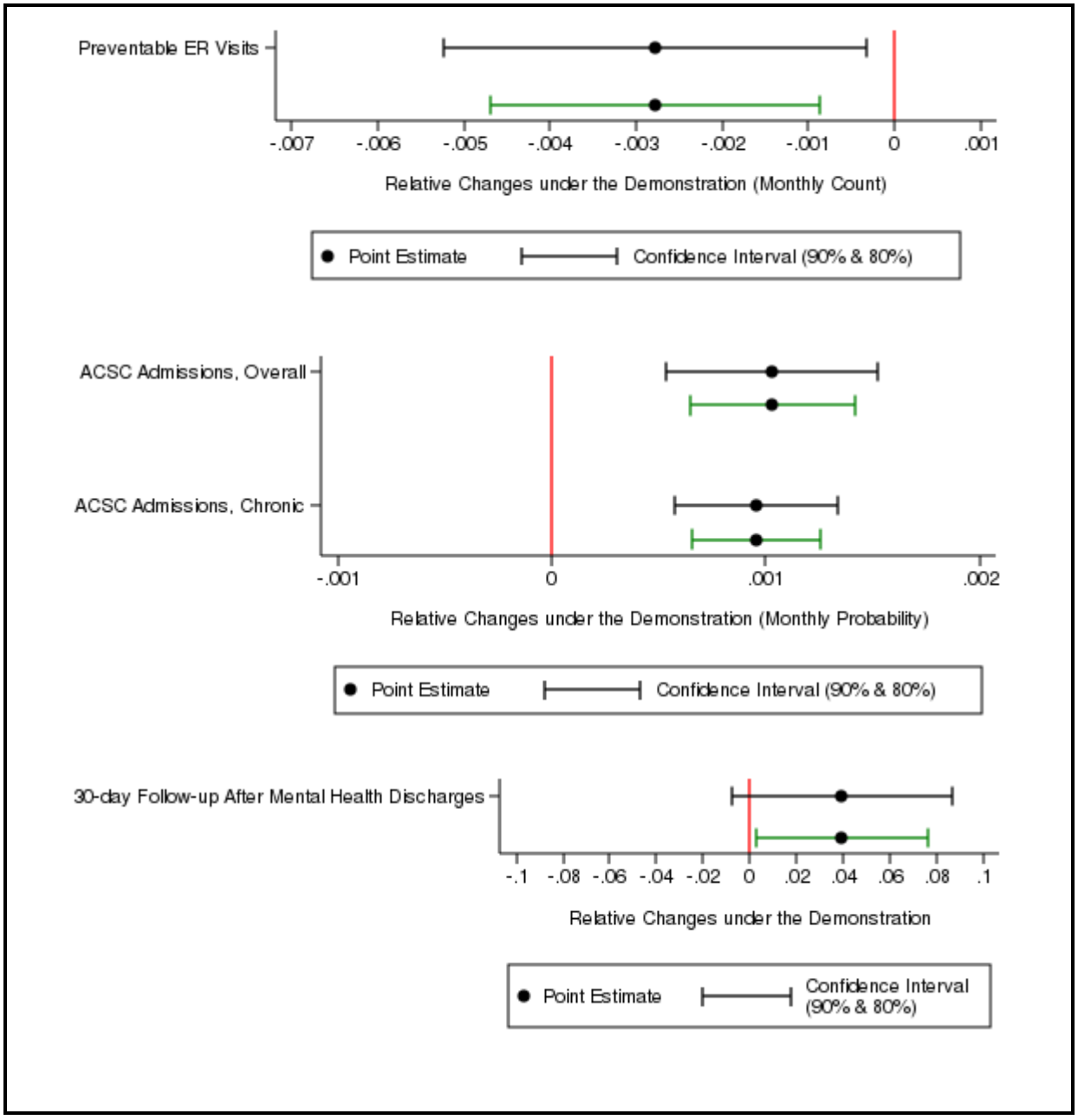
SOURCE: RTI International analysis of Medicare data.

Figure 7 displays the changes under the Minnesota demonstration relative to the comparison group in RTI quality of care and care coordination measures for the demonstration eligible population with SPMI through demonstration year 2. Monthly preventable ER visits declined among adults with SPMI in the demonstration group by 0.0028 visits (90 percent CI: −0.0052, −0.0003) relative to the comparison group. After multiplying the estimate by 12, the annual estimate corresponds to 0.0332 fewer preventable ER visits per eligible beneficiary per demonstration year. The probability of overall and chronic ACSC admissions increased by 0.10 percentage points (90 percent CI: 0.05, 0.15) and by 0.10 percentage points (90 percent CI: 0.06, 0.13), respectively, for SPMI adults in the demonstration group relative to the comparison group. There were no statistically significant differences in the changes in the number of all-cause 30-day readmissions per demonstration year or 30-day follow-up after mental health discharges per quarter between the demonstration and comparison groups among the demonstration eligible population with SPMI.

Figure 7

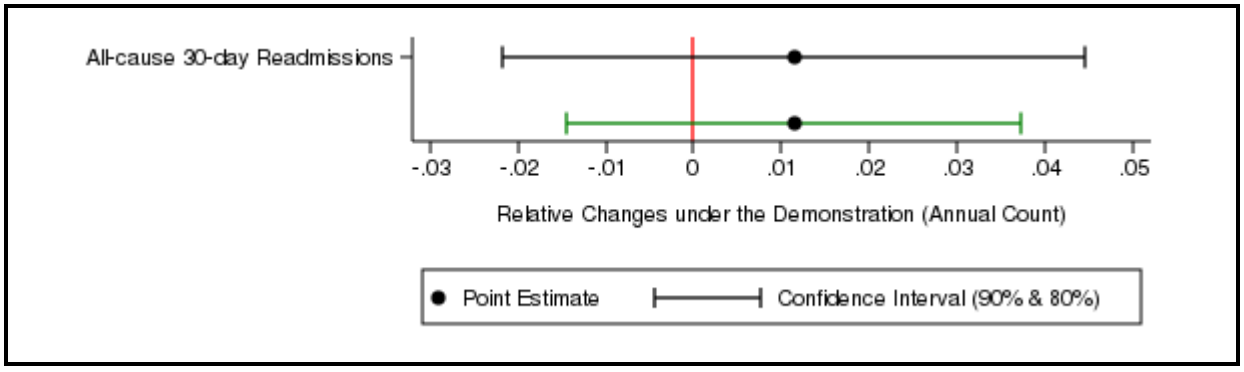
Changes under the Minnesota demonstration and the comparison group in RTI quality of care and care coordination for eligible beneficiaries with SPMI—Difference-in-differences regression results for the demonstration period October 1, 2013–December 31, 2015

(90 and 80 percent confidence internals)



(continued)

Figure 7 (continued)
Changes under the Minnesota demonstration and the comparison group in RTI quality of care and care coordination for eligible beneficiaries with SPMI—Difference-in-differences regression results for the demonstration period October 1, 2013–December 31, 2015
(90 and 80 percent confidence internals)



ACSC = ambulatory care sensitive conditions; ER = emergency room.

NOTE: Standard statistical practice is to use confidence intervals of 90 percent or higher. 80 percent confidence intervals are provided here for comparison purposes only. The 90 percent intervals are black, and the 80 percent intervals are green.

SOURCE: RTI International analysis of Medicare data.

Table 10 displays the changes under the Minnesota demonstration in RTI quality of care and care coordination measures for adults with SPMI in the demonstration group relative to the comparison group in each demonstration year. For SPMI adults, monthly preventable ER visits declined by 0.0034 visits ($p = 0.0520$) in demonstration year 1 and by 0.0024 visits ($p = 0.0961$) in year 2 for the demonstration group relative to the comparison group. The probabilities of overall and chronic ACSC admissions increased in demonstration year 2 only for the demonstration group relative to the comparison group, by 0.24 percentage points ($p < 0.0001$) and 0.17 percentage points ($p < 0.0001$), respectively. In demonstration year 1 only, 30-day follow-up visits after mental health discharges per quarter increased by 0.0884 visits ($p = 0.0037$) in the demonstration group relative to the comparison group. There were no statistically significant differences in changes in all-cause 30-day readmissions for either demonstration year for the demonstration group relative to the comparison group.

Table 10
Changes under the Minnesota demonstration relative to the comparison group by year in RTI quality of care and care coordination for eligible beneficiaries with SPMI
(* indicates significant at $p < 0.20$, ** indicates significant at $p < 0.10$)

Quality of care and care coordination measures	Demonstration year 1 (10/13–12/14)	Demonstration year 2 (1/15–12/15)
Preventable ER visits	−0.0034**	−0.0024**
Probability of ACSC admissions, overall	−0.0004*	0.0024**
Probability ACSC admissions, chronic	0.0001	0.0017**
30-day follow-up after mental health discharges	0.0884**	−0.0021*
All-cause 30-day readmissions	−0.0037	0.0204

ACSC = ambulatory care sensitive conditions; ER = emergency room.

NOTE: Standard statistical practice is to use confidence intervals of 90 percent or higher. Significance based on 80 percent confidence intervals are provided here for comparison purposes only.

SOURCE: RTI International analysis of Medicare data.

5.2.4 Service Use for Enrollee and Non-Enrollee Populations in Minnesota

To provide insights into the utilization experience over time within the Minnesota demonstration***, Tables C-4*** and ***C-5*** in ***Appendix C*** present descriptive statistics for the enrolled population, compared to those demonstration eligible beneficiaries who were not enrolled, for each service by demonstration year.

Enrollees appeared similar to non-enrollees on most measures of utilization. Differences between the two populations included fewer inpatient admissions, lower emergency department and outpatient therapy use, and lower use of other hospital outpatient services among enrollees compared to non-enrollees (***Table C-4***). As for the RTI quality of care and care coordination measures, enrollees appeared to have fewer monthly preventable ER visits, a lower 30-day all-cause risk-standardized readmission rate, and a higher rate of 30-day follow-up after mental health discharge than non-enrollees (***Table C-5***).

5.2.5 Service Use by Demographic Characteristics of Eligible Beneficiaries

To examine any differences in racial and ethnic groups, ***Figures 8, 9,*** and ***10*** provide month-level results for five settings of interest for Minnesota's eligible beneficiaries: inpatient admissions, emergency department visits (non-admit), hospice admissions, primary care E&M visits, and outpatient therapy (physical therapy [PT], occupational therapy [OT], and speech therapy [ST]) visits. Results across these five settings are displayed using three measures: percentage with any use of the respective service, counts per 1,000 eligible beneficiaries with any use of the respective service, and counts per 1,000 demonstration eligible beneficiaries.

Figure 8 presents the percentage of use of selected Medicare services. Asians had the lowest use in all service settings. Whites had the highest use of hospice admissions primary care E&M visits, and outpatient therapy visits; Blacks had the highest use of inpatient admissions and emergency department visits.

Regarding counts of services used among users of each respective service, as presented in ***Figure 9***, the counts of inpatient admissions, emergency department visits, hospice admissions, and primary care E&M visits were similar across all racial and ethnic groups. Counts of outpatient therapy visits, on the other hand, were highest for Whites, followed by Blacks, Hispanics, and Asians.

Figure 10 presents counts of services across all Minnesota demonstration eligible beneficiaries regardless of having any use of the respective services. Trends for utilization across all service settings were broadly similar to those displayed in ***Figure 8***.

Figure 8
Percent with use of selected Medicare services

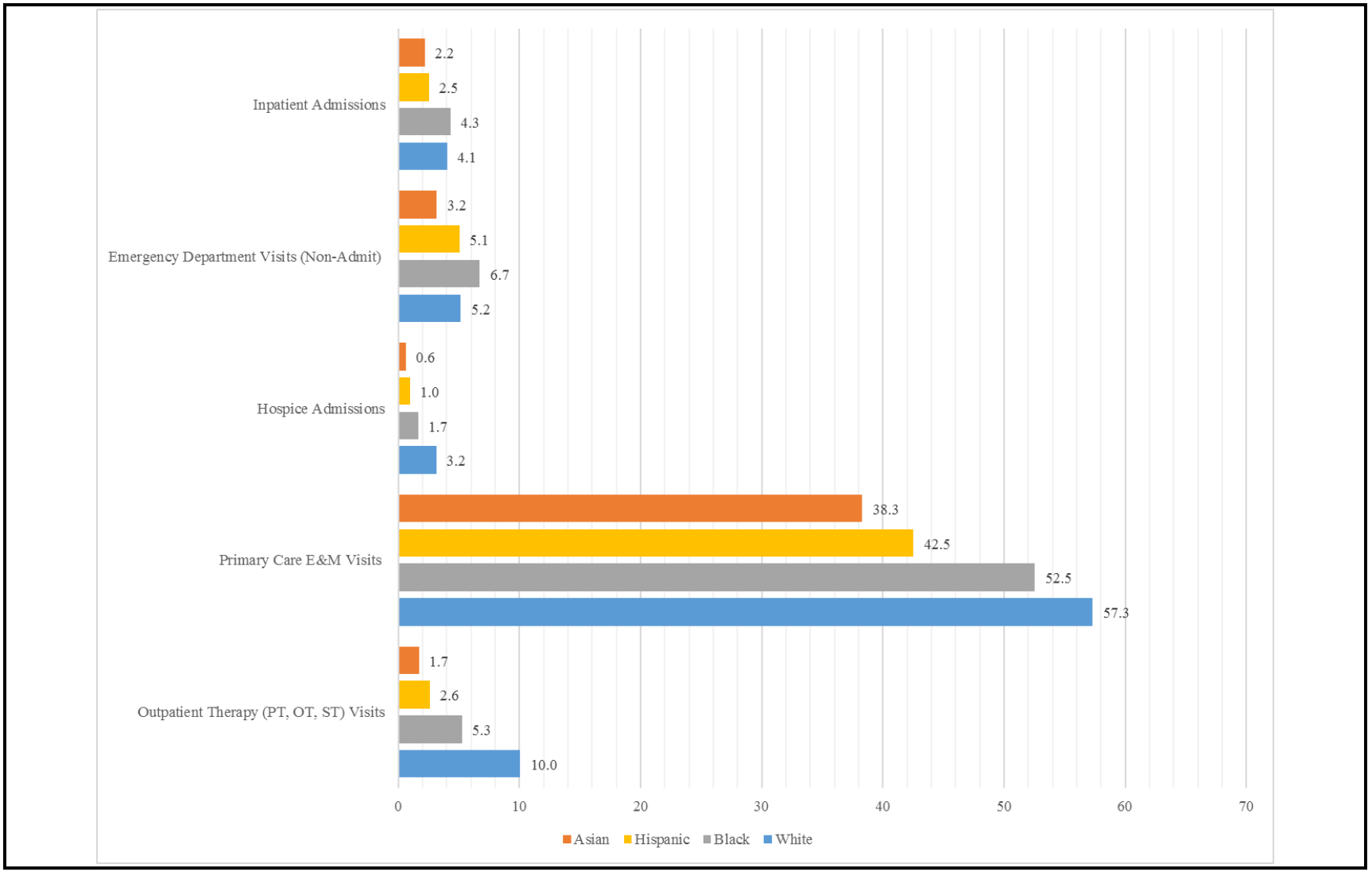


Figure 9
Service use among all demonstration eligible beneficiaries with use of service per 1,000 user months

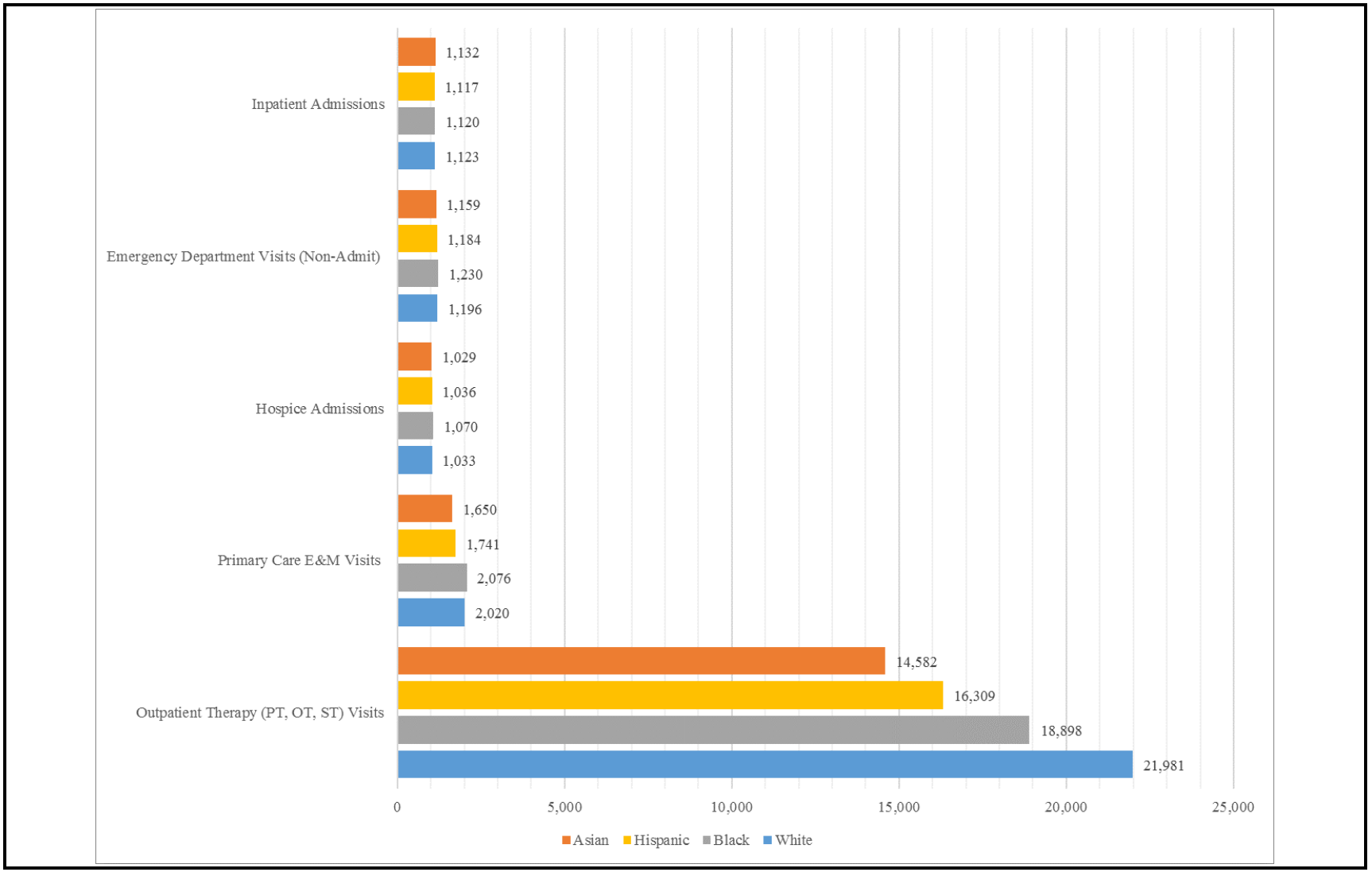
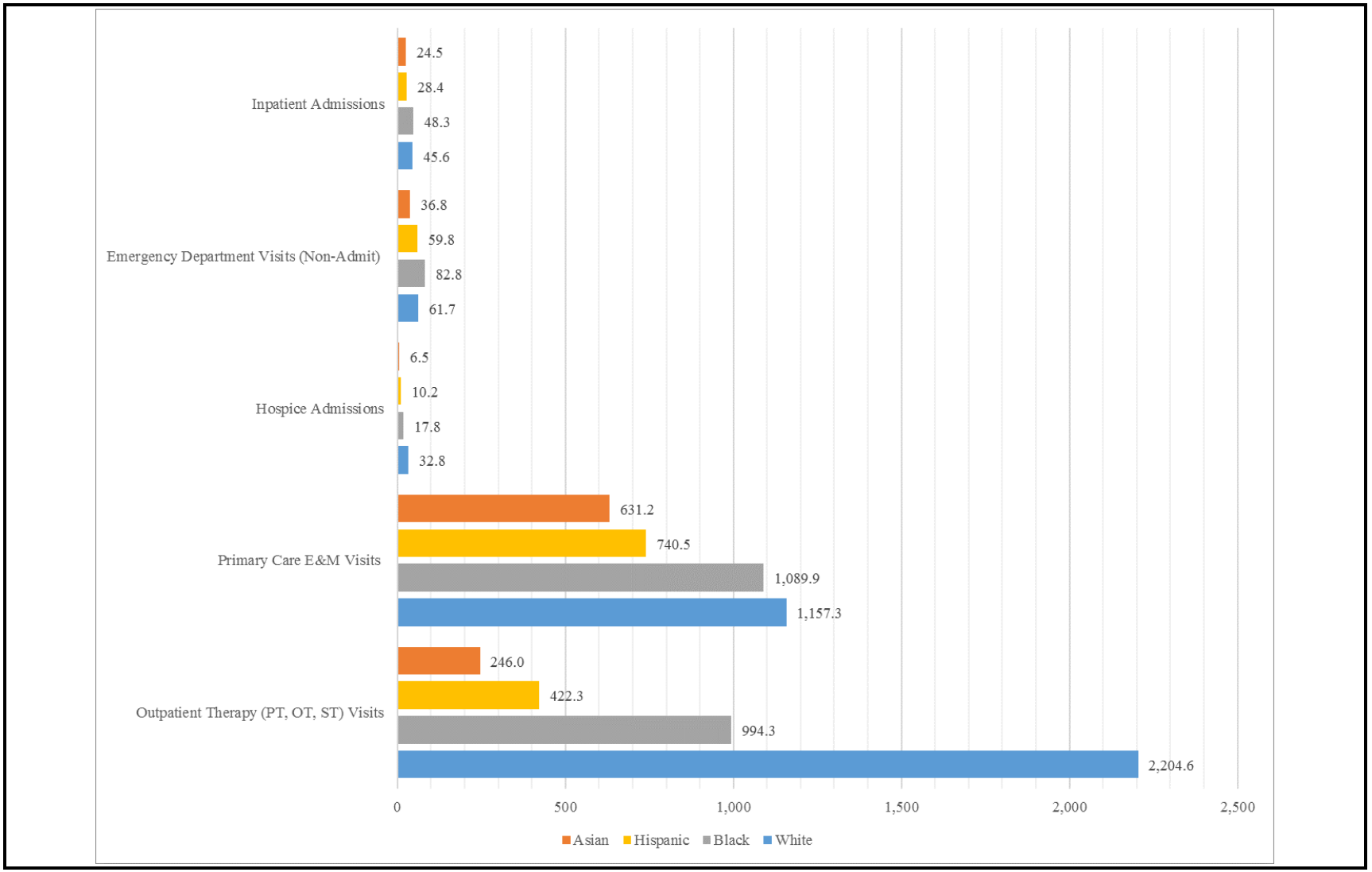


Figure 10
Service use among all demonstration eligible beneficiaries per 1,000 eligible months



6. Conclusions

6.1 Implementation Accomplishments

The Minnesota alternative model demonstration is implementing administrative changes that are meant to better align Medicare and Medicaid processes within MSHO, the State's long-running integrated Medicare-Medicaid program. Those changes include three types of Medicare-Medicaid alignment activities: (1) joint CMS-State demonstration management activities related to the MSHO program; (2) discrete activities that CMS and the State have agreed to conduct, usually in partnership; and (3) those based on the self-implementing provisions that formalize previous CMS-State agreements related to various MSHO operational policies. To date, the demonstration has made the most progress with the joint CMS-State demonstration management activities and formalizing previous CMS-State agreements related to MSHO operational policies.

With the establishment of the Demonstration Management Team, the State reported that it now has a reliable communication channel with CMS, which it did not have during the 9 years it had been administering an integrated Medicare D-SNP–Medicaid managed care program. State officials reported that they appreciate the information they receive from the Demonstration Management Team members about changing D-SNP policies and the knowledge that it has a resource to help identify and access specific CMS staff when needed.

The demonstration has also established some administrative processes that could be adopted by other Medicare-Medicaid integration programs. Specifically, these include the new pilot for conducting joint CMS-State Medicare network adequacy reviews, collaborative structures for drafting and reviewing beneficiary materials, and integration of State-specific standards into the Medicare model of care (MOC).

By formalizing agreements that had been in place between CMS and the State, the demonstration has already addressed important aspects of Medicare and Medicaid alignment in the MSHO program, such as integrated processes for grievances and appeals, for claims adjudication, and for program enrollment. The Demonstration Management Team has been very successful in facilitating policy collaboration between CMS and the State over the course of the demonstration to date. In addition, the demonstration's Medicare-Medicaid alignment activities produced changes to the MSHO plan's MOCs; improved processes used by MSHO plans, CMS, and the State in developing integrated beneficiary materials; and implemented Integrated Care Systems Partnerships. Minnesota's first quarterly submission of information about the demonstration to the RTI evaluation team summed up the nature of the Medicare-Medicaid program alignment work:

> It is challenging to describe the Minnesota demonstration to stakeholders and state leadership because it is so related to behind the scenes technical and operational issues between Medicare and Medicaid that most people do not know or care about, even though these are necessary to maintaining and improving integration of service delivery and operation *(SDRS 1st Quarter, 2014)*.

6.2 Assessment of Unintended Consequences in Medicare Utilization

Because no changes were expected in Medicare utilization from implementation of administrative processes under the demonstration, the purpose of our impact analyses was to assess the data for any unintended consequences of these administrative changes among Minnesota demonstration eligible beneficiaries relative to the comparison group.

We found no unintended consequences of the demonstration. There were either no differences in utilization when compared with the comparison group, or there were differences that were consistent with prior research on utilization patterns in Minnesota.

Although there was a slight increase in admissions for ambulatory care sensitive conditions (ACSC), all other indicators were unchanged or changed for the better. When viewed in light of a prior study of Minnesota programs before implementation of these administrative changes (Anderson, Feng, and Long, 2016), Minnesota utilization patterns generally appear similar before and after the demonstration, with lower institutional use and higher utilization of community-based providers when comparing Minnesota Senior Health Options, the fully integrated program vs. Minnesota Senior Care Plus, a managed Medicaid plan that may coordinate services with Medicare FFS. In difference-in-differences results, there was no difference in inpatient or skilled nursing facility (SNF) use, 30-day follow-up after mental health discharges, or all-cause 30-day inpatient readmissions. Monthly emergency room (ER) visits, preventable ER visits, and the probability of long-stay nursing facility (NF) use all decreased for the Minnesota demonstration group relative to its comparison group, whereas the probability of overall and chronic ACSC admissions and the number of physician evaluation and management (E&M) visits increased for the demonstration group.

6.3 Next Steps for the Evaluation of the Minnesota Demonstration

The evaluation will continue to collect information quarterly from Minnesota through the online SDRS that covers enrollment statistics and updates on key aspects of implementation. Using the quarterly finder file submitted by the State, the evaluation team will generate quality, utilization, and cost data from Medicare and Medicaid claims and encounters, and the Nursing Home Minimum Data Set. The evaluation team will continue to conduct quarterly calls with the Minnesota demonstration State staff and request the results of any evaluation activities conducted by the State or other entities. We will continue to discuss the demonstration with CMS staff. During the course of the demonstration, there will be additional site visits..

The third Evaluation Report on the Minnesota demonstration will include qualitative information on the status of the demonstration. Qualitative information will include findings through the date of the most recent site visit at that time. The final aggregate report for the Financial Alignment Initiative evaluation will include all elements of the State-specific evaluation reports and the aggregate findings from the demonstration. We will not be conducting an analysis of the impacts of the Minnesota demonstration on MSHO enrollees (as opposed to the analyses in this report that encompass the entire demonstration-eligible population), given the focus of the demonstration on administrative processes and hypothesis that utilization and costs will not change as a direct result of the demonstration.

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Appendix A:
Identification of the Minnesota Comparison Group

This appendix presents the comparison group selection and assessment results for the Minnesota demonstration. Results for comparison group selection and analyses are prepared for each demonstration year. The evaluation report for the first performance year and two prior baseline years for the state of Minnesota was originally released in December 2016. The Technical Appendix at the end of that document describes the comparison group identification methodology in detail. This report provides the comparison group results for the second performance year for the Minnesota demonstration (January 1, 2015–December 31, 2015), and notes any major changes in the results since the previous performance year.

A.1 Demonstration and Comparison Group Characteristics

The Minnesota demonstration area consists of the entire state. Seven States with timely Medicaid data qualified as sources for the metropolitan statistical areas (MSAs) comprising the comparison group for the Minnesota demonstration. These geographic areas have not changed from the previous demonstration period. As described in the first evaluation report, RTI continues to use the distance score methodology described in that document's Technical Appendix. The total Minnesota comparison area is comprised of 31 MSAs in seven States.

The Minnesota demonstration was restricted to Medicare-Medicaid beneficiaries age 65 years or older who were enrolled in a Dual Eligible Special Needs Plan (D-SNP) and, therefore, not attributed to another Federal Medicare shared savings initiative. Comparison groups were comprised of beneficiaries age 65 years or older who had not been attributed to another Federal Medicare shared savings initiative.

The number of demonstration group beneficiaries listed in finder files decreased slightly from 62,720 in demonstration year 1 to 61,061 in demonstration year 2. There was a small reduction in the size of the comparison group (from 224,204 to 219,020) between these periods also. These reductions may reflect the fact that demonstration year 2 (12 months) was shorter than demonstration year 1 (15 months).

A.2 Propensity Score Estimates

RTI's methodology uses propensity scores to examine initial differences between the demonstration and comparison groups in each analysis period and then to weight the data to improve the match between the two groups. The comparability of the two groups is examined with respect to both individual beneficiary characteristics as well as the overall distributions of propensity scores.

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

The logistic regression coefficients and z-values for the covariates included in the propensity model for demonstration year 2 are shown in ***Table A-1***. The magnitudes of the coefficients are very similar to those from previous years, except for the variable for the proportion of months eligible during the period which changed to a negative value in demonstration year 2.

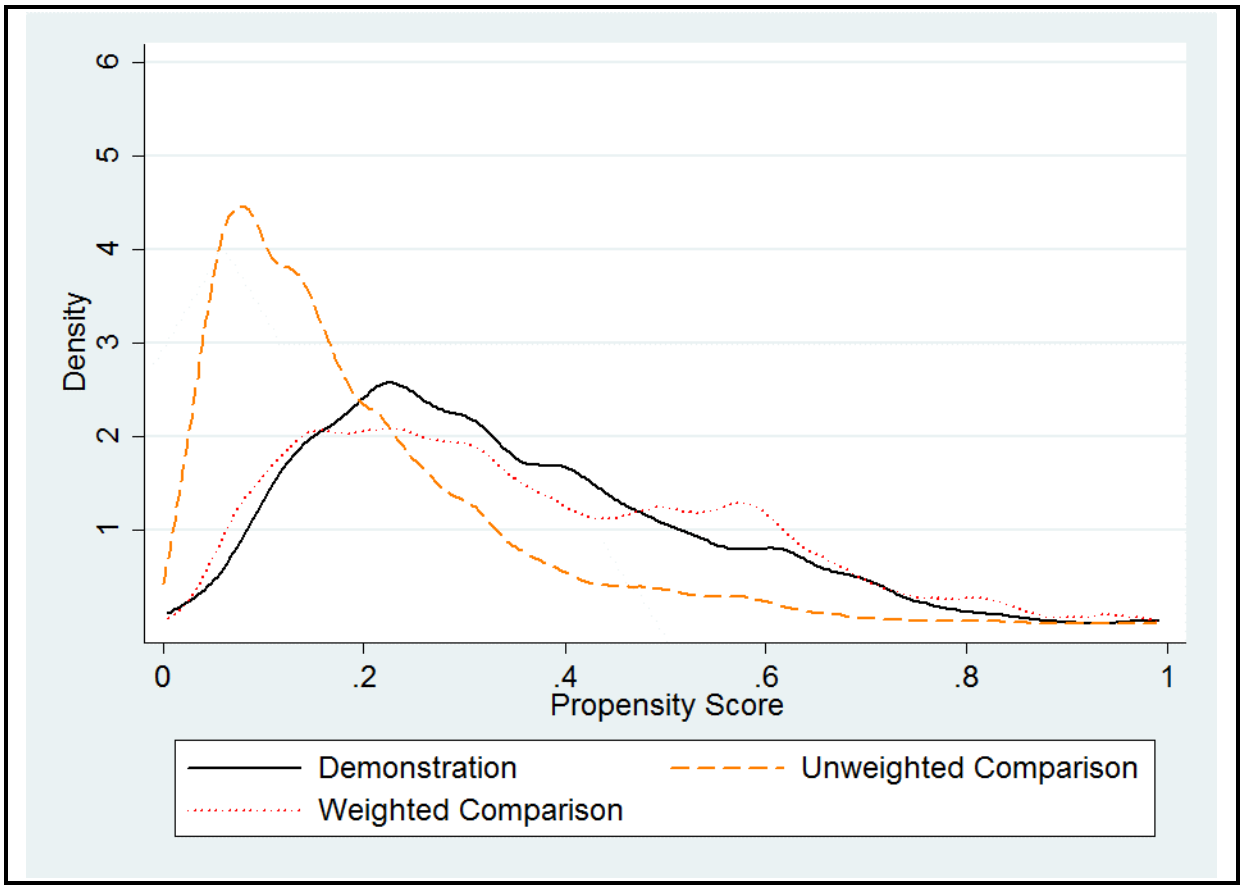
Table A-1
Logistic regression estimates for Minnesota propensity score model in demonstration year 2

Characteristics	Demonstration period 2		
	Coef.	**Std. Err.**	**z-score**
Age (years)	0.008	0.001	14.35
Died during year	−0.197	0.018	−10.99
Female (0/1)	0.162	0.012	13.27
White (0/1)	−0.441	0.014	−31.43
Disabled (0/1)	−0.107	0.019	−5.59
ESRD (0/1)	−0.237	0.045	−5.23
Share mos. elig. during period (prop.)	−0.287	0.019	−15.11
HCC risk score	−0.059	0.004	−13.25
Other Medicare shared savings program enrollment	−0.841	0.017	−48.14
MSA (0/1)	−0.468	0.015	−31.94
% of pop. living in married household	0.029	0.001	55.17
% of households w/member >= 60 yrs.	−0.101	0.001	−120.66
% of adults with college education	0.028	0.001	55.64
% of adults w/self-care limitation	0.003	0.001	2.36
% of households w/ member < 18 yrs.	0.014	0.001	19.26
% of those age <65 yrs. Unemployed	−0.017	0.001	−23.43
Distance to nearest hospital (mi.)	0.025	0.001	20.17
Distance to nearest nursing facility (mi.)	0.075	0.002	43.29
Intercept	−0.965	0.067	−14.38

A.3 Propensity Score Overlap

The distributions of propensity scores by group are shown for demonstration period 2 in ***Figure A-1*** before and after propensity weighting. Estimated scores covered nearly the entire probability range in both groups. Like the previous analyses, the unweighted comparison group (dashed line) is characterized by a spike in predicted probabilities in the range from 0 to 0.20 likely caused by the MSA effect. This spike in demonstration year 2 was similar to demonstration year 1. Inverse Probability of Treatment Weighting (IPTW) pulls the distribution of weighted comparison group propensity scores (dotted line) much closer to that of the demonstration group (solid line).

Figure A-1
Distribution of beneficiary-level propensity scores in the Minnesota demonstration and comparison groups, weighted and unweighted, January–December 2015



A.4 Group Comparability

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

The group means and standardized differences for all beneficiary characteristics are shown for demonstration year 2 in ***Table A-2***. The column of unweighted standardized differences indicates that several of these variables were not balanced before running the propensity model. Five variables (percent of the population living in married households, percent of households in the ZIP code with at least one member age 60 or older, percent of households in the ZIP code with at least one member younger than 18 years of age, distance to the nearest hospital, and distance to the nearest nursing facility) all had unweighted standardized differences exceeding 0.30.

The results of propensity score weighting for demonstration period 2 are illustrated in the far right column (weighted standardized differences) in ***Table A-2***. Propensity weighting reduced the standardized differences to at or below the threshold level of an absolute value of 0.1 or less. The sizable initial difference in MSA rates was reduced far below the threshold. This is the same pattern of results that was found in demonstration period 1.

A.5 Summary

Our demonstration year 2 analyses of the Minnesota demonstration and comparison groups produced results that were very similar to those in demonstration period 1 and for the baseline years. The Minnesota groups are distinguished by differences in MSA rates and several ZIP-related demographic measures. Propensity-score weighting successfully removes the MSA difference between groups.

Table A-2
Minnesota dual eligible beneficiary covariate means by group before and after weighting by propensity score—Demonstration year 2, January 1–December 31, 2015

Characteristics	Demonstration group mean	Comparison group mean	PS-weighted comparison group mean	Unweighted standardized difference	Weighted standardized difference
Age	79.329	78.472	79.364	0.089	−0.004
Died	0.124	0.129	0.126	−0.014	−0.005
Female	0.682	0.688	0.680	−0.013	0.005
White	0.770	0.786	0.770	−0.039	−0.001
Disabled	0.073	0.085	0.074	−0.042	−0.004
ESRD	0.012	0.016	0.012	−0.034	0.000
Share mos. elig. during period	0.813	0.832	0.810	−0.067	0.009
HCC score	1.667	1.783	1.674	−0.096	−0.006
Other Medicare shared savings program enrollment	0.080	0.144	0.086	−0.204	−0.022
MSA	0.688	0.765	0.693	−0.172	−0.011
% of pop. living in married household	74.913	70.551	75.281	0.332	−0.032
% of households w/member >= 60	34.141	37.682	33.583	−0.436	0.066
% of households w/member < 18	21.552	17.110	22.961	0.372	−0.098
% of adults w/college education	7.702	8.340	7.703	−0.133	0.000
% of adults w/self-care limitation	29.951	28.951	29.165	0.129	0.090
% of households w/member <18	4.224	5.568	4.288	−0.167	−0.009
% of those age <65 yrs. unemployed	9.697	7.741	9.528	0.276	0.022
Distance to nearest hospital	7.337	5.617	7.200	0.325	0.024
Distance to nearest nursing facility	0.334	0.187	0.353	0.928	−0.097

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Appendix B:
Analysis Methodology

Methodology

We briefly describe the overall evaluation design, the data used, and the populations and measures analyzed. Given the focus of the Minnesota demonstration on administrative processes, we are not conducting an analysis of the impacts of the Minnesota demonstration on MSHO enrollees. We do, however, monitor key outcomes to assess the potential for unintended negative consequences under the demonstration in the care provided to MSHO enrollees. The description here focuses primarily on the design for the overall evaluation.

Evaluation Design

RTI International is using an intent-to-treat (ITT) approach for the impact analyses conducted for the evaluation, comparing the eligible population under each State demonstration with a similar population that is not affected by the demonstration (i.e., a comparison group). ITT refers to an evaluation design in which all Medicare-Medicaid enrollees eligible for the demonstration constitute the evaluation sample, regardless of whether they actively participated in demonstration models. Thus, under the ITT framework, analyses include all beneficiaries eligible for the demonstration, including those who are eligible but are not contacted by the State or participating providers to enroll in the demonstration or care model; those who enroll but do not engage with the care model; and a group of similar eligible individuals in the comparison group.

Results for special populations within each of the demonstration and comparison groups are also presented in this section (e.g., those with any LTSS use in the demonstration and comparison groups; those with any behavioral health claims in the demonstration and comparison groups). In addition, one group for which descriptive results are also reported are *not* compared to the comparison group because this group does not exist within the comparison group: Minnesota demonstration enrollees. For this group, we compare them to in-State non-enrollees.

Comparison Group Identification

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

To construct Minnesota's comparison group, we used seven out-of-State areas. We compared demonstration and potential comparison areas on a range of predemonstration period

measures, including spending per Medicare-Medicaid enrollee by each program, the shares of LTSS delivered in facility-based and community settings, and the extent of Medicare and Medicaid managed care penetration. Using statistical analysis, we selected the individual comparison metropolitan statistical areas (MSAs) that most closely match the values found in the demonstration area on the selected measures. We also considered other factors when selecting comparison States, such as timeliness of Medicaid data submission to CMS. We identified a comparison group from MSAs in Alabama, California, Michigan, New York, Pennsylvania, Texas, and Wisconsin. For details of the comparison group identification strategy, see ***Appendix A***.

Data

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

Although Medicaid service data on use of LTSS, behavioral health, and other Medicaid-reimbursed services were not available for the demonstration period and therefore are not included in this report, CMS administrative data identifying eligible beneficiaries who used *any* Medicaid-reimbursed LTSS or *any* Medicare behavioral health services were available, so that their Medicare service use could be presented in this report. Future reports will include findings on Medicaid service use once data are available.

Populations and Services Analyzed

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

For all demonstration eligible beneficiaries and service types analyzed, we provide estimates of three access to care and utilization measures: the percent of demonstration eligible beneficiaries with any use of a service, and counts of service use for both all eligible beneficiaries and users of the respective service.

The 12 service settings analyzed include both institutional (inpatient, inpatient psychiatric, inpatient non-psychiatric, emergency department visits not leading to admission, emergency department psychiatric visits, observation stays, skilled nursing facility, and hospice) and community settings (primary care; outpatient as well as independent physical, speech, and occupational therapy; and other hospital outpatient services).

In addition, seven quality measures representing specific utilization types of interest are presented: 30-day all-cause risk-standardized readmission rate; preventable emergency room visits; rate of 30-day follow-up after hospitalization for mental illness; ambulatory care sensitive

condition overall composite rate (Agency for Healthcare Research and Quality [AHRQ] Prevention Quality Indicator [PQI] #90); ambulatory care sensitive condition chronic composite rate (AHRQ PQI#92); depression screening rate; and rate of pneumococcal vaccinations.

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

The analyses were conducted for each of the years in the 2-year predemonstration period (September 1, 2011 to August 31, 2013) and for the 2-year demonstration period (October 1, 2013 to December 31, 2015) for both the demonstration and comparison groups in each of the four analytic years. The demonstration began in mid-September 2013; this month was excluded from the predemonstration and demonstration periods.

Table B-1 presents descriptive statistics on the independent variables used in multivariate difference-in-differences regressions for impact analyses. Independent variables include demographic and health characteristics and market- and area-level characteristics. Results are presented for six groups: all demonstration eligible beneficiaries in the FAI State, its comparison group, demonstration enrollees, non-enrollees, demonstration eligible beneficiaries with any long-stay nursing facility use, and demonstration eligible beneficiaries with an SPMI.

Each of the three age groups were generally evenly represented across all groups; though those with LTSS use tended to be relatively old (40 percent were 85 years and older), and those with an SPMI tended to be relatively young (44 percent were 65 to 74 years old). Across all groups, the majority were female, ranging from 63 percent of those not enrolled to 72 percent of those with an SPMI diagnosis. Whites made up a majority of the sample across all groups (between 77 percent and 85 percent), and between 5 percent and 10 percent across all groups were disabled. Hierarchical Condition Category (HCC) scores were consistent across most groups at roughly 1.7, except among eligible beneficiaries with an SPMI diagnosis, for whom scores were higher at 2.0. An HCC score is a measure of the predicted relative annual cost of a Medicare beneficiary based on the diagnosis codes present in recent Medicare claims. Beneficiaries with a score of 1 are predicted to have average cost in terms of annual Medicare expenditures. Beneficiaries with HCC scores less than 1 are predicted to have below average costs, whereas beneficiaries with scores of 2 are predicted to have twice the average annual cost. Most eligible beneficiaries and comparison group members resided in metropolitan areas, ranging from 68 percent of eligible beneficiaries with LTSS use to 77 percent of the comparison group. The percent of months of dual-eligibility was highest among those who enrolled in the demonstration (88 percent) and lowest among those who were not enrolled (66 percent) but was consistent across other groups at roughly 81–83 percent.

There were limited differences in area- and market-level characteristics. Those who were in the comparison group resided in counties with a higher population density relative to those in which the demonstration group resided (311.3 vs 279.8 per square mile). Additionally, those in the comparison group resided in counties with lower Medicaid spending ($24,008 vs. $28,926.) and a higher fraction of dual eligible beneficiaries with Medicaid managed care (79.8 percent vs 50.5 percent) relative to the counties in which the demonstration group resided.

Table B-1
Characteristics of demonstration eligible beneficiaries in current demonstration year by group

Characteristics	Demonstration	Comparison	Enrollees	Non-enrollees	LTSS users	SPMI diagnosis
Number of beneficiaries	59,901	213,121	41,089	18,812	43,029	19,525
Demographic characteristics						
Age						
65 to 74	39.9	43.8	34.3	52.0	28.6	43.7
75 to 84	29.4	27.9	32.2	23.2	31.6	29.6
85 and older	30.7	28.3	33.4	24.7	39.8	26.7
Female						
No	31.8	31.1	29.5	36.6	29.0	27.7
Yes	68.2	68.9	70.5	63.4	71.0	72.3
Race/Ethnicity						
White	77.0	78.6	76.5	78.1	82.5	84.5
Black	8.2	13.4	7.7	9.2	7.3	6.0
Hispanic	1.3	2.3	1.2	1.4	0.7	0.8
Asian	7.9	3.3	9.4	4.5	5.5	4.6
Disability						
No (0)	92.7	91.5	91.7	94.7	90.8	90.0
Yes (1)	7.3	8.5	8.3	5.3	9.2	10.0
ESRD status						
No (0)	98.8	98.4	99.4	97.5	98.8	98.9
Yes (1)	1.2	1.6	0.6	2.5	1.2	1.1
MSA						
Non-metro (0)	31.2	23.6	31.5	30.5	32.3	28.2
Metro (1)	68.8	76.4	68.5	69.5	67.7	71.8
Months with full-dual eligibility during year (%)	81.3	81.0	88.4	65.7	82.0	83.1
HCC score	1.7	1.7	1.7	1.6	1.9	2.0

(continued)

Table B-1 (continued)
Characteristics of demonstration eligible beneficiaries in current demonstration year by group

Characteristics	Demonstration	Comparison	Enrollees	Non-enrollees	LTSS users	SPMI diagnosis
Market characteristics						
Medicare spending per dual, ages 19+ ($)	15,225.2	15,680.4	15,213.6	15,250.5	15,192.7	15,276.1
MA penetration rate	0.5	0.4	0.5	0.5	0.5	0.5
Medicaid-to-Medicare fee index (FFS)	0.7	0.7	0.7	0.7	0.7	0.7
Medicaid spending per dual, ages 19+ ($)	28,926.4	24,007.5	28,923.6	28,932.5	28,923.3	28,982.4
Fraction of dual eligible beneficiaries using NF, age 65+	0.3	0.3	0.3	0.3	0.3	0.3
Fraction of dual eligible beneficiaries using HCBS, age 65+	0.1	0.1	0.1	0.1	0.1	0.1
Fraction of dual eligible beneficiaries using personal care, age 65+	0.0	0.0	0.0	0.0	0.0	0.0
Fraction of dual eligible beneficiaries with Medicaid managed care, age 19+	0.5	0.8	0.5	0.5	0.5	0.5
Population per square mile, all ages	279.8	311.3	276.3	287.6	271.0	292.5
Patient care physicians per 1,000 population	0.9	0.8	0.9	0.9	0.9	0.9
Area characteristics						
% of pop. living in married households	74.9	75.3	75.0	74.7	75.4	75.2
% of elderly (65+) with college education	21.6	23.0	21.0	22.7	21.2	21.9
% of elderly (65+) unemployed	4.2	4.3	4.3	4.2	4.2	4.3
% of elderly (65+) with self-care limitations	7.7	7.7	7.8	7.6	7.7	7.7
% of household with individuals younger than 18	30.0	29.2	29.9	30.0	29.7	29.9
% of household with individuals older than 60	34.1	33.6	34.2	34.1	34.5	33.8
Distance to nearest hospital	9.7	9.5	9.7	9.7	10.0	9.3
Distance to nearest nursing facility	7.3	7.2	7.4	7.3	7.5	7.0

ESRD = end-stage renal disease; FFS = fee for service; HCC = Hierarchical Condition Category; LTSS = long-term services and supports; MA = Medicare Advantage, MSA = metropolitan statistical area; NF = nursing facility; SPMI = severe and persistent mental illness.

Detailed Population Definitions

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

Additional special populations were identified for the analyses as follows:

- *Enrollees*. A beneficiary was defined as an enrollee if they were enrolled in the demonstration during the demonstration period.

- *Age*. Age was defined as a categorical variable where beneficiaries were identified as *65 to 74*, *75 to 84, and 85 years and older* during the observation year (i.e., predemonstration year 1, predemonstration year 2, demonstration year 1, and demonstration year 2).

- *Gende*r. Gender was defined as binary variable where beneficiaries were either male or female.

- *Race/Ethnicity*. Race/ethnicity was defined as a categorical variable where beneficiaries were categorized as *White*, *Black*, *Hispanic*, or *Asian*.

- *Long-term care services and supports (LTSS*). A beneficiary was defined as using LTSS if there was any use of institutional based services or home and community based services during the observation year.

- *Severe and persistent mental illness (SPMI).* A beneficiary was defined as having a SPMI if a beneficiary had incurred a claim for severe and persistent mental illness within the past 2 years.

Detailed Utilization and Expenditure Measure Definitions

For any health care service type, the methodology for estimating average monthly utilization and the percentage of users takes into account differences in the number of eligibility months across beneficiaries. Because full-benefit dual eligibility status for the demonstration can vary by month over time for any individual, the methodology used determines dual eligibility status for the demonstration for each person on a monthly basis during a predemonstration or demonstration period. That is, an individual can meet the demonstration's eligibility criteria for up to 12 months during the observation year. The methodology adds the total months of full-benefit dual eligibility for the demonstration across the population of interest and uses it in the denominator in the measures in ***Section 5***, creating average monthly utilization information for each service type. The methodology effectively produces average monthly use statistics for each year that account for variation in the number of dual eligible beneficiaries in each month of the observation year.

The utilization measures below were calculated as the aggregate sum of the unit of measurement (e.g., counts) divided by the aggregated number of eligible member months [and user months] within each group (*g*) where group is defined as (1) Minnesota base year 1, (2) Comparison base year 1, (3) Minnesota base year 2, (4) Comparison base year 2, (5) Minnesota demonstration year 1, (6) Comparison demonstration year 1, (7) Minnesota demonstration year 2, (8) Comparison demonstration year 2.

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

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

Where

Y_g = average count of the number services used [for a given service] per eligible or user month within group *g*.
Z_{ig} = the total units of utilization [for a given service] for individual *i* in group *g*.
n_{ig} = the total number of eligible/user months for individual *i* in group *g*.

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

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

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

Where

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

Quality of Care and Care Coordination Measures

Similar to the utilization measures, for the appendix tables of descriptive statistics, the quality of care and care coordination measures were calculated as the aggregated sum of the numerator divided by the aggregated sum of the denominator for each respective outcome within

each beneficiary group, except for the average 30-day all-cause risk standardized readmission rate and the 30-day follow-up after hospitalization for mental illness, which are reported as percentages.

Average 30-day all-cause risk standardized readmission rate (percent) was calculated as follows:

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

Where

C = the national average of 30-day readmission rate, .238.
X_{ig} = the total number of readmissions for individual *i* in group *g*.
n_{ig} = the total number of hospital admissions for individual *i* in group *g*.
$Prob_g$ = the annual average adjusted probability of readmission for individuals in group *g*. The average adjusted probability equals:

Average adjusted probability of readmission by demonstration group

Demonstration group	Average adjusted probability of readmission
Predemonstration year 1	
Minnesota	0.1639
Comparison	0.1732
Predemonstration year 2	
Minnesota	0.1705
Comparison	0.1784
Demonstration year 1	
Minnesota	0.1755
Comparison	0.1828
Demonstration year 2	
Minnesota	0.1787
Comparison	0.1855

Rate of 30-day follow-up in a physician or outpatient setting after hospitalization for mental illness (percent) was calculated as follows:

$$MHFU\ = \frac{\Sigma_{ig} x_{ig}}{\Sigma_{ig} n_{ig}} * 100$$

Where

MHFU = the average rate of 30-day follow-up care after hospitalization for a mental illness (percent) for individual*s in* group *g*.

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

n_{ig} = the total number of discharges from a hospital stay for mental health for individual *i* in group *g*.

Average ambulatory care sensitive condition admissions per eligible beneficiary, overall and chronic composite (PQI #90 and PQI #92) was calculated as follows:

$$ACSC_{ig} = \frac{\Sigma_{ig} x_{ig}}{\Sigma_{ig} \mathrm{n}_{ig}}$$

Where

$ACSC_g$ = the average number of ambulatory care sensitive condition admissions per eligible month for overall/chronic composites for individuals in group *g*.

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

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

Preventable ER visits per eligible month was calculated as follows:

$$ER_{ig} = \frac{\Sigma_{ig} x_{ig}}{\Sigma_{ig} \mathrm{n}_{ig}}$$

Where

ER_g = the average number of preventable ER visits per eligible month for individuals in group *g*.

X_{ig} = the total number ER visits that are considered preventable based in the diagnosis for individual *i* in group *g*.

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

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

$$D_g = \frac{\Sigma_{ig} x_{ig}}{\Sigma_{ig} \mathrm{n}_{ig}}$$

Where

D_g = the average number of beneficiaries per eligible month who received depression screening in group *g*.
X_{ig} = the total number eligible beneficiaries age 65+ who ever received depression screening in group *g*.
n_{ig} = the total number of eligible months among beneficiaries in group *g*.

Average rate of beneficiaries per positive depression screening who received a follow-up plan during the observation year was calculated as follows:

$$PD_g = \frac{\Sigma_{ig} x_{ig}}{\Sigma_{ig} \mathrm{n}_{ig}}$$

Where

PD_g = the average number of beneficiaries per positive depression screening who received a follow-up plan among beneficiaries in group *g*.
X_{ig} = the total number beneficiaries who received a positive depression screen and a follow up plan in group *g*.
n_{ig} = the total number of beneficiaries who received a positive depression screen in group *g*.

Minimum Data Set Measures

Two measures of annual nursing facility-related utilization are derived from the MDS. The rate of new long-stay NF admissions per 1,000 eligible beneficiaries is calculated as the number of NF admissions for whom there is no record of NF use in the 100 days prior to the current admission and who subsequently stay in the NF for 101 days or more. Individuals are included in this measure only if their NF admission occurred after their first month of demonstration eligibility. The percentage of long-stay NF users is calculated as the number of individuals who have stayed in a NF for 101 days or more, who were long-stay after the first month of demonstration eligibility. The probability of any long-stay NF use includes both new admissions from the community and continuation of a stay in a NF.

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

Regression Outcome Measures

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

The outcome measures include:

- *Monthly Inpatient Admissions* is the count of the number of inpatient admissions in which a beneficiary has an admission date within the observed month.

- *Monthly Emergency Department Use* is the count of the number of emergency department visits that occurred during the month that did not result in an inpatient admission.

- *Monthly Physician Visits* is the count of any evaluation and management visit within the month where the visit occurred in the outpatient or office setting, nursing facility, domiciliary, rest home, or custodial care setting, a federally qualified health center or a rural health center.

- *Monthly Skilled Nursing Facility Admissions* is the count of any skilled nursing facility admissions within the month.

- *Long-stay Nursing Facility Use* is the annual probability of residing in a nursing facility for 101 days or more during the year.

In addition to the five measures above, this evaluation will estimate the demonstration effects on quality of care. The following quality of care and care coordination measures use claims/encounter-level information and are adopted from standardized HEDIS and NQF measures. The outcomes are reported monthly, with the exception of the 30-day all cause risk-standardized readmission rate, which is annual, and 30-day follow-up after hospitalization for mental illness, which is quarterly.

- *30-day all-cause risk-standardized readmissions (NQF #1768)* is the count of the number risk-standardized readmissions, defined above, that occurs during the year.

- *Preventable ER visits* is the count of ER visits among adults. The lists of diagnoses that are considered as either preventable/avoidable, or treatable in a primary care setting were developed by researchers at the New York University Center for Health and Public Service Research.[1]

[1] http://wagner.nyu.edu/faculty/billings/nyued-background

- *30-day follow up after hospitalization for mental illness (NQF #576)* is estimated as the monthly probability of any follow-up visits within 30-days post-hospitalization for a mental illness

- *Ambulatory care sensitive condition (ACSC) admissions—overall composite (AHRQ PQI # 90)* is the monthly probability of any acute admissions that meet the AHRQ PQI #90 (Prevention Quality Overall Composite) criteria within the month.

- *Ambulatory care sensitive condition (ACSC) admissions—chronic composite (AHRQ PQI # 92)* is the monthly probability of any admissions that meet the AHRQ PQI #92 criteria within the month.

Regression Methodology for Determining Demonstration Impact

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

$$\text{Dependent variable} = F(\beta 0 + \beta 1\text{PostYear} + \beta 2\text{Demonstration} + \beta 3\text{PostYear} * \text{Demonstration} + \beta 4\text{Demographics} + \beta 5\text{-j Market} + \varepsilon)$$

where separate models will be estimated for each dependent variable. *PostYear* is an indicator of whether the observation is from the pre- or postdemonstration period, *Demonstration* is an indicator of whether the beneficiary was in the demonstration group, and *PostYear* * *Demonstration* is an interaction term. *Demographics* and *Market* represent vectors of beneficiary and market characteristics, respectively.

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

In addition to estimating the model described in Equation 1, a less restrictive model was estimated to produce year-by-year effects of the demonstration. The specification of the unrestricted model is as follows:

$$\text{Dependent variable} = F(\beta 0 + \beta 1\text{-k PostYear1-n} + \beta 2\text{Demonstration} + \beta 3\text{-k PostYear1-n} * \text{Demonstration} + \beta 4\ \text{Demographics} + \beta 5\text{-j Market} + \varepsilon)$$

This equation differs from the previous one in that separate difference-in-differences coefficients are estimated for each year. Under this specification, the coefficients $\beta_{3\text{-}k}$ would reflect the impact of the demonstration in each respective year, whereas the previous equation reflects the impact of the entire demonstration period. This specification measures whether changes in dependent variables occur in the first year of the demonstration only, continuously over time, or in some other pattern. Depending on the outcome of interest, we will estimate the equations using logistic regression, Generalized Linear Models with a log link, or count models such as negative binomial or Poisson regressions (e.g., for the number of inpatient admissions). We used regression results to calculate the marginal effects of demonstration impact.

Impact estimates across the entire demonstration period are determined using the difference-in-differences methodology and presented in figures for all demonstration eligible beneficiaries, and then for two special populations of interest—demonstration eligible beneficiaries with any LTSS use, and demonstration eligible beneficiaries with SPMI. A table follows each figure displaying the annual demonstration difference-in-differences effect for each separate demonstration period for each of these populations. In each figure, the point estimate is displayed for each measure, as well as the 90 percent confidence interval (black) and the 80 percent confidence interval (green). The 80 percent confidence interval is narrower than the 90 percent confidence interval. If the confidence interval includes the value of zero, it is not statistically significant at that confidence level.

For only the full demonstration eligible population and not each special population, an additional table presents estimates of the regression-adjusted mean values of the utilization measures for the demonstration and comparison groups by year for each service. The purpose of this table is to understand the magnitude of the difference-in-differences estimate relative to the adjusted mean outcome value in each period. The adjusted mean values show how different the two groups were in each period, and the relative direction of any potential effect in each group over time. The values in the third and fourth columns represent the post-regression, mean predicted value of the outcomes for each group and period, based on the composition of a reference population (the comparison group in the demonstration period). The difference-in-differences estimate is also provided for reference, along with the *p*-value and the relative percent change of the difference-in-differences estimate compared to an average mean use rate for the comparison group in the entire demonstration period.

The relative percent annual change for the difference-in-differences estimate for each outcome measure is calculated as [overall difference-in-differences effect] / [adjusted mean outcome value of comparison group in the demonstration period].

Table B-2 provides an illustrative example of the regression output for each independent variable in the negative binomial regression on monthly inpatient admissions across the entire demonstration period.

Table B-2
Negative binomial regression results on monthly inpatient admissions
(n = 11,437,476 person months)

Independent variables	Coefficient	Standard error	z-value	p-value
Post period	−0.2179	0.0218	−9.9800	0.0000
Demonstration group	−0.1322	0.0326	−4.0600	0.0000
Interaction of post period x demonstration group	0.0081	0.0272	0.3000	0.7660
Trend	0.0062	0.0007	8.2900	0.0000
Age	−0.0057	0.0009	−6.5000	0.0000
Female	−0.0606	0.0122	−4.9600	0.0000
Black	0.0135	0.0356	0.3800	0.7040
Asian	−0.2248	0.0537	−4.1900	0.0000
Hispanic	−0.2001	0.0391	−5.1200	0.0000
Other race	−0.1664	0.0533	−3.1200	0.0020
Disability as reason for original Medicare entitlement	0.1116	0.0142	7.8500	0.0000
End stage renal disease	1.4009	0.0275	50.9500	0.0000
Participating in shared savings program	0.2216	0.0278	7.9800	0.0000
Hierarchical Condition Category (HCC) score	0.3445	0.0052	66.8200	0.0000
Percent of months of demonstration eligibility	−1.8146	0.0205	−88.6900	0.0000
Metropolitan statistical area (MSA) residence	−0.0873	0.0363	−2.4000	0.0160
Percent of population living in a married household	−0.0009	0.0007	−1.1700	0.2440
Percent of households with family member < 18 years old	−0.0019	0.0009	−2.0500	0.0400
Percent of households with family member >= 60 years old	−0.0011	0.0011	−0.9700	0.3300
Percent of elderly (65+) with college education	−0.0024	0.0010	−2.5000	0.0120
Percent of elderly (65+) with self-care limitations	0.0004	0.0012	0.2900	0.7730
Percent of elderly (65+) unemployed	0.0003	0.0007	0.4200	0.6780
Distance to nearest hospital	−0.0009	0.0019	−0.4500	0.6520
Distance to nearest nursing facility	0.0018	0.0023	0.7900	0.4300
HCBS users per full-benefit dual eligible over 65	0.3008	0.2097	1.4300	0.1510
Personal care users per full-benefit dual eligible over 65	−0.0060	0.2409	−0.0200	0.9800
Medicaid managed care users per full-benefit dual eligible	−0.1271	0.0598	−2.1300	0.0330
Medicare spending per full-benefit dual eligible	0.0000	0.0000	5.6700	0.0000
Medicare Advantage penetration rate	−0.1484	0.0948	−1.5700	0.1180
Patient care physicians per 1,000 (total) population	−0.0541	0.0719	−0.7500	0.4520
Intercept	−2.0386	0.1539	−13.2500	0.0000

Appendix C:
Descriptive Tables

Tables in ***Appendix C*** present results on the average percentage of demonstration eligible beneficiaries using selected Medicare service types during the months in which they met demonstration eligibility criteria in the predemonstration and demonstration periods. In addition, average counts of service use and payments are presented across all such eligible months, and for the subset of these months in which eligible beneficiaries were users of each respective service type. Data is shown for the predemonstration and demonstration period for both Minnesota eligible beneficiaries (the demonstration group) and the comparison group. Similar tables of Medicaid service utilization are also presented, as well as tables for the RTI quality of care and care coordination measures.

Tables are presented for the overall demonstration eligible population (***Tables C-1*** through ***C-3***), followed by tables on Minnesota demonstration eligible beneficiaries who were enrollees and non-enrollees (***Tables C-4*** and ***C-5***).

Table C-1
Proportion and utilization for institutional and non-institutional services for the Minnesota demonstration eligible beneficiaries and comparison groups

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2
Number of demonstration beneficiaries		63,273	64,031	61,361	59,901
Number of comparison beneficiaries		200,524	203,097	217,741	213,121
Institutional setting					
Inpatient admissions[1]	Demonstration group				
% with use		2.6	3.3	2.9	3.2
Utilization per 1,000 user months		1,107.9	1,100.5	1,076.8	1,129.5
Utilization per 1,000 eligible months		28.3	36.8	33.4	36.3
Inpatient admissions[1]	Comparison group				
% with use		3.3	3.5	3.4	3.6
Utilization per 1,000 user months		1,112.9	1,111.7	1,114.2	1,115.4
Utilization per 1,000 eligible months		36.3	38.5	37.4	39.8
Inpatient psychiatric	Demonstration group				
% with use		0.1	0.1	0.1	0.1
Utilization per 1,000 user months		1,048.1	1,039.4	1,026.2	1,058.3
Utilization per 1,000 eligible months		0.6	0.9	0.9	0.8
Inpatient psychiatric	Comparison group				
% with use		0.1	0.1	0.1	0.1
Utilization per 1,000 user months		1,061.5	1,061.3	1,052.7	1,078.1
Utilization per 1,000 eligible months		0.6	0.7	0.7	0.8

(continued)

Table C-1 (continued)
Proportion and utilization for institutional and non-institutional services for the Minnesota demonstration eligible beneficiaries and comparison groups

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2
Inpatient non-psychiatric	Demonstration group				
% with use		2.5	3.3	2.9	3.1
Utilization per 1,000 user months		1,106.1	1,098.4	1,072.8	1,127.7
Utilization per 1,000 eligible months		27.7	35.8	32.5	35.5
Inpatient non-psychiatric	Comparison group				
% with use		3.2	3.4	3.3	3.5
Utilization per 1,000 user months		1,110.2	1,109.5	1,111.9	1,112.1
Utilization per 1,000 eligible months		35.6	37.8	36.7	38.9
Emergency department use (non-admit)	Demonstration group				
% with use		3.2	4.1	3.5	4.2
Utilization per 1,000 user months		1,165.1	1,170.0	1,100.1	1,163.1
Utilization per 1,000 eligible months		37.7	47.6	40.3	48.8
Emergency department use (non-admit)	Comparison group				
% with use		3.9	4.4	4.6	5.0
Utilization per 1,000 user months		1,180.3	1,177.3	1,181.2	1,198.9
Utilization per 1,000 eligible months		46.1	51.4	54.1	60.5
Emergency department use (psychiatric)	Demonstration group				
% with use		0.1	0.1	0.1	0.1
Utilization per 1,000 user months		1,056.6	1,070.7	993.0	1,096.9
Utilization per 1,000 eligible months		1.2	1.5	1.3	1.6
Emergency department use (psychiatric)	Comparison group				
% with use		0.1	0.1	0.1	0.2
Utilization per 1,000 user months		1,085.2	1,071.4	1,094.8	1,165.0
Utilization per 1,000 eligible months		1.3	1.4	1.6	2.0

(continued)

Table C-1 (continued)
Proportion and utilization for institutional and non-institutional services for the Minnesota demonstration eligible beneficiaries and comparison groups

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2
Observation stays	Demonstration group				
% with use		0.5	0.6	0.7	0.8
Utilization per 1,000 user months		1,061.5	1,091.7	992.3	1,070.5
Utilization per 1,000 eligible months		5.3	7.0	6.9	8.3
Observation stays	Comparison group				
% with use		0.6	0.7	0.8	1.0
Utilization per 1,000 user months		1,056.6	1,064.0	1,064.8	1,078.7
Utilization per 1,000 eligible months		6.0	7.7	8.9	10.3
Skilled nursing facility	Demonstration group				
% with use		1.8	2.0	1.5	2.1
Utilization per 1,000 user months		1,097.8	1,098.6	1,064.5	1,127.7
Utilization per 1,000 eligible months		19.6	22.0	16.7	23.3
Skilled nursing facility	Comparison group				
% with use		1.6	1.7	1.6	1.7
Utilization per 1,000 user months		1,088.0	1,085.1	1,079.3	1,084.4
Utilization per 1,000 eligible months		17.1	18.2	17.2	18.5
Hospice	Demonstration group				
% with use		2.5	2.6	2.5	2.8
Utilization per 1,000 user months		1,036.5	1,025.9	959.0	1,006.6
Utilization per 1,000 eligible months		25.7	26.9	25.5	28.4
Hospice	Comparison group				
% with use		3.0	2.9	2.9	2.9
Utilization per 1,000 user months		1,053.1	1,035.7	1,018.4	1,037.5
Utilization per 1,000 eligible months		31.5	30.4	29.3	30.3

(continued)

Table C-1 (continued)
Proportion and utilization for institutional and non-institutional services for the Minnesota demonstration eligible beneficiaries and comparison groups

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2
Non-institutional setting					
Primary care E&M visits	Demonstration group				
% with use		38.0	49.6	48.4	49.3
Utilization per 1,000 user months		1,630.5	1,795.6	1,915.4	2,033.3
Utilization per 1,000 eligible months		620.2	890.1	960.5	1,003.0
Primary care E&M visits	Comparison group				
% with use		48.4	52.8	52.8	53.9
Utilization per 1,000 user months		1,709.2	1,757.1	1,803.5	1,963.6
Utilization per 1,000 eligible months		827.0	927.2	951.8	1,057.6
Outpatient therapy (PT, OT, ST)	Demonstration group				
% with use		3.5	4.1	2.7	5.5
Utilization per 1,000 user months		13,630.7	11,604.6	13,290.5	11,691.2
Utilization per 1,000 eligible months		472.4	471.5	393.3	637.4
Outpatient therapy (PT, OT, ST)	Comparison group				
% with use		7.0	7.2	7.4	8.6
Utilization per 1,000 user months		19,391.1	18,682.8	21,773.0	21,056.1
Utilization per 1,000 eligible months		1,363.8	1,336.9	1,621.3	1,808.9
Independent therapy (PT, OT, ST)	Demonstration group				
% with use		0.7	1.0	1.2	1.3
Utilization per 1,000 user months		6,837.9	7,177.4	7,607.9	7,601.4
Utilization per 1,000 eligible months		50.9	72.3	90.8	96.0
Independent therapy (PT, OT, ST)	Comparison group				
% with use		0.7	0.9	0.9	1.0
Utilization per 1,000 user months		9,544.5	9,609.4	11,384.9	12,549.6
Utilization per 1,000 eligible months		71.5	82.5	97.7	128.4

(continued)

Table C-1 (continued)
Proportion and utilization for institutional and non-institutional services for the Minnesota demonstration eligible beneficiaries and comparison groups

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2
Other hospital outpatient services	Demonstration group				
% with use		24.7	32.3	26.9	30.4
Utilization per 1,000 user months		—	—	—	—
Utilization per 1,000 eligible months		—	—	—	—
Other hospital outpatient services	Comparison group				
% with use		29.1	31.5	32.4	32.9
Utilization per 1,000 user months		—	—	—	—
Utilization per 1,000 eligible months		—	—	—	—

— = data not available. E&M = evaluation and management; OT = occupational therapy, PT = physical therapy, ST = speech therapy.

[1] Includes acute admissions, inpatient rehabilitation, and long-term care hospital admissions.

[2] Results for the Demonstration group may be inflated due to a data anomaly under investigation.

SOURCE: RTI International analysis of Medicare data.

Table C-2
Quality of care and care coordination outcomes for demonstration eligible and comparison beneficiaries for the Minnesota demonstration

Quality and care coordination measures	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2
30-day all-cause risk-standardized readmission rate (%)	Demonstration group	22.6	20.8	20.2	19.0
	Comparison group	20.5	19.3	18.7	18.1
Preventable ER visits per eligible months	Demonstration group	0.017	0.022	0.019	0.022
	Comparison group	0.020	0.023	0.024	0.026
Rate of 30-day follow up after hospitalization for mental illness (%)	Demonstration group	36.1	38.4	46.0	38.7
	Comparison group	34.5	36.2	35.7	35.0
Ambulatory care-sensitive condition admissions per eligible months—overall composite (AHRQ PQI # 90)	Demonstration group	0.004	0.004	0.004	0.008
	Comparison group	0.007	0.007	0.006	0.007
Ambulatory care-sensitive condition admissions per eligible months—chronic composite (AHRQ PQI # 92)	Demonstration group	0.002	0.002	0.002	0.005
	Comparison group	0.003	0.003	0.003	0.004
Screening for clinical depression per eligible months	Demonstration group	0.000	0.000	0.000	0.001
	Comparison group	0.000	0.000	0.001	0.002
Rate of pneumococcal vaccinations	Demonstration group	0.000	0.001	0.005	0.007
	Comparison group	0.008	0.007	0.005	0.010

AHRQ PQI =Agency for Healthcare Research and Quality Prevention Quality Indicator; ER = emergency room.

NOTES: The last quarter of demonstration year 1 (October–December 2015) was the first quarter of the switch from ICD9 to ICD10 codes. Some differences between demonstration year 1 and the predemonstration period may have resulted from misalignment of ICD9 and ICD10 codes.

SOURCE: RTI International analysis of Medicare data.

Table C-3
Minimum Data Set long-stay nursing facility utilization and characteristics at admission for the Minnesota demonstration and comparison groups

Measures by setting	Group	Predemonstration year 1	Predemonstration year 2	Demonstration year 1	Demonstration year 2
Annual nursing facility utilization					
Number of demonstration beneficiaries	Demonstration group	38,432	38,520	36,190	38,820
New long-stay nursing facility admissions per 1,000 eligible beneficiaries		35.6	34.7	38.7	27.1
Number of comparison beneficiaries	Comparison group	110,153	108,489	110,801	128,460
New long-stay nursing facility admissions per 1,000 eligible beneficiaries		38.6	37.8	43.2	36.2
Number of demonstration beneficiaries	Demonstration group	51,434	50,521	46,117	49,026
Long-stay nursing facility users as % of eligible beneficiaries		28.0	26.4	24.7	23.2
Number of comparison beneficiaries	Comparison group	158,001	153,531	152,771	173,030
Long-stay nursing facility users as % of eligible beneficiaries		33.1	32.0	30.9	28.7
Characteristics of new long-stay nursing facility residents at admission					
Number of admitted demonstration beneficiaries	Demonstration group	1,367	1,338	1,400	1,052
Number of admitted comparison beneficiaries	Comparison group	4,250	4,103	4,792	4,644
Functional status (RUG-IV ADL scale)	Demonstration group	8.3	8.3	8.5	8.3
Functional status (RUG-IV ADL scale)	Comparison group	8.5	8.7	8.6	8.8
Percent with severe cognitive impairment	Demonstration group	36.8	37.1	34.1	35.7
Percent with severe cognitive impairment	Comparison group	41.2	42.0	41.1	38.8
Percent with low level of care need	Demonstration group	3.1	2.4	2.8	2.7
Percent with low level of care need	Comparison group	2.2	2.8	2.1	1.5

RUG-IV ADL = Resource Utilization Group IV Activities of Daily Living.

SOURCE: RTI International analysis of Minimum Data Set data.

Table C-4
Proportion and utilization for institutional and non-institutional services for the Minnesota demonstration enrollees and non-enrollees

Measures by setting	Group	Demonstration year 1	Demonstration year 2
Number of enrollees		42,670	41,089
Number of non-enrollees		18,691	18,812
Institutional setting			
Inpatient admissions[1]	Enrollees		
% with use		2.47	2.90
Utilization per 1,000 user months		1,383.57	1,132.26
Utilization per 1,000 eligible months		28.26	32.81
Inpatient admissions[1]	Non-enrollees		
% with use		4.09	3.90
Utilization per 1,000 user months		1,615.80	1,122.13
Utilization per 1,000 eligible months		45.92	43.80
Inpatient psychiatric	Enrollees		
% with use		0.07	0.07
Utilization per 1,000 user months		1,653.99	1,044.67
Utilization per 1,000 eligible months		0.83	0.73
Inpatient psychiatric	Non-enrollees		
% with use		0.09	0.08
Utilization per 1,000 user months		1,907.22	1,073.77
Utilization per 1,000 eligible months		1.01	0.87
Inpatient non-psychiatric	Enrollees		
% with use		2.41	2.83
Utilization per 1,000 user months		1,372.93	1,131.55
Utilization per 1,000 eligible months		27.40	32.06
Inpatient non-psychiatric	Non-enrollees		
% with use		4.02	3.83
Utilization per 1,000 user months		1,606.84	1,119.60
Utilization per 1,000 eligible months		44.89	42.88
Emergency department use (non-admit)	Enrollees		
% with use		2.93	3.85
Utilization per 1,000 user months		1,242.79	1,158.60
Utilization per 1,000 eligible months		33.82	44.60
Emergency department use (non-admit)	Non-enrollees		
% with use		4.81	4.98
Utilization per 1,000 user months		1,500.22	1,172.87
Utilization per 1,000 eligible months		55.94	58.38

(continued)

Table C-4
Proportion and utilization for institutional and non-institutional services for the Minnesota demonstration enrollees and non-enrollees (continued)

Measures by setting	Group	Demonstration year 1	Demonstration year 2
Emergency department use (psychiatric)	Enrollees		
% with use		0.09	0.12
Utilization per 1,000 user months		1,119.47	1,097.66
Utilization per 1,000 eligible months		0.96	1.35
Emergency department use (psychiatric)	Non-enrollees		
% with use		0.20	0.21
Utilization per 1,000 user months		1,596.77	1,080.13
Utilization per 1,000 eligible months		2.16	2.24
Observation stays	Enrollees		
% with use		0.53	0.68
Utilization per 1,000 user months		1,169.29	1,080.58
Utilization per 1,000 eligible months		5.66	7.33
Observation stays	Non-enrollees		
% with use		0.94	0.97
Utilization per 1,000 user months		1,421.01	1,051.91
Utilization per 1,000 eligible months		9.68	10.22
Skilled nursing facility	Enrollees		
% with use		1.40	2.15
Utilization per 1,000 user months		1,034.75	1,139.99
Utilization per 1,000 eligible months		15.44	24.51
Skilled nursing facility	Non-enrollees		
% with use		1.68	1.70
Utilization per 1,000 user months		1,447.77	1,091.69
Utilization per 1,000 eligible months		18.47	18.58
Hospice	Enrollees		
% with use		2.57	2.85
Utilization per 1,000 user months		1,289.66	1,006.09
Utilization per 1,000 eligible months		25.92	28.66
Hospice	Non-enrollees		
% with use		2.58	2.86
Utilization per 1,000 user months		1,285.06	1,007.89
Utilization per 1,000 eligible months		25.98	28.84

(continued)

Table C-4
Proportion and utilization for institutional and non-institutional services for the Minnesota demonstration enrollees and non-enrollees (continued)

Measures by setting	Group	Demonstration year 1	Demonstration year 2
Non-institutional setting			
Primary care E&M visits	Enrollees		
% with use		48.59	49.98
Utilization per 1,000 user months		2,854.07	2,152.99
Utilization per 1,000 eligible months		1,013.67	1,076.00
Primary care E&M visits	Non-enrollees		
% with use		47.39	47.34
Utilization per 1,000 user months		2,153.00	1,708.09
Utilization per 1,000 eligible months		811.50	808.67
Outpatient therapy (PT, OT, ST)	Enrollees		
% with use		1.20	4.93
Utilization per 1,000 user months		2,354.75	8,871.58
Utilization per 1,000 eligible months		80.36	437.61
Outpatient therapy (PT, OT, ST)	Non-enrollees		
% with use		6.29	6.36
Utilization per 1,000 user months		22,596.05	15,977.65
Utilization per 1,000 eligible months		1,076.13	1,015.76
Independent therapy (PT, OT, ST)	Enrollees		
% with use		1.17	1.29
Utilization per 1,000 user months		9,542.17	7,360.97
Utilization per 1,000 eligible months		87.91	94.71
Independent therapy (PT, OT, ST)	Non-enrollees		
% with use		1.10	1.20
Utilization per 1,000 user months		9,729.32	8,059.21
Utilization per 1,000 eligible months		94.44	96.68
Other hospital outpatient services	Enrollees		
% with use		23.22	28.23
Utilization per 1,000 user months		—	—
Utilization per 1,000 eligible months		0.00	0.00
Other hospital outpatient services	Non-enrollees		
% with use		35.97	35.51
Utilization per 1,000 user months		—	—
Utilization per 1,000 eligible months		0.00	0.00

— = data not available. E&M = evaluation and management; OT = occupational therapy; PT = physical therapy; ST = speech therapy.

[1] Includes acute admissions, inpatient rehabilitation, and long term care hospital admissions.

SOURCE: RTI International analysis of Medicare data.

Table C-5
Quality of care and care coordination outcomes for enrollees and non-enrollees for the Minnesota demonstration

Quality and care coordination measures	Group	Demonstration year 1	Demonstration year 2
30-day all-cause risk-standardized readmission rate (%)	Enrollees	15.4	17.5
	Non-enrollees	21.1	21.8
Preventable ER visits per eligible months	Enrollees	0.013	0.014
	Non-enrollees	0.018	0.020
Rate of 30-day follow up after hospitalization for mental illness (%)	Enrollees	39.4	39.5
	Non-enrollees	36.1	35.3
Ambulatory care-sensitive condition admissions per eligible months—overall composite (AHRQ PQI # 90)	Enrollees	0.006	0.008
	Non-enrollees	0.005	0.007
Ambulatory care-sensitive condition admissions per eligible months—chronic composite (AHRQ PQI # 92)	Enrollees	0.004	0.006
	Non-enrollees	0.003	0.004
Screening for clinical depression per eligible months	Enrollees	0.001	0.001
	Non-enrollees	0.001	0.001
Rate of pneumococcal vaccinations	Enrollees	0.003	0.003
	Non-enrollees	0.003	0.004

AHRQ PQI =Agency for Healthcare Research and Quality Prevention Quality Indicator; ER = emergency room.

SOURCE: RTI International analysis of Medicare data.