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REPORT

FINAL REPORT

Money Follows the Person 2014 Annual Evaluation Report

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III.	Trends in Transitions and Post-Transition Outcomes	Andrea Wysocki and Carol Irvin
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I. INTRODUCTION AND BACKGROUND

The national Money Follows the Person (MFP) demonstration continued to grow in 2014. Cumulative MFP enrollment increased to more than 51,000 transitions by the end of December 2014, growth of 13 percent over the total number at the same point in 2013. As of December 31, 2014, 45 states had received MFP grants; Florida and New Mexico also received MFP grants in 2011 but rescinded them in 2012. Among the 45 MFP grantees, Montana and South Dakota began their transition programs in 2014, whereas Oregon, one of the original grantees, elected to rescind its grant after suspending program operations in 2010 to redesign its operations. During 2014, 43 states and the District of Columbia (referred to as the 44 grantee states throughout this report) were actively transitioning participants through their MFP demonstrations.

This report is the sixth in a series of annual reports that Mathematica Policy Research is producing for the national evaluation of the MFP demonstration funded by the Centers for Medicare & Medicaid Services (CMS) (CMS Contract Number HHSM-500-2010-00026I/HHSM-500-T0010). It provides basic information about the program and how it grew and changed during calendar year 2014. It also updates and summarizes analytic studies Mathematica conducted during the year.

A. Background

1. Basic features of the MFP demonstration

Each state in the MFP demonstration must establish a program that has two components: (1) a transition program that identifies Medicaid beneficiaries in institutional care who wish to live in the community and helps them do so and (2) a rebalancing program that allows more Medicaid long-term care expenditures to flow to community services and supports. MFP demonstrations (like Medicaid programs in general) are subject to general federal requirements, but the design and administration of each MFP demonstration are unique and tailored to states' needs.

Transition programs. By statute, the MFP demonstration is for people residing in an inpatient facility for not less than 90 consecutive days, where inpatient facility is defined as "a hospital, nursing facility, or intermediate care facility for the mentally retarded." The statute also allows residence in an institution for mental diseases "to the extent medical assistance is available under the State Medicaid plan for services provided by such institution."[1, 2, 3]

[1] 42 U.S.C. 1396a.

[2] Because language has changed since the passage of the Deficit Reduction Act of 2005, this report refers to intermedicate care facilities as intermediate care facilities for individuals with intellectual disabilities (ICFs/IID).

[3] Institutions for mental diseases (IMDs) are defined in statue (Subpart K of 42 CFR Section 435.1010) as "a hospital, nursing facility, or other institution of more than 16 beds that is primarily engaged in providing diagnosis, treatment or care of persons with mental diseases…" State Medicaid programs may provide care in this type of facility for individuals 65 and over (Subpart C of 42 CFR Section 441) and they may provide inpatient psychiatric hospital services

institutionalized in nursing homes, hospitals, intermediate care facilities for individuals with intellectual disabilities (ICFs/IID), or long-term psychiatric facilities. Participants must have been in institutional care for at least 90 days and eligible for Medicaid coverage.[4]

On the day they transition to the community, MFP participants begin receiving a package of home- and community-based services (HCBS). Federal matching payments for these services are financed by the state's MFP grant funds. MFP-financed services continue for as many as 365 days after the date of transition. After exhausting their 365 days of eligibility for the MFP demonstration, participants continue to receive the HCBS they need through the state plan and/or a waiver program, depending on their eligibility for these services.

MFP demonstrations may provide up to three categories of services: (1) qualified HCBS, (2) demonstration HCBS, and (3) supplemental services. Qualified HCBS are services that beneficiaries would have received regardless of their status as MFP participants, such as personal assistance services available through a 1915(c) waiver program or the state plan. Demonstration HCBS are either allowable Medicaid services not currently included in the state's array of HCBS (such as assistive technologies) or qualified HCBS above what would be available to non-MFP Medicaid beneficiaries (such as 24-hour personal care). MFP requires states to maintain needed services after participants leave the program as long as they maintain Medicaid eligibility, and demonstration HCBS tend to be short-term services needed to help people adjust to community living. States can also provide to MFP participants supplemental services that are not typically reimbursable outside of waiver programs but facilitate an easier transition to a community setting (such as a trial visit to the proposed community residence). States receive an enhancement to the Federal Medical Assistance Percentage (FMAP), which is drawn from their MFP grant funds, when they provide either qualified or demonstration HCBS.[5] They receive the regular FMAP, which is also drawn from their MFP grant funds, when they provide supplemental services. In general, the MFP demonstration allows states to provide a richer mix of community services for a limited time to help facilitate a successful transition to the community.

Rebalancing programs. The rebalancing program is subject to fewer basic requirements than the transition program. States must use the enhanced matching funds they receive when MFP participants use qualified HCBS or demonstration services to finance changes in their long-

for individuals under age 21 (Subpart D of 42 CFR Section 441). The IMD exclusion prohibits federal matching funds for medical assistance under title XIX for services provided to any individual under age 65 and a patient in an IMD unless the payment is for inpatient psychiatric services for individauls under age 21 (Subpart K of 42 CFR Section 435.1009).

[4] Until the passage of the Patient Protection and Affordable Care Act, MFP required participants to be institutionalized for a minimum of 180 days, and they had to be eligible for full Medicaid benefits for at least one month before the transition to be eligible for the program. Affordable Care Act reduced the length-of-stay requirement to 90 days, but states may not count any rehabilitative care days covered by Medicare.

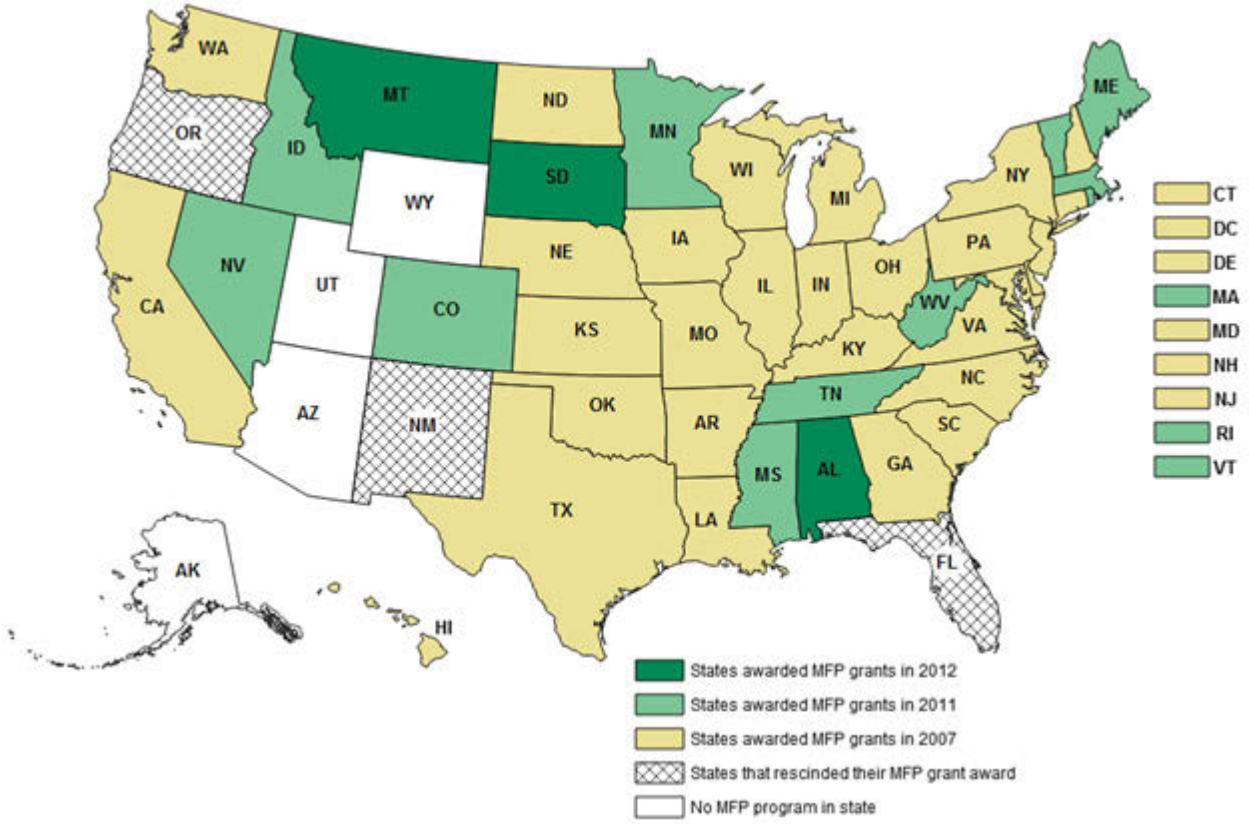
[5] The MFP-enhanced FMAP is set in statute and cannot exceed 90 percent $(\text{state's.regular.FMAP} + [1 - \text{state's.regular.FMAP}] * .5)$. The state's regular FMAP also included the enhancements that states received through the American Recovery and Reinvestment Act of 2009, retroactive to October 1, 2008.

term services and supports (LTSS). States may use the enhanced funds in a variety of ways, including (1) financing the provision of services, which includes improving housing supports; (2) expanding the availability of HCBS programs (such as increasing HCBS waiver slots); (3) improving access to HCBS, including supporting transitions of people not eligible for MFP; and (4) supporting providers with workforce initiatives, trainings, and incentives, as well as facility closures and right-sizing. Each state sets benchmarks for measuring the success of its selected rebalancing strategy.

2. MFP grant awards

CMS began awarding MFP demonstration grants in January 2007 with 17 initial awards, followed by 14 additional awards in May 2007. In January 2011, another 13 states received MFP grants and Alabama, Montana, and South Dakota received planning grants in 2012, bringing the total number of states with MFP grants to 46, plus the District of Columbia (Figure I.1). New Mexico and Florida formally withdrew from the grant program in 2012 and 2013 respectively, and Oregon withdrew in 2014 after operating a demonstration for several years. As of the end of December 2014, 43 states and the District of Columbia had an operating MFP demonstration.

Figure I.1. Map of MFP demonstration grants



Note: New Mexico and Florida received MFP grant awards in 2011. New Mexico withdrew from the program in 2012, Florida withdrew in 2013, and Oregon withdrew in 2014.

B. Purpose of this report

In March 2007, CMS contracted with Mathematica to conduct a national evaluation of the MFP demonstration and the contract was renewed in 2012 (CMS Contract Number HHSM-500-2010-00026I/HHSM-500-T0010). This sixth annual report for the MFP demonstration covers the program from its inception through December 2014. The primary purpose of the report is to describe the status of the program as of December 31, 2014, including how states are progressing on their transition and HCBS expenditure goals.

The following chapters present analyses that include descriptive information about the progress of the overall demonstration, an assessment of whether the MFP demonstration has changed transition rates overall, and post-transition outcomes relating to readmission to institutional care and mortality. The report also assesses how expenditures and use of select medical care services change when someone transitions and how the quality of life of MFP participants changes after they have lived in the community one or two years. As in the previous annual reports, the work presented here adds to the foundation for the national evaluation and an assessment of program effects. At its most fundamental level, the national evaluation of the MFP demonstration seeks to understand whether the program met its goals to (1) increase the number and proportion of long-term institutionalized Medicaid enrollees who live successfully in the community and (2) facilitate state rebalancing of long-term services and supports. MFP demonstrations are expected to have an array of effects on beneficiaries who need LTSS, including increases in the likelihood and number of transitions from institutional to community settings and the proportion of long-term care expenditures accounted for by community-based LTSS.

C. Road map to the report

The next chapters are organized around two broad types of analyses: (1) an assessment of program implementation and growth and (2) participant-level outcomes. Chapter II describes the overall growth of the MFP demonstration and assesses whether state grantees are achieving their transition goals; it also includes a qualitative assessment of factors associated with program success at the state level. Chapter III assesses whether MFP is associated with changes in state-level transition rates and post-transition outcomes for long-term residents of institutions who transition to community-based LTSS. Chapter IV assesses how expenditures and use of LTSS and medical care change at the individual level after someone transitions to the community. The assessment also compares MFP participants with a matched sample of other transitioners to determine whether the MFP demonstration is associated with a different level and mix of post-transition expenditures and services. To understand how the quality of life of MFP participants changes after transitioning to community-based services, Chapter V presents a qualitative assessment of quality of life data MFP demonstrations collect from their participants.

II. GRANTEES' PROGRESS TOWARD STATUTORY GOALS: TRANSITIONS AND MEDICAID SPENDING ON COMMUNITY-BASED LTSS

The federal statute that created the MFP demonstration requires grantees to establish two sets of annual goals: (1) the number of institutionalized people transitioned back to the community by grantees and (2) total Medicaid expenditures on community-based LTSS for all Medicaid enrollees. Both are important indicators of progress toward MFP's overall aim to enable more people with disabilities to receive LTSS in home or community settings, if that is their preference, and to eliminate barriers that restrict the flexible use of Medicaid funds to enable people to receive LTSS in the community.

This chapter examines trends in MFP transitions and community-based LTSS spending and reviews grantees' progress in meeting annual state-established targets for these two statutory goals during the first seven years of program implementation (2008 through 2014). The chapter concludes with a discussion of lessons learned from six grantee states about factors that have contributed to strong program performance serving older adults, people with physical disabilities, those with intellectual or developmental disabilities, and people with mental illness in community-based settings.

A. Transitions

The growth in MFP transitions seen in earlier years continued into 2014. Both the cumulative and annual number of MFP transitions increased substantially over previous years (Figure II.1). A total of 10,658 people enrolled in MFP and transitioned to the community in 2014, bringing the number of people ever enrolled in MFP to 51,676, which represents a 27 percent increase in cumulative transitions since the end of 2013 (which was 40,693).[6] This growth rate sustains the strong upward trend in transitions seen during each successive year of the program's operation.

Key Finding

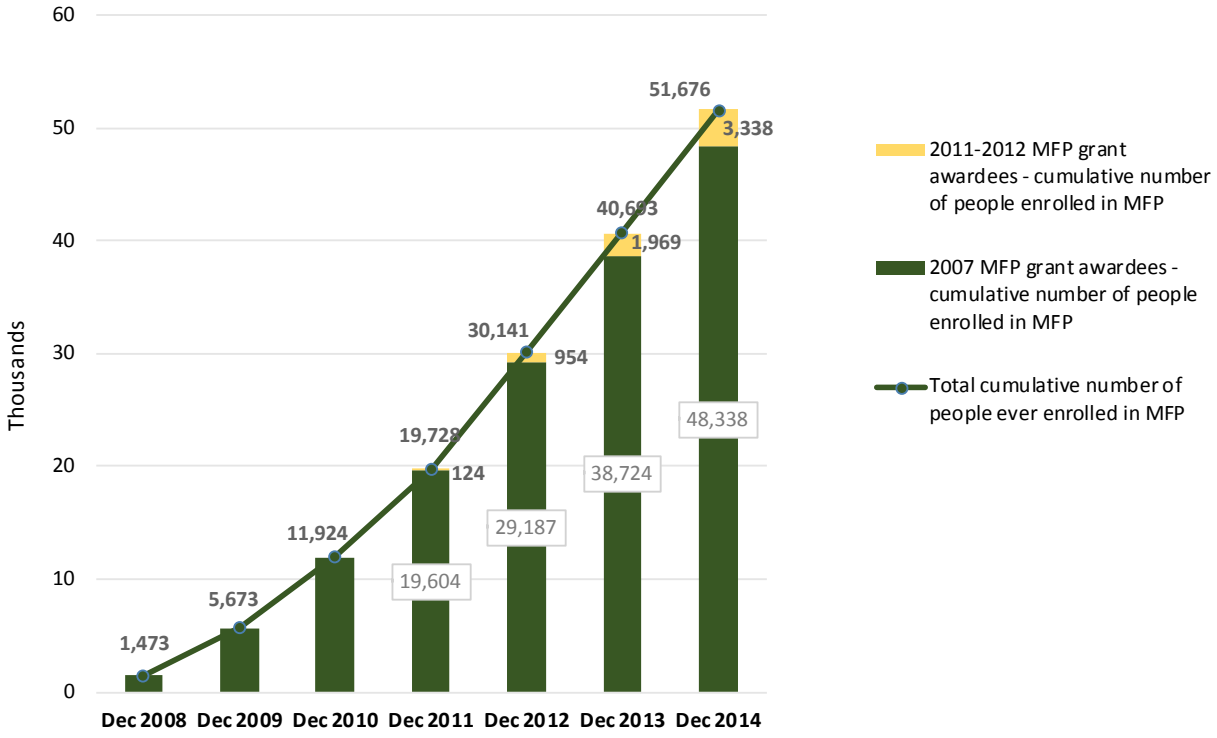
Cumulative transitions under MFP totaled nearly 52,000 at the close of 2014, 37 percent of whom were older adults, 38 percent were adults under the age of 65 with a physical disability, 18 percent had an intellectual disability, 6 percent had mental illness, and 2 percent some other type of impairment.

At the end of 2014, 44 grantees were actively transitioning participants through their programs, including two grantees that launched their transition programs during the year: Montana and South Dakota. A total of 10,658 people enrolled in MFP and transitioned to the community in 2014, a 4 percent increase over the previous year (10,243 transitioned in 2013, data not shown). The 6 grantees with the largest programs (Connecticut, Maryland, Michigan, Ohio, Texas, and Washington) accounted for slightly more than half (51 percent) of cumulative transitions (see Appendix Table A.1 for state-level counts of transitions). Among those transitioning during

[6] Because some state grantees have lags in their reporting, grantees are allowed to adjust the cumulative number of transitions they report theeir semi-annual progress reports to provide more complete data on cumulative transitions. Hence, the cumulative number of transitions reported here may not match numbers from previous reports due to grantee efforts to improve data quality.

2014, about 37 percent were older adults (ages 65 and older), 37 percent were people with physical disabilities, 15 percent were people with intellectual or developmental disabilities, 9 percent were people with mental illness, and about 2 percent were "other" individuals (Table A.1).

Figure II.1. Total number of MFP transitions, 2008 – 2014



Source: Mathematica's analysis of State MFP Grantee Semiannual Progress Reports, 2008–2014.

Note: Numbers in the figure might not match numbers from previous reports due to efforts to improve data quality retrospectively. Oregon implemented its program in 2008 but then suspended operations in 2010 and later rescinded its MFP grant. Oregon's cumulative transitions through 2010 are captured in the national transition totals for all years; however, Oregon is not reflected in the annual number of grantees transitioning participants after 2010. The data for 2008 through 2010 are from 30 grantees, 33 grantees in 2011, 36 grantees in 2012, 41 grantees in 2013, and 44 grantees in 2014.

B. MFP transitions over time

One factor that contributed to growth in MFP transitions was the addition of several new grantee states to the national demonstration. In 2011, 13 states received MFP grants, 11 of which have begun to transition MFP participants to the community since that time. Three additional states (Alabama, Montana, and South Dakota) received awards in 2012, all of which transitioned their first participants to the community in 2013 or 2014 (Table II.1). Among these new grantees, 4 transitioned 124 participants to the community in 2011, but cumulative transitions among new

grantees grew to 3,338 at the end of 2014, at which point all 15 2011–2012 grant awardees were actively transitioning participants to the community (Figure II.1). Other factors contributing to recent growth in transitions include program maturation and expanded operating capacity, as many grantees have increased their transition coordination capacity by hiring additional staff to grow their programs and help address barriers to transition. Refer to the MFP 2012 Annual Evaluation Report (Irvin et al. 2013) for a discussion of factors that contributed to growth in enrollment over the course of the MFP demonstration.

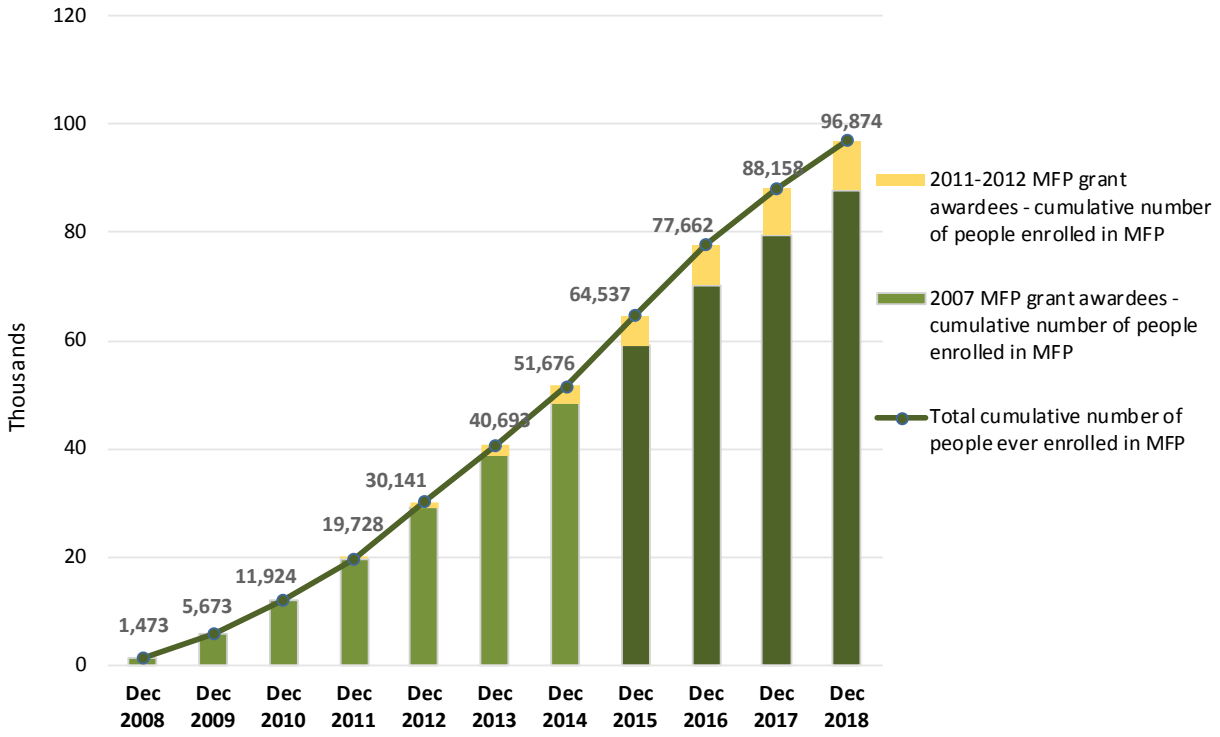
Table II.I. Grantees that began MFP demonstrations, 2011 through 2014

2011 (n=4)	2012 (n=4)	2013 (n=5)	2014 (n=2)
Idaho, Massachusetts, Rhode Island, and Tennessee	Maine, Mississippi, Nevada, and Vermont	Alabama, Colorado, Minnesota, South Carolina, and West Virginia	Montana and South Dakota

Note: Grantees that received MFP awards in 2011 include Colorado, Florida, Idaho, Maine, Massachusetts, Minnesota, Mississippi, Nevada, New Mexico, Rhode Island, Tennessee, Vermont, and West Virginia. Florida and New Mexico later rescinded their MFP grants. Alabama, Montana, and South Dakota were awarded MFP grants in 2012. South Carolina was awarded an MFP grant in 2007 and actively began transitioning participants in January 2013.

Calendar year 2016 represents the last year grantees can request MFP funding and they will have until 2018 to transition beneficiaries in long-term institutional care and 2020 to use these funds to support participants in home and community-based settings. Depending on the funding available, preliminary grantee transition estimates for future year suggest that the total number of MFP transitions over the entire 11-year demonstration (2008 to 2018) may top 100,000 (Figure II.2). About 36 percent of these transitions are expected to be older adults, nearly a quarter (23 percent) are people with serious mental illness, 20 percent are expected to be people younger than 65 with physical disabilities, and an additional 18 percent are people with intellectual disabilities. Three percent are expected to be people with other types of impairments.

Figure II.2. Cumulative total number of MFP transitions, actual (2008–2014) and projected (2015–2018)



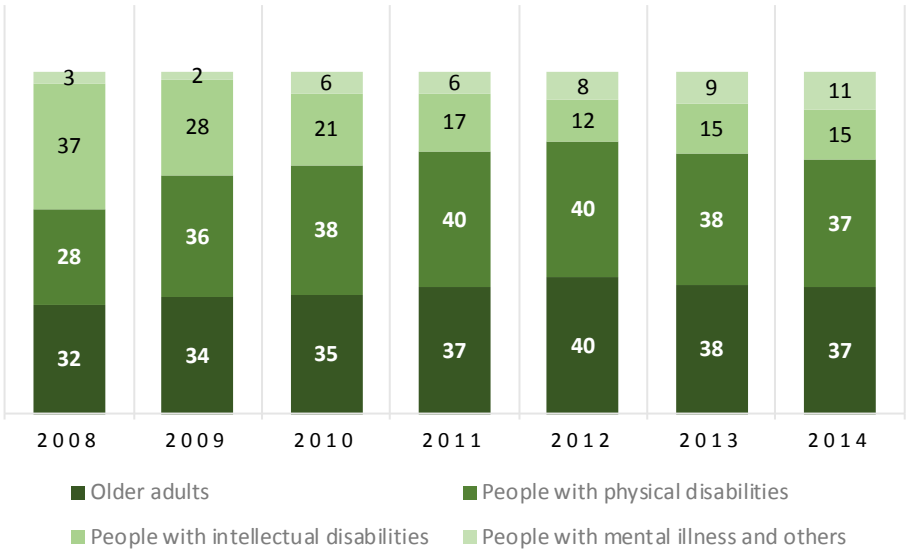
Source: Mathematica's analysis of State MFP Grantee Semiannual Progress Reports, 2008–2014 and 2014 and 2015 supplemental budget worksheets submitted by MFP grantees.

Note: Numbers in the figure might not match numbers from previous reports due to efforts to improve data quality retrospectively. The projected number of transitions was unavailable for 3 grantees for 2016, 9 grantees for 2017, and 16 grantees for 2018; hence, projections are underestimated for these years. Oregon implemented its program in 2008 but then suspended operations in 2010 and later rescinded its MFP grant. Oregon's cumulative transitions through 2010 are captured in the national transition totals for all years; however, Oregon is not reflected in the annual number of grantees transitioning participants after 2010. The data for 2008 through 2010 are from 30 grantees, 33 grantees in 2011, 36 grantees in 2012, 41 grantees in 2013, and 44 grantees in 2014 through 2018.

Since the demonstration launched in 2007, the mix of people transitioned each year (new enrollees) has changed (Figure II.3). During the seven years of program implementation, older adults have gradually increased as a share of new enrollees, accounting for 32 percent in 2008, peaking at 40 percent in 2012, and decreasing slightly to 37 percent in 2014. The proportion of nonelderly people with physical disabilities accounted for 28 percent in 2008, increased to 40 percent in 2011, and has since declined to 37 percent in 2014. By contrast, the proportion of new enrollees with intellectual disabilities has declined, decreasing from 37 percent in 2008 to 12 percent in 2012 and then increasing slightly to 15 percent in 2014. The share of new enrollees

with serious mental illness or other conditions has steadily increased during the first seven years, peaking at 11 percent in 2014.

Figure II.3. Annual percentage distribution of MFP participants, by population group, 2008–2014



Source: Mathematica's analysis of State MFP Grantee Semiannual Progress Reports, 2008–2014.

Note: The data for 2008 through 2010 are from 30 grantees, 33 grantees in 2011, 36 grantees in 2012, 41 grantees in 2013, and 44 grantees in 2014.

C. Achievement of annual transition goals

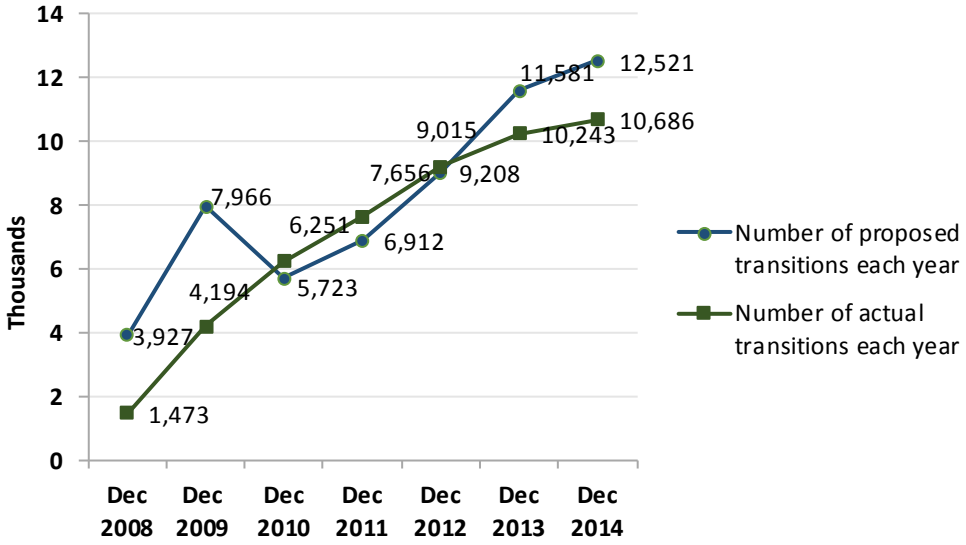
The Deficit Reduction Act of 2005 (DRA), which authorized the MFP demonstration, requires state grant applications to specify the projected numbers of eligible people in each target group to be transitioned to the community during each year of the MFP demonstration (DRA, §6071(c)(5)). CMS allows grantees to modify their goals on an annual basis when they submit requests for supplemental budget funds. For this reason, overall transition goals in many grantees, and the aggregate transition goal for all grantees, have changed over time.

The 44 MFP grantees actively transitioning participants in 2014 achieved 85 percent of the transition goal for 2014, transitioning 10,658 people of the 12,521 transitions planned for the year. Nevertheless, the total number of people the grantees transitioned to community living (10,658) through MFP in 2014 is the highest since the inception of the MFP demonstration.

As in the earlier years of the MFP demonstration, grantees might have set overly ambitious transition goals for 2014. The aggregate transition goal increased by 39 percent from 2012 (9,015) to 2014 (12,521), which suggests that some MFP grantees might have overestimated what they could accomplish during 2014 (Figure II.4). Several grantees were still in the early phases of their programs in 2014, having begun to transition people in 2013 or 2014 (Table II.1); collectively, the seven grantees that started transitions in 2013 (Alabama, Colorado, Minnesota,

South Carolina, and West Virginia) or 2014 (Montana and South Dakota) achieved 28 percent (198 of 720) of their transition goals in 2014.

Figure II.4. MFP grantees' progress toward annual transition goals, 2008–2014

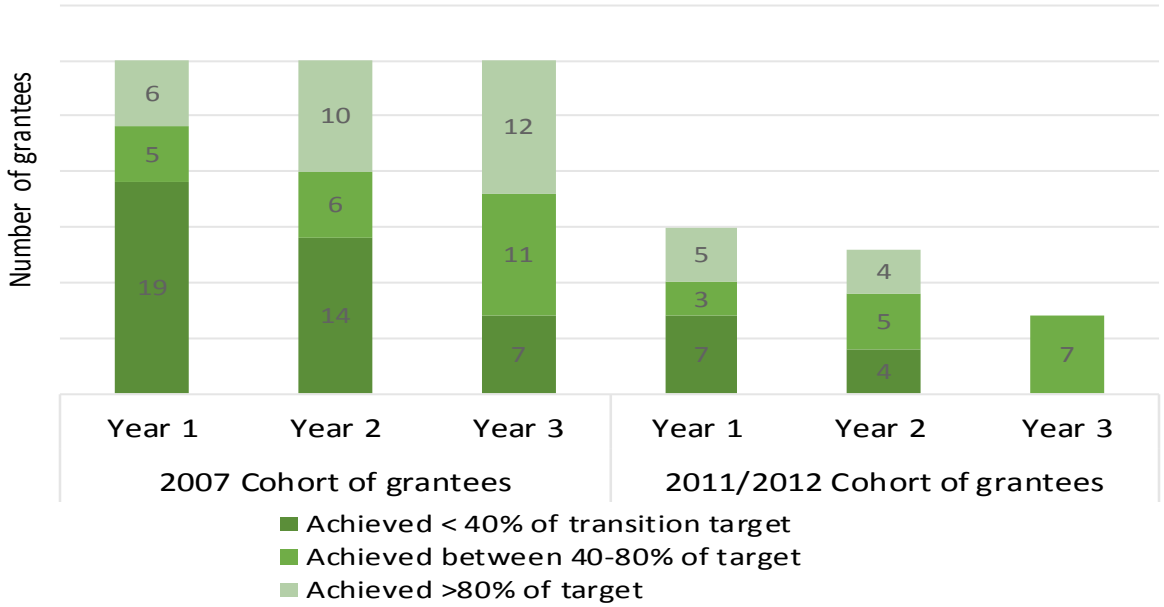


Source: Mathematica's analysis of State MFP Grantee Semiannual Progress Reports, 2008–2014.

Note: N = 30 grantees in 2008, 2009, and 2010; 34 grantees in 2011; 37 grantees in 2012; 42 grantees in 2013; and 44 grantees in 2014.

Based on the experiences among the cohort of grantees that received grant awards in 2007, fewer transitions than expected occur during the early years of a program as grantees learn how difficult these transitions can be and before procedures and systems are fully implemented. During the first year of program implementation, nearly two thirds of the 2007 cohort of grantees achieved less than 40 percent of their transition goals. In the second year of implementation, progress towards transition goals improved; although half still achieved less than 40 percent of their transition goal, a third achieved more than 80 percent of their goal. The share of awardees achieving more than 80 percent of their transition goal continued to increase in subsequent years. The same pattern is observed among the 2011/2012 grantees (Figure V.5). Grantees have faced a range of programmatic and systemic challenges that hinder grantees' transition efforts. For example, during the second half of 2014, more than half of all MFP grantees reported challenges transitioning the projected number of people they proposed to transition during 2014. Challenges cited by MFP grantees included the reduction in the number of referrals received; staff shortages, including transition coordinators; housing challenges; delays in the closure of one or more ICFs-IID; inadequate capacity to provide all the community-based LTSS needed; procurement delays or changes in vendor contracts; implementation of managed care programs; and changes in the nursing facility level-of-care standards that have led to an increase in diversions from nursing homes to community services.

Figure II.5. MFP grantees' achievement of transition goals by year of implementation, 2008–2014



Source: Mathematica's analysis of State MFP Grantee Semiannual Progress Reports, 2008–2014.

Note: The 2007 cohort included 30 grantees. Within the 2011/2012 cohort, 15 grantees had one year of information in the data, 13 had two years, and 7 had three years.

D. Achievement of annual expenditure goals for community-based LTSS

The federal statute that created the MFP demonstration requires grantee states to report their total qualified expenditures for community-based LTSS each year. These expenditures include all spending on community-based LTSS for MFP participants, as well as total state and federal Medicaid spending on 1915(c) waiver services, home health, personal care, and other community-based LTSS provided as optional state plan benefits.[7] The statute also requires that grantee states in the MFP demonstration set annual expenditure goals for community-based LTSS; as with their transition goals, they can alter those goals over time as the contextual climates for state programs change.

[7] Other optional state plan community-based LTSS include services such as adult day care, private duty nursing, and residential care.

In 2014, 43 MFP grantees reported spending a total of $70.3 billion on community-based LTSS, achieving 98 percent of the aggregate expenditure goal for the year ($71.9 billion). However, the total reported spending for 2014 was likely underestimated because the reported data for some grantees were incomplete. Delaware did not report expenditures for 2014 and two other grantees (South Dakota and Maine) reported their expenditure data were incomplete in some way.[8] In addition, some grantees experienced lags in their claims processing systems. These grantees will provide updated expenditure reports when their systems are able to process all claims associated with a given year.

Key Finding

Grantee's qualified community-based LTSS expenditures increased $2.3 billion, or 3.3 percent, from 2013 to 2014. At the same time, their MFP expenditures increased by 23 percent between 2013 and 2014, from $371 million to $458 million, reflecting the ongoing growth in the size of the MFP demonstration.

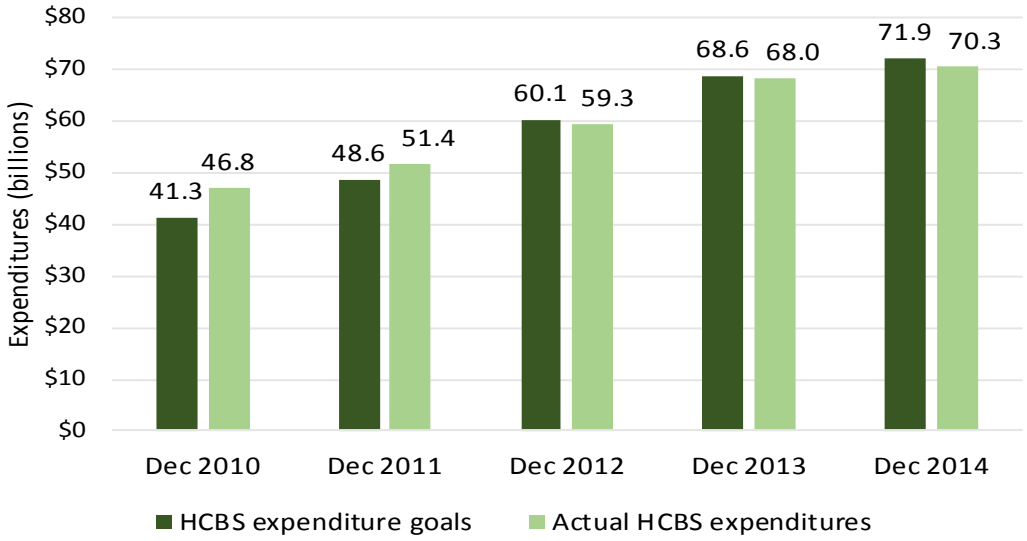
Although reported expenditures in 2014 mark the third year that grantees have fallen slightly short of meeting their aggregate expenditure goals for the year (achieving 99 percent of their goals in 2012 and 2013), total spending on community-based LTSS in 2014 was at its highest since the inception of the demonstration (Figure II.6).[9] Among the 43 grantees that reported expenditures for 2014, spending as a percentage of 2014 goals ranged from 36 percent (Connecticut) to 158 percent (New Jersey).

- In 2014, 21 grantee states met or exceeded their spending goals. Of these, 11 grantees (Arkansas, Idaho, Illinois, Iowa, Kansas, Michigan, Missouri, Nevada, New Jersey, Pennsylvania, and Texas) achieved 110 percent or more of their goals.
- Of the 22 grantees that did not meet their spending goals, 8 grantee states (California, Connecticut, District of Columbia, Georgia, Kentucky, Maine, New Hampshire, and Oklahoma) achieved less than 90 percent of their 2014 expenditure targets (Table A.1). These grantees indicated that the factors contributing to lower-than-expected expenditures for community-based LTSS included incomplete claims data due to processing lags in state systems and lower-than-expected transition counts.

[8] South Dakota's qualified expenditures for community-based LTSS for 2014 do not include MFP expenditures, as the state's MFP demonstration had not made any payments for services as of December 31, 2014. Maine indicated that spending on qualified expenditures from the first two quarters of 2104 were missing from the expenditure amount it reported for 2014.

[9] Previous-year expenditures might not be consistent with earlier reports on the MFP demonstration. When grantees report expenditures for a year, they are also allowed to update actual expenditures for one year prior to reflect more complete reporting of data and state systems that need additional time to process all claims for a given year.

Figure II.6. Projected and actual qualified community-based LTSS expenditures, December 2010 to December 2014



Source: Mathematica's analysis of State MFP Grantee Semiannual Progress Reports, 2010–2014.

Note: The data for 2008 through 2010 are from 29 grantees, 33 grantees in 2011, 35 grantees in 2012, 41 grantees in 2013, and 43 grantees in 2014.

E. Trends in community-based LTSS expenditures

Consistent with the continued growth in the annual counts of MFP transitions, total community-based LTSS expenditures in 2014 showed continued growth from earlier years as well. The $70.3 billion in qualified expenditures for community services represents a 3 percent increase in expenditures from 2013 ($68 billion), and a 19 percent increase from 2012 ($59.3 billion). The addition of new MFP grantees and maturation of existing grantee programs contributed to the growth in total spending for community services in 2014. Only five grantees (California, District of Columbia, Hawaii, Maryland, and New Jersey) reported a decrease in spending during this time, with two grantees (District of Columbia and New Jersey) reporting a decline greater than 20 percent.

This growth in expenditures is likely to be larger when state reporting becomes more complete for 2014. Previously, grantees reported an additional $6.4 billion in spending on qualified HCBS for 2013 when they updated their expenditure data during the most recent reporting period. The largest changes came from New York, which reported an additional $2.3 billion in spending, and Illinois, which reported $1.9 billion in spending for 2013.[10] Eight other grantees (Idaho, Kansas, Massachusetts, Maryland, Michigan, New Jersey, Wisconsin, and West Virginia) also updated their spending for 2013.

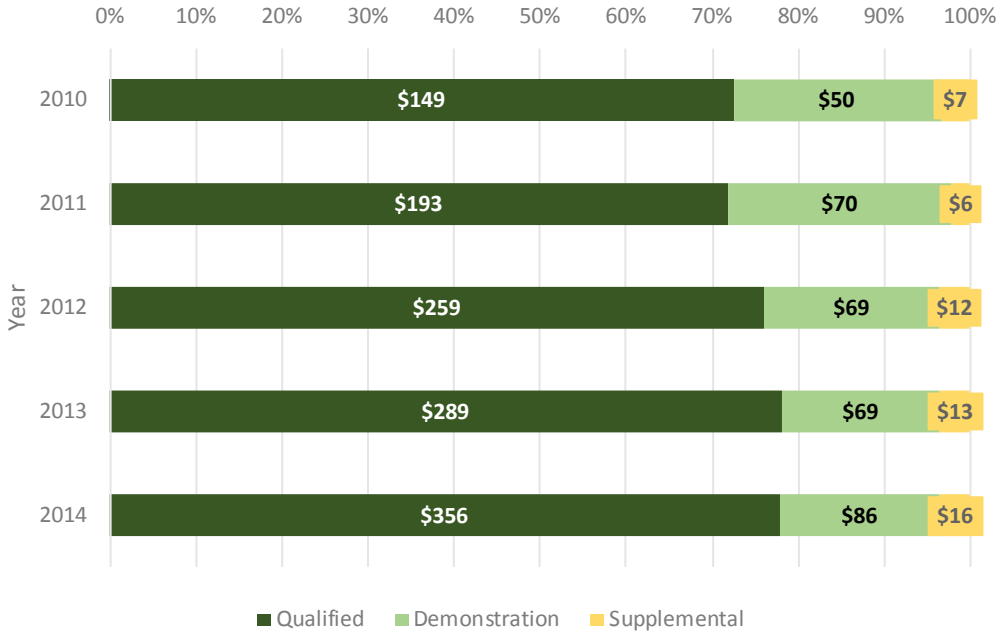
As total community-based LTSS expenditure amounts have increased over time, the same trend can be seen across three main categories of MFP expenditures: qualified, demonstration, and supplemental services. See chapter I for a description of these three categories of services. Grantee states receive an enhancement to their FMAP, which is drawn from their MFP grant funds, when they provide either qualified or demonstration services, whereas supplemental services are reimbursed at the state's regular FMAP rate. Increases in MFP spending from 2010 to 2014 were apparent across all categories of MFP expenditures (Figure II.7) as MFP grantees used the enhanced funds made available by the MFP demonstration to expand the mix of services to better meet the needs of frail older adults and people with disabilities in community settings.

Grant funds can be used to cover pretransition planning and up-front expenses, such as environmental modifications, to help people set up residences in the community. Grantee states can also offer participants an enhanced set of community services to sustain them during their first year of community living.[11] Other grantees have created new services to address identified gaps in the array of community-based LTSS offered to people through an existing waiver or state plan. Except for a couple years of stable spending in demonstration and supplemental service spending, the level of spending increased for each category during these years. At the same time, the proportions of spending changed. The share of qualified services increased during this time, with a shift away from demonstration services. This might be the result of grantees including more demonstration services as part of their regular Medicaid plan, resulting in those expenditures shifting categories.

[10] Illinois and New York also began participating in the Balancing Incentive Payment program in 2013. See Lester et al. (2015) and Lester et al. (2013) for studies of the Balancing Incentive Payment program and its association with state rebalancing efforts.

[11] MFP demonstrations receive a higher percentage of federal Medicaid matching dollars for all HCBS provided to MFP participants during the first year of community living. Grantees are expected to invest the extra federal match funds, known as rebalancing funds, in initiatives that aim to shift the provision of LTSS from institutional settings to home- and community-based care.

Figure II.7. MFP service expenditures (in millions), by category of service, 2010 – 2014



Source: Mathematica's analysis of state MFP supplemental budget worksheets submitted by grantees for 2014-2015.

Notes: These worksheets were submitted before the end of the 2014 calendar year, so grantees provided early estimates or projections for 2014 spending. In addition, Oregon implemented its program in 2008 but then suspended operations in 2010 and later rescinded its MFP grant. Oregon's 2010 expenditures are captured in the totals for the year; however, Oregon is not reflected in the expenditure amounts after 2010. Other MFP-related expenditures related to administrative costs, evaluation supports, Aging and Disability Resource Center funding, or tribal initiatives are not represented in this figure.

F. Lessons learned to improve transitions and LTSS system performance

At the same time that grantees are achieving the program's statutory goals, state staff managing MFP on the front lines have acquired valuable knowledge about what it takes to execute a successful transition and what is needed to effectively serve populations with complex needs in the community.

We sought to understand the factors that have contributed to strong performance on key outcome measures by studying six grantees that scored higher, relative to other state MFP grantees, on the number of people transitioned, rates of reinstitutionalization, changes in self-reported quality of life (QoL), and other indicators for each of four populations targeted by MFP demonstrations: older adults and people with physical disabilities who transition from nursing homes, people with intellectual disabilities, and people with mental illness (Denny-Brown et al. 2015). The six selected grantees included Illinois, Louisiana, Missouri, Nebraska, New Jersey,

and Ohio. These MFP demonstrations have translated several lessons learned from program development to improve service delivery for populations with complex medical and support needs.

- **Early identification of an individual's needs and preferences is essential to facilitate timely linkages to services in the community and avoid reinstitutionalization.** Thorough identification of a person's needs during the transition planning process helps to provide the right combination of LTSS up front so that all of the individual's needs are adequately addressed upon exiting the long-term care facility. Each person's holistic needs and preferences must be identified through an assessment instrument, completed by the transition candidate and the transition coordinator. Both Missouri and Ohio strengthened their assessment processes to improve identification of needed supports and potential risks that could jeopardize an individual's placement in the community. For example, Ohio added the CAGE questionnaire[12] to the assessment process to more comprehensively identify, early in the process, behavioral health issues, such as active use of alcohol or other drugs. By strengthening the assessment process, the program was able to put individualized supports in place to give participants the best chance to successfully maintain their independence in the community.

- **The flexible funding of the MFP demonstration offers grantees the ability to test service innovations that stabilize participants soon after transitioning to the community.** The flexible funding made available to MFP grantees under the demonstration gave grantees states the ability to test new services or supports that helped to stabilize participants soon after leaving an institution and meet their support needs so they can successfully reside in the community. New Jersey has established an Olmstead resource team that provides intensive supports for participants in the areas of physical, nutritional, and/or behavioral management during their first 90 days in the community. As part of the sustainability planning process, New Jersey is exploring continuing this service model after the end of the demonstration. Illinois used highly trained designated transition coordinators to provide a single point of coordination for participants who often have complex behavioral health needs.

  All of the grantees included in this study made good use of the flexible funding to address identified gaps in services so that that all participants received appropriate and timely supports in the community. For example, through an evaluation of its quality monitoring data, Ohio learned that participants with behavioral health needs tend to be at greater risk of reinstitutionalization during their first 90 days in the community than other participants are.

[12] The CAGE questionnaire takes its name from letters in each of the four questions it asks: (1) Have you ever felt you needed to **C**ut down on your drinking? (2) Have people **A**nnoyed you by criticizing your drinking? (3) Have you ever felt **G**uilty about drinking? (4) Have you ever felt you needed a drink first thing in the morning (**E**ye-opener) to steady your nerves or to get rid of a hangover?

Ohio extended its transition coordinator service to provide all participants with services that support their physical, social, and emotional well-being during the first 90 days post-transition. Louisiana, Missouri, and New Jersey used MFP funds to cover the up-front costs associated with reestablishing a residence in the community, such as moving expenses, purchasing furniture and household items, assistive technology, and environmental adaptations. Illinois used rebalancing funds to provide bridge subsidies to participants with mental illness as a way to move them into the community sooner while they find a permanent source of housing assistance.

Flexible funding beyond what is traditionally available in a waiver program has enabled some grantees to provide wrap-around services or supports to meet the needs of participants who require more intensive levels of support. For example, Ohio and Louisiana implemented policies and programs that enabled participants to maximize their budget allotment if the resources available under the waiver might benefit from enhancement to cover the costs of nonrecurring services or supports associated with moving to the community. Nebraska also restructured its funding system by converting the allotted amounts of monthly expenditures for day and residential services to an annualized budget; participants, with support from their team, then decide what services and supports they will purchase with the budget to address their identified needs. Officials stressed that the ability to leverage a flexible source of funds to cover the costs of executing a transition and/or supporting an individual's needs in the community are instrumental in sustaining a transition.

- **Quality monitoring systems are key to tracking participants' outcomes in the community.** All of the grantees included in this study described having strong quality systems in place to monitor how participants fare in the community. Three grantees, Louisiana, New Jersey, and Ohio, have dedicated quality assurance staff who collect and analyze service use and quality data for the MFP population and investigate potential issues that arise. Illinois contracted with an outside vendor, UIC, which provided quality assurance monitoring and reporting as well as training for transition coordinators. Nebraska and Missouri have used MFP funds to develop web-based program monitoring systems to track service use and participants' health status in the community. Illinois, Missouri, New Jersey, and Ohio reported using these data to improve program design and service delivery. Through analysis of its data, New Jersey learned that some participants with intellectual disabilities were prone to reinstitutionalization during their first 90 days in the community. New Jersey applied this knowledge to strengthen the specialized supports provided to this population during the first 90 days after the transition.

- **Strong partnerships with stakeholders are important to coordinate efforts related to service delivery and propel system transformation efforts forward.** Building strategic partnerships with stakeholders—including public housing agencies, state behavioral health agencies, state divisions of developmental disabilities, family members, legal advocacy organizations, centers for independent living, and area agencies on aging—is key to advance system transformation efforts. Past research of the care needs of MFP participants who transitioned from nursing facilities indicates that nearly a third of participants (32 percent) were classified as having high care needs; many require different types of services that are often administered by different agencies within each state's LTSS system (Ross et al. 2012). In many grantee states, the MFP demonstration has

been a collaborative effort among multiple state and local agencies; these strong partnerships can help to break down silos across organizational divisions so that resources can be targeted to improve service delivery and participants' outcomes. For example, Ohio created a behavioral health liaison position, which was jointly funded with the Department of Mental Health and Addiction Services, to recruit behavioral health providers to serve as transition coordinators. The state MFP demonstration also partnered with the department to launch an initiative that provided wrap-around supports to help those with serious and persistent mental illness, including many MFP participants, exit an institutional setting and move to the community. Missouri worked with its public housing authorities to obtain housing preferences for MFP participants in counties where participants transitioning from an institution have the greatest housing needs.

III. TRENDS IN TRANSITIONS AND POST-TRANSITION OUTCOMES

A. Introduction

The MFP rebalancing demonstration is designed to help people successfully transition from institutions to the community. Therefore, identifying the program's effects on state-level transition rates and post-transition outcomes is fundamental to understanding the program's outcomes both directly on the targeted populations and indirectly through spillover effects on the states' infrastructure that supports these types of transitions in general. Previous MFP evaluation reports have provided estimates of the size of the population eligible for MFP, from a brief period before the national MFP demonstration began through the most recent data available (Irvin et al. 2011; Wenzlow and Lipson 2009). Subsequent analyses examined transitions and post-transition outcomes for a subset of MFP grantee states during the first two years of the MFP demonstration, accounting for the period before the start of the program and for patients' characteristics (Irvin et al. 2012). This chapter builds on the analyses reported in 2012 by examining transitions for multiple years before and after the start of the MFP demonstration with additional grantee states and years of data. This chapter addresses two research questions:

1. Is the MFP demonstration associated with increased rates of transitions out of institutions and into the community?
2. Is the MFP demonstration associated with changes in post-transition outcomes including reinstitutionalizations, mortality, and successful transitions?

To address these questions, we examined trends in rates of transition to the community, as well as trends in post-transition outcomes from 2006 through 2010.[13] We then tested whether rates of transition and rates of post-transition outcomes deviated from existing trends after the MFP demonstration began. In addition to descriptive analyses, we present the results from analyses that control for person-level characteristics (such as age, race, gender, and limitations in the activities of daily living [ADLs]).

Our findings suggest that:

[13] The analyses in this chapter relied on data from the Medicaid Analytic eXtract (MAX) system. MAX data were available for 48 states and the District of Columbia for at least some years over the period 2006 to 2011. Data from Arizona and Maine were not included in these analyses because their MAX records were incomplete during this period. To verify eligibility during a given calendar year, we used MAX data from the following year. For example, we used 2011 MAX data to verify eligibility for MFP in 2010. For most analyses, we further limited the study to grantee states with a full panel of data from calendar years 2006 through 2011 and an MFP demonstration that started anytime from 2008 to 2010, which means that we excluded grantee states that started their MFP demonstrations any time in calendar year 2011 or later. See Appendix B for details on the data sources, samples, and methods used for each analysis.

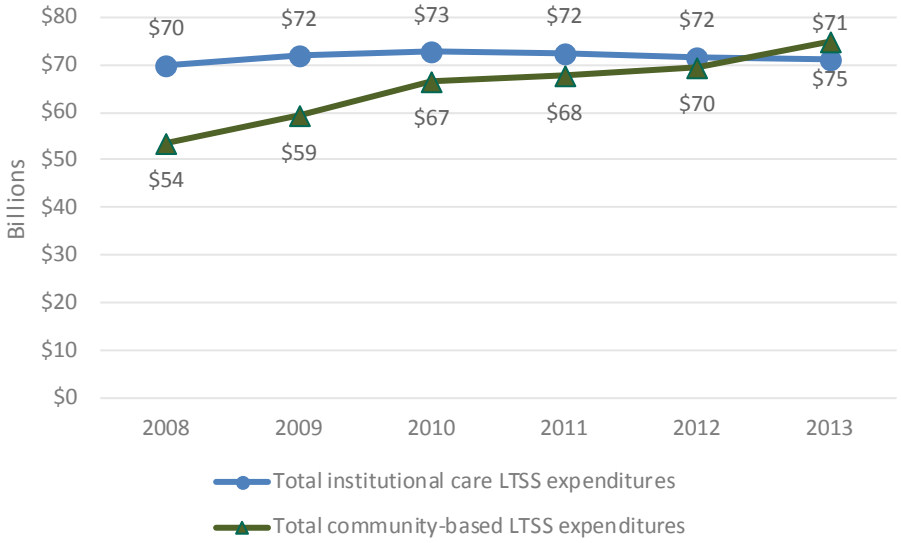
- The overall size of the population eligible for the MFP demonstration declined in the years immediately before (2006 and 2007) and after (2008–2011) the MFP demonstration began. However, the size and direction of the trends across different target populations varied.
- MFP was not associated with a general increase in transitions, but the results were mixed and varied by targeted population and over time.
  - The MFP demonstration was associated with an increase in transitions for people with physical disabilities residing in nursing homes. We estimate that, by 2010, about 95 percent of MFP participants in this targeted population represented new transitions or transitions that would not have occurred if this demonstration had not been implemented.
  - Transitions among older adults in nursing homes and people with severe mental illness in psychiatric facilities do not appear to have changed after the introduction of MFP. In contrast, MFP was associated with a decline in transitions among people with intellectual disabilities, but in only one year, which suggests our estimates may have captured a spurious correlation.
- Increases in rates of successful transitions in the post-MFP period were consistently found only for older adults. At the same time, there were declines in reinstitutionalization rates from 2008 to 2010 among older adults. This suggests that in the post-MFP period, greater numbers of older adults were successfully transitioning to the community without returning to nursing homes.

B. Background: Secular trends in institutional care and community-based LTSS

When the MFP demonstration was implemented, states were already shifting resources toward community-based LTSS. Data published by Truven Health Analytics (Eiken et al. 2015) indicate that although Medicaid expenditures for institutional care have remained relatively flat, state expenditures for community-based LTSS have shown considerable growth (Figure III.1). Calendar year 2013 marked the first year states spent more on community-based LTSS relative to institutional-based care. These trends indicate that the rebalancing of LTSS away from institutional care and toward community-based services was under way when states began implementing their MFP demonstrations. Failing to account for these trends will lead to biased estimates of the effects of the MFP demonstration on transition rates and post-transition outcomes.

It is also important to note that many grantee states had other transition efforts operating alongside their MFP demonstrations. The programs were a product of existing transition efforts or extensions of the state's MFP demonstration designed to help more people transition from institutions. The other transition programs might help people move into settings that are not eligible under MFP, such as certain types of assisted living or personal home care settings. These additional transition efforts might affect the results, and we are unable to account for them.

Figure III.1. State Medicaid expenditures for institutional and community-based LTSS, 2008 through 2013



Source: Mathematica's analysis of data published by Eiken et al. (2015).

LTSS = long-term services and supports.

C. Trends in the size of the MFP-eligible population

Key Finding

The size of the population eligible for MFP has steadily decreased from 2006 through 2011, declining by approximately 1.5 percent each year.

The success of grantee states' transition efforts will be affected by their ability to respond to changes in the makeup of the long-term institutionalized population and to the unique needs of the different subgroups of MFP-eligible people. Table III.1 shows that the overall size of the Medicaid population eligible for MFP has decreased steadily from 2006 through 2011.[14] In 2006, there were 1,361,064 MFP-eligible participants across the 48 states and the District of Columbia included in this analysis.[15] By 2008, the first year of the demonstration, that number had decreased to 1,320,111, a 1.5 average yearly percentage decrease. From 2008 to 2011, the overall size of the MFP-eligible population continued to decrease by about 1.5 percent per year, which represents a similar rate of decrease to the 2006–2008 period.

[14] When the MFP rebalancing demonstration started in 2008, MFP eligibility required a six-month stay in an institution. The Patient Protection and Affordable Care Act decreased the required amount of time in an institution to 90 days, not including Medicare-covered skilled nursing days. For this chapter, we use the 90-day requirement to flag people as being eligible for the MFP demonstration in a given year for the entire period of data covered (2006–2011).

[15] Some states did not have complete MAX data for the entire period from 2006 to 2011. To develop a complete panel of data for this analysis, we imputed values for states with missing years of data. Appendix B provides more detail on the imputation methods used.

Table III.1. Trends in the MFP-eligible population, by target population 2006–2011

Target population	2006	2007	2008	2009	2010	2011	Average yearly percentage change, 2006 to 2008	Average yearly percentage change, 2008 to 2011
Older adults	1,032,828	1,006,245	986,436	955,415	946,035	935,722	-2.3%	-1.7%
Physical disabilities	202,535	208,189	210,907	206,607	208,314	209,683	2.1%	-0.2%
Intellectual disabilities	99,538	98,017	95,885	93,325	90,690	89,108	-1.9%	-2.4%
Severe mental illness	26,163	25,869	26,883	27,882	27,367	27,855	1.4%	1.2%
Total	1,361,064	1,338,320	1,320,111	1,283,229	1,272,405	1,262,368	-1.5%	-1.5%

Source: Mathematica's analysis of 2006–2012 MAX data.

MAX = Medicaid Analytical eXtract.

Not every subpopulation of MFP-eligible participants experienced the same decline in size. The populations of both older adults and people with intellectual disabilities in long-term institutional care declined during the period, although the populations of younger adults with physical disabilities and those with severe mental illness increased. Older adults experienced a greater decrease in the pre-MFP period (2006–2008), whereas people with intellectual disabilities experienced a greater decrease in the post-MFP period (2008–2011). The number of MFP-eligible participants among the population of younger adults with physical disabilities increased in the pre-MFP period, but then declined slightly in the post-MFP period.

The growth in the MFP-eligible population among people with severe mental illness was similar across both time periods. Overall, the size of the MFP-eligible population decreased in size and followed a similar pattern as the older adult group, as they make up most of the overall MFP-eligible population (approximately 75 percent in any given year). People with physical disabilities had a slight increase in the share of the MFP-eligible population over the period. The groups of people with intellectual disabilities or with severe mental illness remained small relative to the other two groups.

D. Trends in transition rates

When assessing the trends in transition rates, an important question is whether the program yields new transitions that would not have occurred without the program. To answer that question, we examined existing trends in rates of transition to community-based LTSS that were present before the implementation of the MFP demonstration, and tested whether rates of transitions changed after grantee states began their MFP demonstration activities.[16]

1. Descriptive evidence

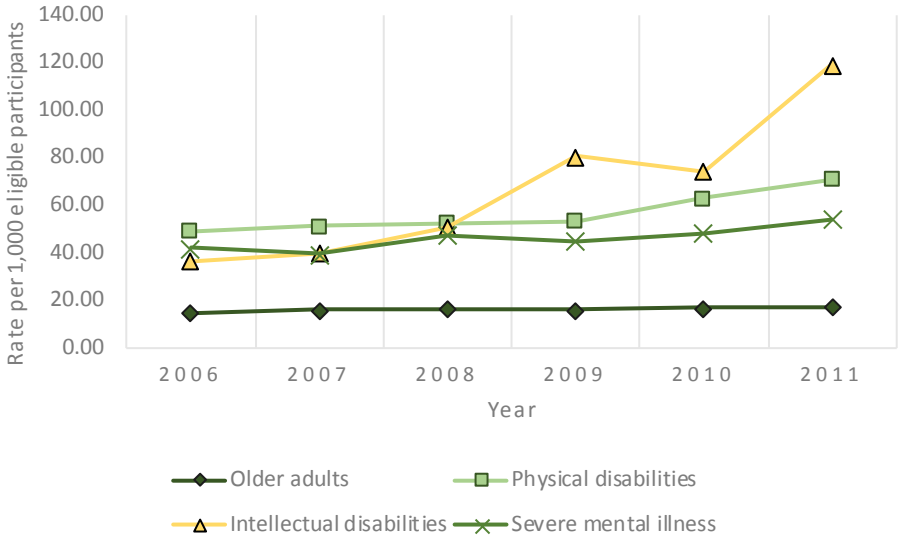
Figure III.2 shows the overall transition rates by year and by target population. The denominator of each rate is composed of the number of MFP-eligible participants in a given year. The numerator is the number of transitions to community services that occurred during the year. The 2008 to 2011 rates combine both MFP participants and people who transitioned to community-based LTSS without the benefit of the MFP demonstration. When there were missing Medicaid Analytic eXtract (MAX) data for a state for any year during the period of interest, we imputed values for the missing years of data to provide a complete panel for Figure III.2. For both the numerators and denominators of the transition rates, data are pooled across all grantee states.

Although all targeted populations experienced increases in their transition rates, Figure III.2 shows significant variation in the levels and trends of transition rates across the target populations. Older adults consistently had the lowest rate of transitions to community-based LTSS per 1,000 eligible people. However, the transition rates increased slightly over time, from

[16] For this chapter, we refer to 2006 and 2007 as the pre-MFP period, and 2008 to 2011 as the post-MFP period. Although some grantee states began their MFP demonstrations in 2007, a very small number (seven) of MFP transitions occurred in 2007. Therefore, for simplicity, we treated 2007 as a pre-MFP year and 2008 as the beginning of the post-MFP period, when grantee states began ramping up their program efforts.

approximately 14.7 to 17.5 transitions per 1,000 eligible participants from 2006 to 2011. Transition rates for those with physical disabilities and severe mental illness showed notable increases and followed similar trajectories over the period. People with physical disabilities had a transition rate of 49.3 per 1,000 eligible participants in 2006 and this rate increased to about 70.9 per 1,000 eligible participants in 2011, a 44 percent increase in the rate. The transition rates for people with severe mental illness also increased from 42.1 to 54.1 transitions per 1,000 eligible participants from 2006 to 2011. People with intellectual disabilities showed large growth in transition rates over time, with transition rates more than tripling from 36.4 per 1,000 MFP-eligible participants in 2006 to 119.2 per 1,000 MFP-eligible participants in 2011. However, the transition rates for peoples with intellectual disabilities was particularly sensitive in later years to the inclusion of imputed values for the District of Columbia and Kansas.

Figure III.2. Trends in transition rates to community-based LTSS, by target population, 2006–2011



Source: Mathematica's analysis of 2006–2012 MAX data.

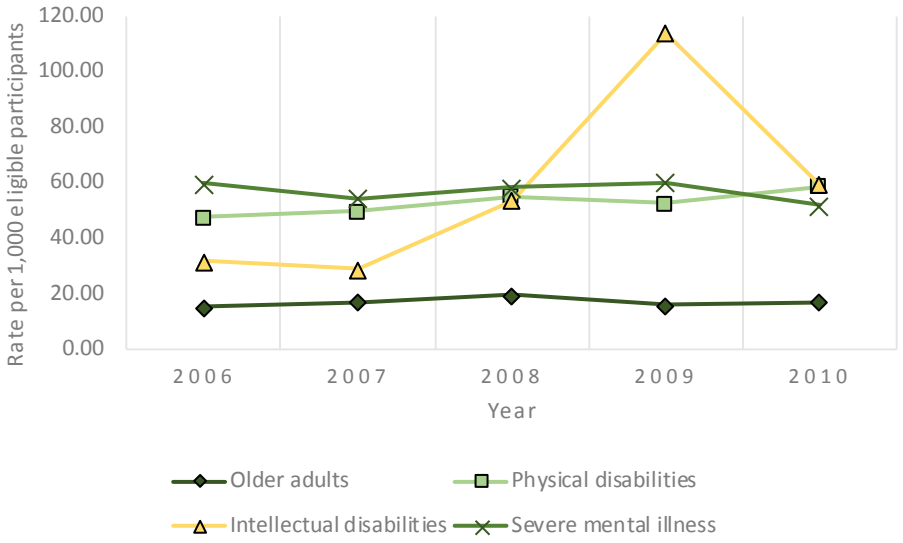
Note: All states except Maine.

MAX = Medicaid Analytical eXtract.

The descriptive data provide mixed evidence that the MFP demonstration might be associated with increased transition rates among the MFP-eligible population. The transition rates across all target populations were higher in the years after MFP was implemented, but the variation across targeted populations suggests some populations might have benefited more from the MFP demonstration than others. However, the transition rates generally trended upward before the implementation of MFP and during the program's initial years, when it was still small in terms of the number of transitions (2008 through 2009), which means that some of the growth in transition rates was most likely due to other secular trends. This early improvement in transition rates before the MFP demonstration and the variation across populations underscores the importance of controlling for these early trends and for separately examining each target population when estimating the effect of the MFP demonstration on transition rates.

Because not all the data presented in Figure III.2 can be used to assess whether MFP was associated with a change in transition rates, we also inspected the descriptive evidence of those grantee states and years included in our assessment of MFP's effects on these rates. Figure III.3 presents the overall transition rates by year and by target population for the sample used in all subsequent analyses in this chapter; this sample includes only grantee states with all years of data from 2006 to 2011, with an MFP demonstration in operation sometime in 2008 to 2010. See Appendix B for more detail on the samples. Figure III.3 shows the overall transition rates by year and by target population for the subsample of grantee states with a full panel of data from 2006 through 2010 and an MFP demonstration in operation during this period. This subsample is used in all subsequent analyses in this chapter.

Figure III.3. Trends in transition rates to community-based LTSS, by target population, 2006–2010



Source: Mathematica's analysis of 2006–2011 MAX data.

Note: States include: Arkansas, California, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa (only for people with intellectual disabilities), Kentucky, Louisiana, Maryland, Michigan, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, Virginia, and Washington.

MAX = Medicaid Analytical eXtract.

The transition rates among the subsample of MFP grantee states with data from 2006 to 2010 do not display the same growth across all target groups as seen in Figure III.2. The transition rates for older adults and people with severe mental illness remained relatively steady across all years. The transition rate among those with physical disabilities increased slightly over time, whereas the transition rate for people with intellectual disabilities increased considerably in the post-MFP period, but showed some volatility in 2009. Although the patterns differ somewhat between Figures III.2 and III.3, these descriptive analyses both highlight the variation in transition rates and trends across targeted populations and during the pre-MFP period that have to be accounted for when assessing MFP's association with changes in transition rates.

2. MFP's association with changes in transition rates

To formally test for changes in transition rates, we estimated regression models that control for existing trends within each target population, which tells whether transition rates changed markedly after the launch of the MFP demonstration in 2008 or if they continued to follow their existing trajectories.

The regression models build on the descriptive analyses of transition rates in two ways. First, the regression models contain trend terms, which account for any existing trends in transition rates that were occurring in the years leading up to the implementation of the MFP demonstration (that is, in the 2006–2007 period). We used the estimated coefficients on the trend terms (and on other covariates) to estimate counterfactual rates and counts of transitions, or the rates and counts of transitions that would have occurred if the MFP demonstration had not been implemented and the pre-MFP trend had continued from 2008 to 2010. We then tested whether the number of transitions deviated from this trend starting in 2008, which would represent new transitions that could be plausibly attributed to the launch of the MFP demonstration.

The regression models for nursing home residents also included patient-level information taken from the Nursing Facility Minimum Data Set (NF-MDS) assessment.[17] The NF-MDS contains detailed information on patients' limitations with ADLs and levels of care needs. These factors can influence a person's ability to transition to the community. In addition, we controlled for basic patients' characteristics—such as age, race, and gender—available from the Medicaid administrative data. If the prevalence of these factors in the long-term institutionalized population was changing, then failing to include them in the analysis could lead to biased estimates of demonstration effects on transition rates.

The unit of analysis was a person-quarter, and we estimated the probability that a person transitioned to the community in a given calendar quarter in which the person was eligible for MFP. Therefore, the regression yields an estimate for the average change in quarterly transition rates from 2008 to 2010. We then used these estimates to compute (1) the regression-adjusted count of transitions for each year from 2008 to 2010; and (2) the expected number of transitions for 2008 to 2010, if transition rates had followed their pre-MFP trajectories. The difference between these two counts is the change in the number of transitions over the period 2008 to 2010, above what we would have predicted, given existing trends. We estimated models separately by target population. For additional details about the regression model, control variables, and data structure, see Appendix B.

Figures III.4 through III.7 display the results from the regression analyses for older adults, people with physical disabilities, those with intellectual disabilities, and people with severe mental illness, respectively. In each figure, the solid black line shows the observed quarterly rate

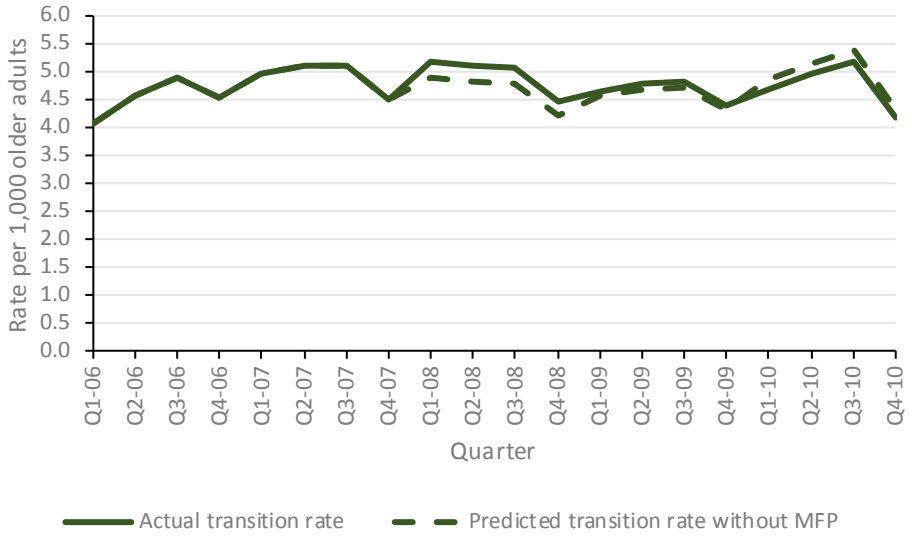
[17] Because the NF-MDS is administered in nursing homes, we used information from the assessments when we estimated models for older and younger adults who transition from these types of facilities. The NF-MDS information is not available for people with intellectual disabilities or severe mental illness, and in the models for these target populations we controlled only for the demographic information available in the Medicaid administrative data (age, gender, and race).

of transitions per 1,000 eligible participants, after controlling for patients' characteristics. The dotted line in each figure shows what the transition rate would have been if the MFP demonstration had not been implemented and the existing trends in transition rates from the pre-MFP period (2006–2007) had continued in the post-MFP period (2008–2010). The vertical distance between the solid and the dotted line is the estimated change in overall quarterly transition rates that occurred after the launch of the MFP demonstration in 2008. The figures display the overall transition rate, which reflects both MFP and non-MFP transitions from institutional- to community-based LTSS.

In general, the results appear to be mixed, varying across targeted populations and across time within a population. MFP was associated with higher transition rates among younger adults with physical disabilities. The transition rates appeared to be lower in all post-MFP years among people with intellectual disabilities and people with severe mental illness, but the lower transition rate was statistically significant only for the group with intellectual disabilities in 2010. MFP is not associated with a change in transition rates among older adults transitioning from nursing homes.

Figure III.4 shows, among older adults, transition rates in 2008 through 2010 were very similar to what we would have predicted given existing trends. The estimated change in transition rates was not statistically significant in any post-MFP year. These results suggest that, among older adults, the launch of MFP did not affect transition rates in the post-MFP period.

Figure III.4. Regression-adjusted trends in transition rates: Older adults in nursing homes



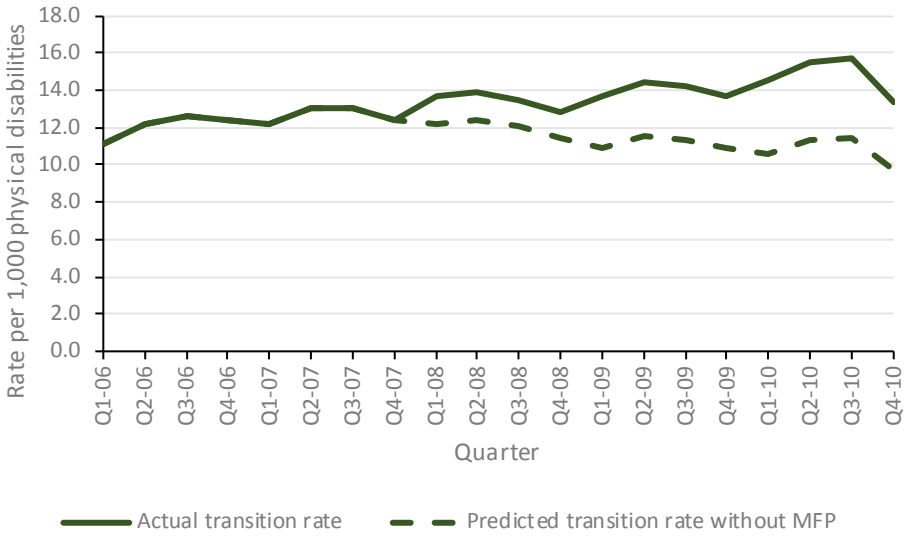
Source: Mathematica's analysis of 2006–2011 MAX data.

Note: The actual transition rate reflects both MFP and non-MFP transitions to community-based LTSS. The estimated change in transition rates was not statistically significant in 2008 (p-value = 0.106), 2009 (p-value = 0.773), or 2010 (p-value = 0.711).

LTSS = long-term services and supports; MAX = Medicaid Analytical eXtract.

For people with physical disabilities, transition rates were higher than the predicted transition rates without MFP for all years after MFP started (Figure III.5). These results suggest that the launch of MFP was positively associated with the probability of transitioning people with physical disabilities from nursing homes to community-based LTSS. The estimated change in transition rates was statistically significant in 2008, 2009, and 2010.

Figure III.5. Regression-adjusted trends in transition rates: Younger adults with physical disabilities in nursing homes



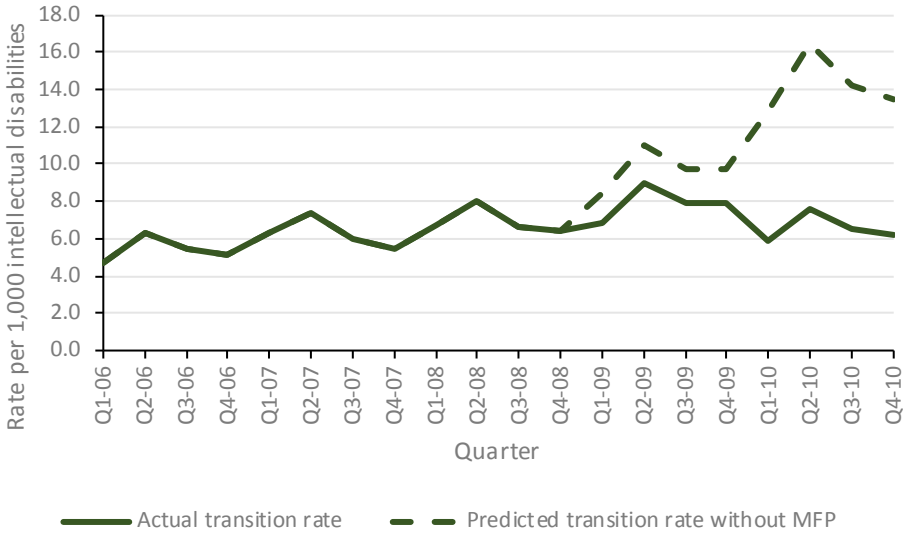
Source: Mathematica's analysis of 2006–2011 MAX data.

Note: The actual transition rate reflects both MFP and non-MFP transitions to community-based LTSS. The estimated change in transition rates was statistically significant in 2008 (p-value = 0.010), 2009 (p-value = 0.009), and 2010 (p-value = 0.012).

LTSS = long-term services and supports; MAX = Medicaid Analytical eXtract.

The transition rates among people with intellectual disabilities increased slightly from the existing trajectory in 2008, but in 2009 and 2010, the transition rates were lower than we would have expected (Figure III.6). The estimated change in transition rates was not statistically significant in 2008 or 2009 but was statistically significant in 2010.

Figure III.6. Regression-adjusted trends in transition rates: People with intellectual disabilities in intermediate care facilities for individuals with intellectual disabilities



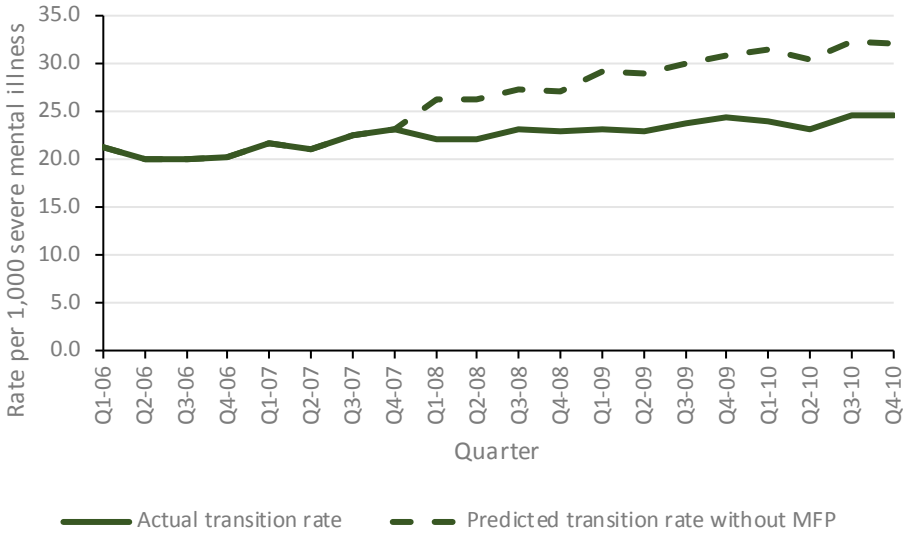
Source: Mathematica's analysis of 2006–2011 MAX data.

Note: The actual transition rate reflects both MFP and non-MFP transitions to community-based LTSS. The estimated change in transition rates was not statistically significant in 2008 (p-value = 0.999) and 2009 (p-value = 0.307), but was in 2010 (p-value = 0.053).

LTSS = long-term services and supports; MAX = Medicaid Analytical eXtract.

Figure III.7 shows transition rates among people with severe mental illness were lower than expected from 2008 to 2010. The estimated change was not statistically significant in any post-MFP year, suggesting that the launch of MFP did not affect transition rates among those with severe mental illness.

Figure III.7. Regression-adjusted trends in transition rates: People with severe mental illness in psychiatric facilities



Source: Mathematica's analysis of 2006–2011 MAX data.

Note: The actual transition rate reflects both MFP and non-MFP transitions to community-based LTSS. The estimated change in transition rates was not statistically significant in 2008 (p-value = 0.107), 2009 (p-value = 0.236), or 2010 (p-value = 0.421).

LTSS = long-term services and supports; MAX = Medicaid Analytical eXtract.

3. Sources of new transitions among people with physical disabilities

Focusing on the one targeted population in which the MFP demonstration was associated with an increase in the transition rate, we broke out the overall number of transitions observed in the data for the group with physical disabilities into MFP transitions and non-MFP transitions and estimated the percentage of the change in the overall number of transitions (presented earlier) was due to MFP transitions. The approach was designed to estimate the number of transitions that would not have happened had the MFP demonstration not been implemented.

Table III.3 reports the observed (regression-adjusted) number of non-MFP transitions, the observed number of MFP transitions, the total observed number of transitions, and the expected total number of transitions given existing trends in transition rates for the population with physical disabilities. This breakout of the data enables us to infer how much of the change in the total number of transitions can be attributed to MFP, when the change in the number of total transitions was statistically significant from zero. For example, among people with physical disabilities in the regression sample, we observed 236 MFP participants in 2008, 863 in 2009, and 1,443 in 2010. The total number of transitions (the sum of MFP and non-MFP transitions) differed significantly from what we would have expected for each year. This means that the MFP demonstration generated new transitions in 2008 through 2010 among people with physical disabilities. We estimated 44 percent of MFP transitions were new transitions in 2008, 81 percent in 2009, and 95 percent in 2010.

Key Finding

Further analyses of the younger adults grantee states transitioned from nursing homes suggest that by 2010, most MFP participants in this targeted population would not have transitioned without the program.

Table III.2. Breakout of the change in the number of transitions among people with physical disabilities

Group	2008	2009	2010
Adjusted number			
Non-MFP transitions	4,770	4,396	4,150
MFP transitions	236	863	1,443
Adjusted total number of transitions	5,006	5,259	5,593
Expected total number of transitions	4,468	4,192	4,072
Difference between adjusted and expected	538	1,067	1,521
Percentage of new transitions attributed to MFP	43.9%	80.9%	94.9%

Source: Mathematica's analysis of 2006–2011 MAX data.

Note: The counts of transitions in the table have been regression-adjusted for patients' characteristics. The sample was restricted to people who had valid NF-MDS assessment data and MAX demographic data. The expected number of total transitions refers to the number of transitions that would have resulted had MFP not been implemented in 2008.

MAX = Medicaid Analytical eXtract; NF-MDS = nursing facility minimum data set.

E. Characteristics of those who transitioned

Previous research indicates that MFP participants have been, on average, younger and more likely to be male, compared with those who transitioned to community services in the pre-MFP period (Schurrer and Wenzlow 2011). For older adults and younger adults with physically disabilities, the NF-MDS assessment data facilitate a comparison of demographic characteristics, level of care needs, and ADL limitations between MFP participants and other people who transition from nursing homes without the benefit of MFP. Characteristics of these groups based on the NF-MDS data were examined in a subset of MFP grantee states for the period 2008–2009, and MFP participants appeared to have lower care needs and fewer limitations than those who transitioned without MFP demonstration assistance (Irvin et al. 2012). The current analysis examines similar characteristics of these target groups, but expands the previous research by including additional grantee states and years of data.

Table III.3 breaks out older adults who transitioned into four groups: the data in column 1 reflect those who transitioned to community services before the MFP demonstration began (2006–2007); column 2 presents the characteristics of those who transitioned to community-based LTSS after the MFP demonstration began, but without the benefit of the MFP demonstration (2008–2010); column 3 presents the characteristics of MFP participants (2008–2010); and the data in column 4 reflect all who transitioned to community services after the MFP demonstration began (MFP and non-MFP transition combined 2008–2010). The data indicate that the pre-MFP transitioners and the non-MFP transitioners in the MFP period (shown in columns 1 and 2) were similar to one another, on average. However, MFP participants differed from non-MFP transitioners. MFP participants were slightly younger and less likely to be female (column 3 compared with column 2). They also had fewer needs for assistance with ADLs (as indicated by the lower average ADL score) and were less likely to have high care needs. In general, MFP participants appeared to be slightly younger, more likely to be men, and have lower levels of care needs and fewer limitations than people who transitioned without the assistance of the MFP demonstration.

Table III.3. Characteristics of transitioners: Older adults who transitioned from nursing homes

Characteristic	(1) Pre-MFP Transitioners 2006–2007	(2) Other Transitioners 2008–2010	(3) MFP Transitioners 2008–2010	(4) Total Transitioners 2008–2010
Mean age	80.0	79.4	76.8	79.2
Race/ethnicity				
White	67.6%	63.2%	71.3%	63.8%
Black/African American	20.7%	21.7%	23.4%	21.8%
Hispanic/Latino	7.1%	9.3%	2.1%	8.8%
Other	4.6%	5.8%	3.2%	5.7%
Female	73.0%	70.6%	63.6%	70.1%
Mean total ADL score	13.9	14.5	12.8	14.4
Level of care needs				
Low	13.0%	11.0%	15.8%	11.3%
Medium	47.6%	42.4%	46.4%	42.7%
High	39.4%	46.7%	37.7%	46.0%
Number of transitioners	16,813	22,983	1,774	24,757

Source: Mathematica's analysis of 2006–2011 MAX and NF-MDS data.

Note: Sample restricted to those who transitioned from nursing homes and who had valid NF-MDS assessment data and MAX demographic data.

ADL = activity of daily living; MAX = Medicaid Analytical eXtract; NF-MDS = nursing facility minimum data set.

Table III.4 shows the characteristics of transitioners with physical disabilities. The differences between the MFP and non-MFP transitioners are less pronounced than we observed among older adults. The MFP and non-MFP transitioners were more similar in terms of age than they were among older adults, but MFP participants with physical disabilities were also less likely to be female, have high care needs, and have slightly lower ADL scores than non-MFP participants, as they were among older adults. Without this additional NF-MDS assessment data, we might have falsely concluded that MFP participants with physical disabilities were similar in make-up to non-MFP transitioners because the two groups have more similar demographic profiles (the data available in Medicaid administrative records). However, there were important differences in levels of care needs and functional limitations between the groups of transitioners.

Table III.4. Characteristics of transitioners: People with physical disabilities who transitioned from nursing homes

Characteristic	(1) Pre-MFP Transitioners 2006–2007	(2) Other Transitioners 2008–2010	(3) MFP Transitioners 2008–2010	(4) Total Transitioners 2008–2010
Mean age	52.2	53.0	52.3	52.9
Race/ethnicity				
White	65.9%	63.0%	68.2%	63.8%
Black/African American	25.8%	27.3%	26.6%	27.2%
Hispanic/Latino	5.6%	7.2%	3.2%	6.6%
Other	2.7%	2.4%	1.9%	2.4%
Female	50.1%	51.1%	46.2%	50.3%
Mean total ADL score	11.6	12.4	11.0	12.2
Level of care needs				
Low	15.9%	13.8%	20.3%	14.8%
Medium	46.6%	41.7%	46.0%	42.4%
High	37.5%	44.6%	33.7%	42.9%
Number of transitioners	4,375	6,637	1,239	7,876

Source: Mathematica's analysis of 2006–2011 MAX data.

Note: Sample restricted to those who transitioned from nursing homes and who had valid NF-MDS assessment data and MAX demographic data.

ADL = activity of daily living; MAX = Medicaid Analytical eXtract; NF-MDS = nursing facility minimum data set.

Table III.5 shows the characteristics of transitioners with intellectual disabilities. The MFP transitioners were slightly older than non-MFP transitioners but otherwise had similar racial/ethnic and gender profiles.

Table III.5. Characteristics of transitioners: People with intellectual disabilities who transitioned from intermediate care facilities for individuals with intellectual or developmental disabilities

Characteristic	(1) Pre-MFP Transitioners 2006–2007	(2) Other Transitioners 2008–2010	(3) MFP Transitioners 2008–2010	(4) Total Transitioners 2008–2010
Mean Age	41.8	41.3	43.9	41.8
Race/Ethnicity				
White	72.2%	71.5%	74.5%	72.2%
Black/African American	21.9%	22.0%	22.2%	22.1%
Hispanic/Latino	4.4%	4.7%	1.9%	4.1%
Other	1.5%	1.8%	1.4%	1.7%
Female	39.3%	37.1%	35.5%	36.8%
Number of Transitioners	2,613	3,597	996	4,593

Source: Mathematica's analysis of 2006–2011 MAX data.

Note: Sample restricted to those who had valid MAX demographic data.

MAX = Medicaid Analytica eXtract.

Table III.6 shows the characteristics of transitioners with severe mental illness. There were relatively few MFP transitioners among individuals with severe mental illness illness and to protect their privacy we do not report their statistics. Their characteristics indicate that they were much older and more likely to be white than the non-MFP transitioners.

Table III.6. Characteristics of transitioners: People with severe mental illness who transitioned from psychiatric facilities

Characteristic	(1) Pre-MFP Transitioners 2006–2007	(2) Other Transitioners 2008–2010	(3) MFP Transitioners 2008–2010	(4) Total Transitioners 2008–2010
Age				
0–25	71.0%	72.7%	--	72.5%
26–64	15.2%	15.3%	--	15.3%
65 and older	13.8%	12.0%	--	12.2%
Race/ethnicity				
White	56.0%	51.2%	--	51.4%
Black/African American	31.1%	34.3%	--	34.2%
Hispanic/Latino	11.2%	12.3%	--	12.2%
Other	1.7%	2.3%	--	2.3%
Female	47.9%	44.8%	--	44.8%
Number of transitioners	1,446	2,432	<11	2,441

Source: Mathematica's analysis of 2006–2011 MAX data.

Note: Sample restricted to those who had valid MAX demographic data. Because of privary concerns, we are unable to report the statistics for the MFP transitioners.

Table III.6 (continued)

MAX = Medicaid Analytica eXtract.

The differences in the characteristics of people who transitioned will have an effect on post-transition outcomes. For example, if those who transitioned without the benefit of the MFP demonstration require more care at the time of their transition to the community than the MFP group, then they might also have differentially higher rates of negative post-transition outcomes, such as mortality and readmission to a nursing home.

Therefore, using others who transition to estimate counterfactual post-transition outcomes of the MFP participants requires controlling for all the differences in baseline characteristics exhibited in Tables III.3 through III.6. However, there might be additional unobserved differences between MFP and non-MFP transitioners, which could lead to biased estimates unless additional statistical approaches (such as instrumental variables) are used to eliminate this bias. On the other hand, the similarity of characteristics between those who transitioned in the period before MFP and those who transitioned in the 2008–2010 period without MFP suggests that these biases might be reduced by comparing post-transition outcomes for all transitioners in the two periods.

F. Post-transition outcomes

Although the volume of transitions is an important measure of the types of effects the MFP demonstration has had on people who use LTSS, these transitions will be considered successful only if transitioners can live in the community for a long period. In this section, we test whether the launch of the MFP demonstration was associated with changes in the rate of successful transition. That is, we assess post-transition outcomes within 12 months of an individual's transition to the community, including reinstitutionalization, mortality, and remaining in the community or having a successful transition.

Previous research provides descriptive evidence that MFP participants had lower rates of mortality and reinstitutionalization within six months of their transitions to the community than people who transitioned to the community without the benefit of the MFP demonstration (Irvin et al. 2012; Schurrer and Wenzlow 2011). Because MFP participants might have been, on average, different (that is, have lower care needs or fewer limitations, in general) than others who transitioned, the observed difference in mortality and reinstitutionalization rates could have been due to the differences in baseline demographics and care needs between the two groups of beneficiaries. Results from earlier analyses that controlled for baseline characteristics found no statistically significant differences in reinstitutionalization during the first 6 months after the transition among older adults or people with physical or intellectual disabilities in 2008 or 2009, but there was a decline in mortality among older adult transitioners in 2008 and 2009 6 months after transitioning (Irvin et al. 2012). In this analysis, we build on these previous analyses by including data from additional years and grantee states and examining outcomes in the 12-month period after transition.

The regression models used in this analysis control for differences in person-level characteristics to isolate the effect of the MFP demonstration on post-transition outcomes. They also control for any existing trends in outcomes that were present before the launch of the MFP

demonstration. Similar to the models estimated for the transition rate analyses, we estimated post-transition outcomes separately by target population and tested whether rates of post-transition outcomes deviated from existing trends in 2008 to 2010. Because mortality was a relatively rare event among those with intellectual disabilities and severe mental illness, we model 12-month reinstitutionalization rates and rates of successful transition only for these two subgroups. We limited the regression analyses for these target groups to people with valid MAX demographic data. For older adults and younger adults with physical disabilities, we considered 12-month mortality as an additional outcome. Therefore, we limited these groups to those who were dually eligible for Medicare and Medicaid to ensure the analysis was based on a consistent data source for date of death (see Appendix B for more details). We also limited the regression analyses for older adults and younger adults with physical disabilities to those who had a valid NF-MDS assessment data before transitioning to the community and valid MAX demographic data.

Table III.7 presents the estimated effects. Among older adults who transitioned, MFP appears to be associated with an improvement in post-transition outcomes. The rate of those remaining in the community for 12 months post-transition increased in all years from 2008 to 2010, whereas the rates of reinstitutionalization declined. For example, for the baseline years of 2006 and 2007, approximately 51 percent of older adults who transitioned were still in the community 12 months after transitioning. In 2008, the percentage of older adults who transitioned and were still in the community 12 months later was about 4 percent higher than the baseline rate. In 2009, the rate of older adults still in the community was nearly 10 percent greater than the baseline rate and similarly in 2010, the rate was slightly more than 10 percent higher than the baseline rate. At the same time, reinstitutionalization rates in the 2008-2010 period declined compared to the baseline period. By 2010, the rate of reinstitutionalization had dropped by nearly 15 percent from the baseline rate. Both sets of rates were statistically significant in all post-MFP years. Mortality rates increased among older adults, but the estimated effect was statistically significant only in 2010. The increase in the number of successful transitions among older adults in the post-MFP period was driven by declines in reinstitutionalization rates in the 2008–2010 period.

Key Finding

Although we find not evidence that the implementation of MFP was associated with an increase in transition rates among older adults residing in nursing homes, the data suggest that the MFP demonstration is associated with improved post-transition outcomes among those who participate in the demonstration. We estimate that successful transitions increased by 4 percent of those targeted population after grantee states began their MFP demonstrations in 2008.

Among the other targeted populations, MFP was associated with few statically significant changes in post-transition outcomes. Among people with physical disabilities, the reinstitutionalization rate had a significant decline in 2009, and the number of successful transitions increased among those with intellectual disabilities in 2010. The general lack of findings among these targeted populations might in part be due to the high rates of successful transitions during the baseline period, particularly among transitioners with intellectual disabilities. High baseline rates make it difficult to achieve further improvements. Although the pattern of the results for transitioners with severe mental illness differed from that for the other target groups, there were no statistically significant

changes in rates of successful transitions or reinstitutionalization among this group, most likely because there were so few MFP participants in this particular group.

Table III.7. Changes in 12-month post-transition outcomes

Outcomes by target group	2008	2009	2010	Baseline rate (2006-2007)
A. Older adults				
Still in community	4.4%	9.8%	10.3%	50.6%
(p-value)	(0.000)	(0.000)	(0.000)	
Return to institutional care	-4.7%	-11.6%	-14.5%	28.0%
(p-value)	(0.000)	(0.000)	(0.000)	
Mortality	0.3%	1.8%	4.3%	21.4%
(p-value)	(0.742)	(0.176)	(0.011)	
B. Younger adults with physical disabilities				
Still in community	2.7%	6.8%	7.5%	69.7%
(p-value)	(0.249)	(0.066)	(0.149)	
Return to institutional care	-2.7%	-7.4%	-8.0%	20.9%
(p-value)	(0.205)	(0.034)	(0.117)	
Mortality	0.0%	0.7%	0.4%	9.4%
(p-value)	(0.974)	(0.736)	(0.871)	
C. People with intellectual disabilities				
Still in community	4.0%	1.1%	18.7%	91.0%
(p-value)	(0.133)	(0.854)	(0.042)	
Return to institutional care	-2.5%	1.4%	-14.5%	7.1%
(p-value)	(0.299)	(0.797)	(0.099)	
D. People with severe mental illness				
Still in community	-6.1%	-6.8%	-7.2%	73.0%
(p-value)	(0.088)	(0.148)	(0.209)	
Return to institutional care	5.7%	6.5%	6.1%	26.2%
(p-value)	(0.107)	(0.160)	(0.288)	

Source: Mathematica's analysis of 2006–2011 MAX data.

Note: Among older adults and those with physical disabilities, the sample was restricted to people who had valid NF-MDS assessment data and MAX demographic data. Among those with intellectual disabilities and those with severe mental illness, the sample was restricted to people with valid MAX demographic data.

MAX = Medicaid Analytic eXtract; NF-MDS = nursing facility minimum data set.

Among the other targeted populations, MFP is associated with few statically significant changes in post-transition outcomes. Among individuals with physical disabilities, the reinstitutionalization rate had a significant decline in 2009, and the number of "successful" transitions increased among individuals with intellectual disabilities in 2010. The general lack of findings among these targeted populations may in part be due to the high rates of "successful" transitions during the baseline period, particularly among transitioners with intellectual disabilities. High baseline rates make it difficult to achieve further improvements. Although the pattern of the results for transitioners with severe mental illness were different than those for the other target groups, there were no statistically significant changes in rates of "successful"

transitions or reinstitutionalization among this group, most likely because there were so few MFP participants in this particular group.

These results should be interpreted with caution. First, the group of post-MFP transitioners is composed, in part, of MFP participants who might have differed along a set of unobservable characteristics that would create bias in our estimates. Despite controlling for some patient covariates in the regression models, it is still possible that MFP participants were healthier along unmeasured dimensions. In addition, we have limited our analysis to grantee states and years for which we have available data to measure post-transition outcomes. We could therefore miss program effects that take more time to manifest. For these reasons, future research and more data are needed to test whether the MFP demonstration actually affects post-transition outcomes.

G. Discussion

This chapter provides evidence of the effect of the MFP demonstration on rates of transitions to the community and on post-transition outcomes. It builds on previous research by including additional grantee states and years of data. The results imply that by 2010 the number of transitions among most targeted populations had not increased after MFP was launched. The one exception was younger adults with physical disabilities residing in nursing homes, for whom the number of transitions increased from 2008 through 2010. The number of transitions decreased among people with intellectual disabilities in 2010, but all other results were not statistically significant, which suggests an anomalous finding. Taken together, it appears that the MFP demonstration was not large enough to affect transition rates on a national level, either directly or indirectly through spillover effects.

We also have no evidence, other than among those with physical disabilities, that as of 2010, the third year of the demonstration, that the MFP demonstration at the national level transitioned people who would not otherwise have moved back to the community. We found that, among older adult transitioners, there was an increase in the number of successful transitions in the post-MFP period, which was driven by declines in reinstitutionalization rates from 2008 to 2010. There were few changes in post-transition outcomes in the 12 months after transitioning for the other target groups.

Our work has several limitations. The most serious methodological limitation is the comparison group. This analysis developed inferences about MFP effects by comparing projected pre-MFP trends with actual experience during the MFP period. Other changes could have occurred from the pre-MFP years (2006–2007) to the post-MFP years (2008–2010) that affected transition rates and the outcomes of those who transitioned. Such changes could include (1) the quality of nursing home care, (2) the availability of alternatives to nursing homes (such as assisted living or group homes), (3) the quality of community-based LTSS, (4) treatment of some medical conditions, or (5) the characteristics of those eligible for MFP. The effects of these and other factors on transitions and post-transition outcomes, such as the availability of family members who can help care for the person in the community, will be confounded with the effect of MFP. In addition, the regression models implicitly assume that each state's program launched in the same manner. Although we controlled for state-level differences that remained constant; the heterogeneity in program design and early implementation experiences that we did not address might also have affected demonstration outcomes.

Our work has also been affected by important limitations in the data available for the evaluation of this program. State Medicaid data files necessary for this analysis have experienced significant delays because of a large restructuring of the national Medicaid data system that has been underway for several years. Because the study requires the ability to track outcomes for up to 12 months after the transition and the most current Medicaid data available for the majority of grantee states at the time the study began was 2011, we were restricted to looking at transitions only through 2010, the third full year of the national demonstration. Although the post-MFP period covered 2008 to 2010, several grantee states did not have available data for some of this period, so we could not include them in the analyses. We attempted to include grantee states with fewer years of data, but the outcomes being assessed have a high degree of variability across grantee states and the results reflected this inter-state variability rather than program effects.

As a result of the data limitations, the MFP transitions through 2010 and assessed here comprised only about one-third of all transitions that have occurred through MFP, and we are unable to draw any conclusions about the effects of MFP beyond 2010 when the first programs would be more mature and more state grantees entered the demonstration. Our limited time period for this analysis means that we are unable to detect any effects of MFP that take longer to manifest as grantee states have improved their programs over time. Therefore, the results presented in this chapter are intermediate and do not reflect all transitions that have occurred through MFP to date.

Lastly, the NF-MDS data were available only for older adults and people with physical disabilities who transitioned from nursing homes, so we lacked information on other aspects of health status for those with intellectual disabilities residing in intermediate care facilities and with severe mental illness residing in psychiatric facilities. This means the problem of unobservable characteristics that might interact with the effects of MFP will be exacerbated for these targeted populations.

IV. THE RELATIONSHIP BETWEEN MFP PARTICIPATION AND HEALTH SERVICE EXPENDITURES AND UTILIZATION

The previous chapter presented results that suggest the MFP rebalancing demonstration was associated with changes in two key outcomes: (1) an increasing transition rate among younger adults with physical disabilities who resided in nursing homes and (2) improved post-transition outcomes for older adults who transitioned from nursing homes. This chapter assesses whether the near-term costs and health care utilization patterns of MFP participants differ from those of others who transition without the benefit of the MFP demonstration. If differences exist, do they indicate that MFP is making a positive contribution, either through controlling costs or through a more desirable mix of services? In addition, because earlier work found that nearly two-thirds of MFP participants have a history of being treated for a mental health condition (Irvin et al. 2015; Bohl et al. 2014), we assess whether and to what extent the presence of a mental health condition influences any cost and utilization differences identified.

In earlier work, we found preliminary evidence that, compared to other transitioners, MFP participants (1) have a similar decline in total expenditures after transitioning to the community; (2) have greater total expenditures after the transition because they have greater expenditures for LTSS, but similar levels of spending on medical services; and (3) are more likely to use inpatient or emergency department (ED) services (Irvin et al. 2015). In this year's report, we refine our analysis using more years of data to answer the following new research questions:

How does the distribution of expenditures across different types of service change after the transition to community living? We examine how expenditures change after the transition in the following major service categories: LTSS (community- and institutional-based services), post-acute care (Medicare-paid skilled nursing facilities [SNFs] and home health), and medical services (inpatient, ED, and physician office visits).

Does MFP influence the mix of medical services participants use after the transition to the community? To explain variations in expenditures after transition, we analyze the use of inpatient, ED, physician office services, and facility-based subacute care. In addition, we assess several quality-of-care measures, including a composite utilization measure for conditions sensitive to the quality of community-based care, known as ambulatory care sensitive conditions (ACSCs): falls and trauma, delirium, dehydration, and pressure ulcers.

Three Target Populations in the Cost and Utilization Analysis

Older adults: People age 65 or older who transitioned from nursing homes

People with physical disabilities: People under age 65 who transitioned from nursing homes

People with intellectual disabilities: People who transitioned from intermediate care facilities for people with intellectual disabilities

How does a history of mental health conditions mediate the influence of MFP on cost and utilization patterns? Depending on the target population, between 42 and 67 percent of MFP participants have a mental health-related diagnostic history, which means that the incidence of having a mental health condition is much more common than suggested by the analysis of grantee reported information presented in chapter II and the number transitioning specifically

from psychiatric facilities as assessed in chapter III. Our estimate of mental health conditions among MFP participants is similar to what others have found among the nursing home population. Analyses by Truven Health Analytics and Mission Analytics Group (2014) indicate that at the end of 2013, 60 percent of nursing home residents had a reported mental health diagnosis in the NF-MDS data. In earlier work, we created a separate group for persons with mental health conditions pooling transitioners from all target populations, but this muddled the important variation by target population (Irvin et al. 2015; Bohl et al. 2014). In the work presented here, we report outcomes for persons with mental health conditions separately for each target population to better identify variation in outcomes for those with these types of conditions. In addition, we examine several utilization measures for mental health-related services.

How do total expenditures change two years after transition when participants are no longer directly benefiting from the MFP demonstration? Focusing on a subgroup of MFP participants and other transitioners with available data and who survive a full two years after the initial transition, we examine total, LTSS, post-acute, and medical expenditures to understand the longer-term relationship between MFP participation on expenditures. This is a preliminary assessment, and the estimates are likely to change as more data become available.

In this chapter, we answer these questions by studying MFP participants who transitioned by the end of calendar year 2011 and comparing them to a select group of Medicaid beneficiaries who appeared to be eligible for MFP, but transitioned without the benefit of the MFP demonstration. To begin, we describe our study sample, data, and analytic methods. We then report results for each target population, stratified by the presence of mental health conditions. A detailed description of our methods is found in the Data and Methods appendix (Appendix C).

A. Key findings

- Total Medicaid and Medicare expenditures decline after transition for all target populations, with older adults with a mental health condition and people with intellectual disabilities having the largest decreases: 20 and 30 percent, respectively. This decline is primarily due to the shift in LTSS spending from institutional- to community-based care.
- Across all target populations, MFP participants have higher total expenditures post-transition than those transitioning outside of the program. This difference is primarily due to the greater expenditures incurred by MFP participants for community-based LTSS, which is by program design.
- MFP participants receive more of their LTSS, post-acute, and medical care in community settings than others who transition. Compared with other transitioners, MFP participants have greater expenditures for community-based LTSS and Medicare home health care. Conversely, MFP participants frequently (but not always) have fewer expenditures for SNF services and facility-based subacute care than others who transition to community living, but the difference is not always statistical significant. Although not discernable in expenditure measures, the analysis of service utilization suggests that MFP participants use more inpatient, ED, and physician services after the transition and they often receive inpatient, ED, and physician services for falls, delirium, dehydration, and pressure ulcers.
- The presence of a mental health condition does not seem to change the general relationship between MFP participation and expenditure and utilization patterns. Patterns of expenditures

and utilization for MFP participants with mental health conditions are similar to those seen in the overall group of MFP participants. For some target populations, MFP participants with mental health conditions were more likely to use outpatient mental health services and less likely to use inpatient mental health services than other transitioners with mental health conditions, conforming to other outcomes that suggest MFP participants are more likely to receive community-based care than institutional-based care.

- Among people who survive two years after the transition, MFP participants have similar or lower expenditures than other transitioners. The service category driving these findings varies by target population, although institutional LTSS expenditures continue to be lower among MFP participants compared to other transitioners. These results are preliminary and based on a small subset of our sample with available data and, therefore, subject to change as more data become available.

B. Methods

Study population. This chapter includes MFP participants who transitioned at any point during 2008 through 2011. The analysis also includes a comparison group of other Medicaid enrollees who transitioned during the same time period from institutional- to community-based LTSS without the support of an MFP demonstration ("other transitioners"). We excluded people who (1) died within 365 days of the transition, (2) used hospice services before the transition, (3) were enrolled in Medicare or Medicaid managed care, or (4) lived in a state without available Medicaid data either before or after the transition. We also excluded a small number of people who transitioned from psychiatric facilities because they were too few to analyze separately and their profiles were too different to include in any of the three targeted populations.

Because MFP demonstrations transition broad groups of Medicaid enrollees who have differing care needs, all analyses were performed separately by target population. We also performed subgroup analyses for (1) people with mental health conditions, and (2) people who survived two years after the initial transition. We identified people with mental health conditions using diagnosis and procedure code information on claims, as well as nursing home assessment data for those who transitioned from nursing homes.

Data and methods. We used propensity score matching to identify a group of Medicaid beneficiaries transitioning to the community outside of the MFP demonstration and who had observable characteristics similar to those of MFP participants. The propensity score model was built using observable demographic characteristics, comorbidity, pre-transition total expenditures, presence of a mental health condition, and, when available, functional status and level-of-care information available from the NF-MDS. A key limitation of this approach is that we are only able to construct a comparison group using characteristics we can observe in the data. Our results will be biased if we are unable to match on important characteristics that may systematically differ between MFP participants and other transitioners.

In the analyses that follow, total expenditures include all Medicaid-paid services and Medicare-paid Part A and Part B services (for those eligible for both programs), but exclude Medicaid or Medicare state administrative expenditures, paid prescription drugs, and out-of-pocket expenditures. LTSS expenditures consist of all Medicaid expenditures for community- and institutional-based LTSS, and medical care expenditures are all Medicaid payments not

otherwise classified as LTSS expenditures plus all Medicare expenditures for those also eligible for Medicare. Inpatient, emergency, physician office, and hospice services use Medicare and Medicaid claims, but home health and SNF expenditures are specific to Medicare in our analyses. This means that Medicaid-financed home health is subsumed in the community-based LTSS expenditures, but Medicare-financed home health is identified separately and considered together with SNF care in the subacute care category. For the subgroup of people who survived a full two years after the initial transition to the community and had available Medicaid data, we also captured total, medical, and community-based LTSS expenditures from 366 to 730 days after the transition.

For each expenditure category, we used Medicare and Medicaid claims to study utilization. We created a separate subacute care category that identified facility-based rehabilitation services in Medicare and Medicaid claims; in addition, we stratified ED visits based on whether they led to a hospital admission. We used diagnosis information on claims records to create physician visit, inpatient admission, and ED care measures for falls, delirium, dehydration, or pressure ulcers—conditions potentially preventable with appropriate care. For each service category, we measured (1) whether someone used the service, and (2) the amount of service used (such as number of visits or admissions). We only report the results for the incidence of use because the results were similar for measures based on the volume of services.[18] For people with diagnoses for mental health conditions, we also measured the frequency and timing of inpatient and outpatient care for mental health services.

We examine the relationship between MFP participation through descriptive and inferential statistics testing for differences in expenditures and utilization between MFP participants and other transitioners to identify whether participation in the MFP demonstration influences post-transition expenditure and utilization patterns. We report the distribution of pre-transition demographics, enrollment, health status, expenditures, and utilization for MFP participants and the matched sample of other transitioners. To test for differences between MFP participants and other transitioners, we fit generalized linear models using expenditures and utilization as outcome variables. More details about our methods appear in the Data and Methods appendix (Appendix C).

C. Descriptive statistics

Table IV.1 reports the pre-transition characteristics of the MFP participants and the matched sample of other transitioners used in our analyses. Because of the approach we used to develop a matched sample of other transitioners, there are few statistically significant differences in characteristics between MFP participants and the comparison groups of other transitioners.

[18] We report utilization as whether someone used the service. Our conclusions were similar if we measured utilization as the count of unique visits or admissions, or as days from transition to the first encounter.

Table IV.1. Pre-transition demographics, enrollment, and health indicators for a weighted sample of MFP participants and a matched cohort of other transitioners

Characteristics	Older adults		Persons with physical disabilities		Persons with intellectual disabilities	
	MFP	Other transit-ioners	MFP	Other transit-ioners	MFP	Other transit-ioners
Sample size						
Unweighted number of transitioners (n)	1,904	1,416	2,779	2,107	1,839	1,261
Mental health conditions (%)	58	58	67	68	42	43
Included in 2-year analysis (%)	39	56	42	64	49	67
Characteristics						
Age (mean)	76	76	51	51	45	45
Female (%)	66	63	46	47	38	38
Number of CDPS conditions (mean)	7.0	7.1	8.6	8.6	6.5	6.5
Low level of care needs (%)	23	24	30	31	2	0
Institutionalized >1 year prior to transition (%)	49	51	63	63	90	91
Transition year (%)						
2008	9	36	7	36	24	41
2009	32	32	32	32	43	31
2010	34	24	38	24	16	21
2011	25	8	23	8	17	7
Dual status	93	92	49	50	63	66
Pre-transition indicators						
Total expenditures ($)	80,772	84,152	90,142	91,071	136,266	152,890
IP admission (%)	53	50	50	51	15	16
ED visit, no hospitalization (%)	47	47	57	58	33	33

Source: Mathematica's analysis of Medicaid and Medicare claims and enrollment data for Medicaid beneficiaries who transitioned from institutional to community-based LTSS from 2008 through 2011.

Notes: Unless noted, characteristics of MFP participant and other transitioners are weighted based on a propensity score matching approach described in more detail in Appendix C.

CDPS = Chronic Illness and Disability Payment System algorithm (used to identify chronic conditions); ED = emergency department; low level of care need = lowest category of 3-level score for care needs based on the Resource Utilization Group (RUG); IP = inpatient.

Compared to other target populations, persons with intellectual and developmental disabilities (ID/DD) are younger, reside in institutions longer before transitioning, and have much higher pre-transition expenditures (see Table IV.1). Medicare-Medicaid eligibility varied substantially across the target populations, with the highest proportion in the elderly population (93 percent) and the lowest among persons with physical disabilities (49 percent). Mental health conditions were prevalent among transitioners, with persons with physical disabilities having the highest prevalence (67 percent), and persons with intellectual disabilities the lowest (42 percent). Transitioners with mental health conditions used inpatient and emergency services at higher rates (3 to 11 percent, depending on the target population and outcome) than other transitioners (data not shown).

MFP participants were less likely than other transitioners to be included in the two-year post-transition analysis (Table IV.1) because of their incomplete claims history for the second year, and not because of differences in survival. For those included in the two-year analysis, the pre-transition outcomes and characteristics were similar between MFP participants and other transitioners (data not shown).

Even after matching, the MFP participants and other transitioners had statistically significant differences in their pre-transition expenditures and the year of transition (Table IV.1). Because of data availability issues in the later years of the study period, we could not match on year of transition, leading to more MFP participants transitioning in 2010 and 2011 relative to the comparison group. To account for discrepancies in observable pre-transition characteristics, the final analysis is based on a regression model that controls for all variables in the propensity score models, as well as dual status and transition year.

D. Expenditures and utilization for transitioners from nursing homes: Older adults and persons with physical disabilities

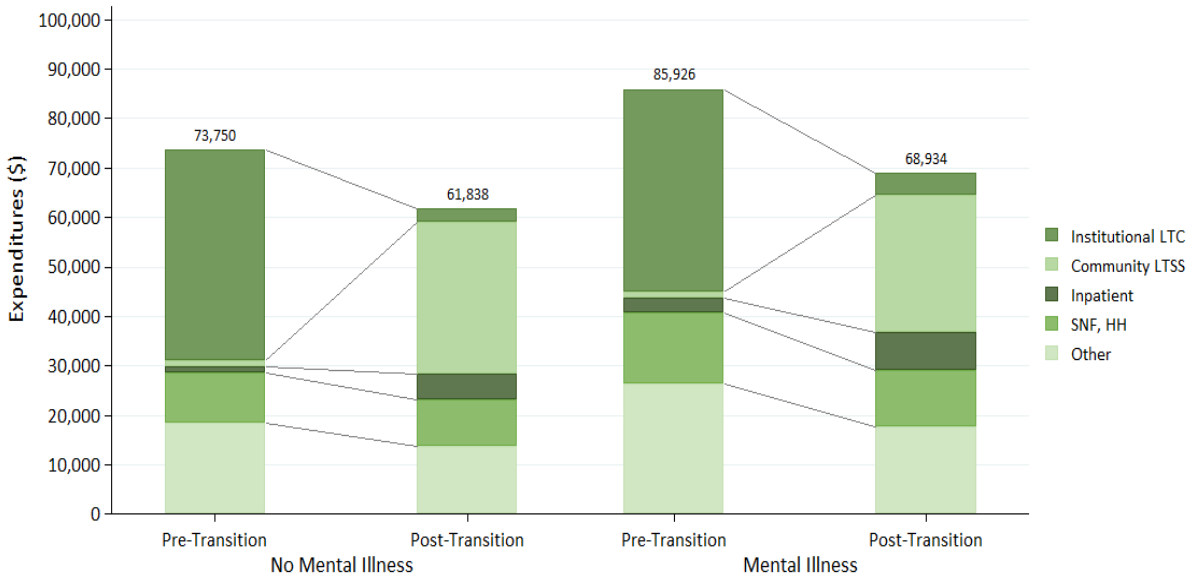
Although they have different characteristics and pre-transition expenditures, MFP participants transitioning from nursing homes have similar patterns of expenditures and utilization, regardless of age. Therefore, we report the expenditure and utilization analysis for older adults and persons with physical disabilities side by side.

Expenditures. MFP participants who transition from a nursing home experience a decline in their total expenditures after moving to the community (Figures IV.1 and IV.2). The decline ranges from 16 percent among older adults who do not have a mental health condition; to 18 percent among younger adults with physical disabilities, regardless of the presence of a mental health condition; to 20 percent among older adults with a mental health condition. The decline in total expenditures is attributable to a shift in LTSS spending from institutional- to community-based care (Figures IV.1 and IV.2). For older adults and persons with physical disabilities, 50 to 70 percent of pre-transition expenditures are for LTSS, with the rest of expenditures for inpatient, post-acute care, and other medical services. LTSS expenditures decrease substantially when MFP participants return to the community, but other spending on inpatient, post-acute, and other medical expenditures largely remains the same or declines slightly.[19] This pattern holds for

[19] Spending on physician, hospice, and ED services accounts for less than 3 percent of total expenditures pre- and post-transition.

MFP participants transitioning from nursing homes, regardless of the presence of mental health conditions.

Figure IV.1. Distribution of pre- and post-transition expenditures for older adult MFP participants, by presence of mental health conditions

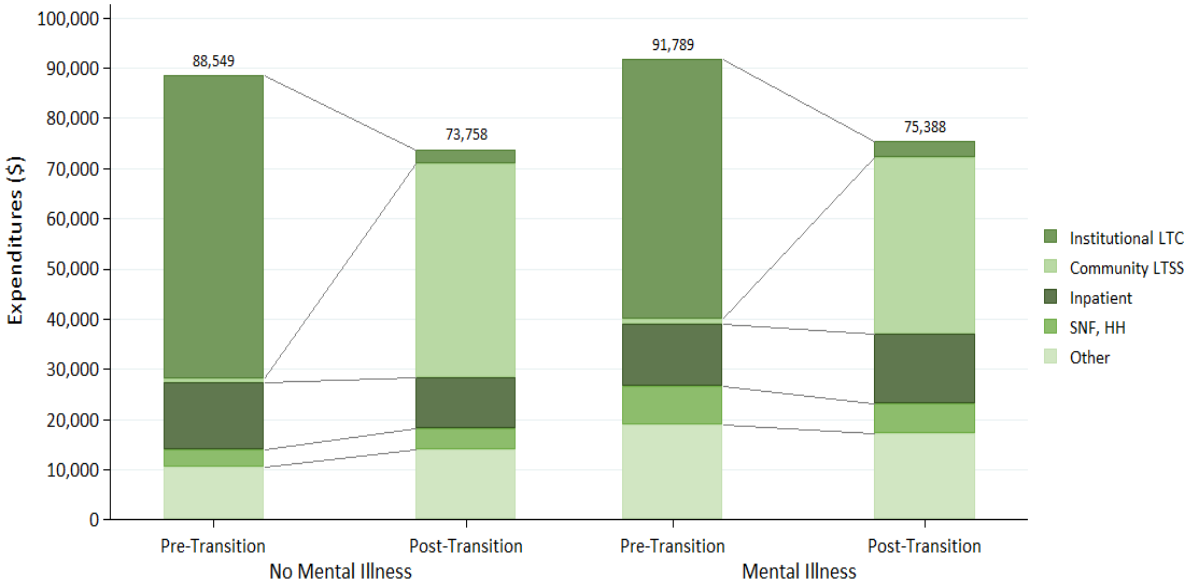


Source: Mathematica's analysis of Medicaid and Medicare expenditures for Medicaid beneficiaries who transitioned from institutional to community-based long-term services and supports from 2008 through 2011. Pre-transition is defined as the 12 months before the transition, and post-transition is the 12 months after the transition.

Notes: This analysis is based on the unweighted sample of MFP participants, whether or not they were included in the propensity score matching analysis.

LTC = long-term care; LTSS = long-term services and supports; HH = Medicare-paid home health; SNF = Medicare-paid skilled nursing facility; Other = all other services, including, but not limited to, ED, physician, hospice, ambulatory surgery, durable medical equipment, and outpatient radiology.

Figure IV.2. Distribution of pre- and post-transition expenditures for MFP participants with physical disabilities, by presence of mental health conditions



Source: Mathematica's analysis of Medicaid and Medicare expenditures for Medicaid beneficiaries who transitioned from institutional to community-based LTSS from 2008 through 2011. Pre-transition is defined as the 12 months before the transition and post-transition is the 12 months after the transition.

Notes: This analysis is based on the unweighted sample of MFP participants, regardless of whether they were included in the propensity score matching analysis.

LTC = long-term care; LTSS = long-term services and supports; HH = Medicare-paid home health; SNF = Medicare-paid skilled nursing facility; Other = all other services, including, but not limited to, ED, physician, hospice, ambulatory surgery, durable medical equipment, and outpatient radiology.

The data indicate that the post-transition health care expenditures of MFP participants are greater than those of other transitioners (Table IV.2). MFP participants' post-transition total expenditures are 13 to 17 percent greater than those of other transitioners, depending on the target population (older adults or persons with disabilities) and the presence of a mental health condition. MFP participants' greater total spending is due to significantly greater post-transition spending on community-based LTSS, as well as greater spending on acute care hospital services. Despite having more costly inpatient care, this type of care does not appear to be leading to greater use of SNF care and institutional-based LTSS. MFP participants transitioning from nursing homes receive more LTSS and post-acute care in the community than other transitioners. For example, compared to other transitioners, MFP participants have higher expenditures for Medicare home health services and community-based LTSS, but lower expenditures for SNF services and institutional-based LTSS. These results suggest that MFP demonstrations may be effective at ensuring participants receive care whenever possible in the community rather than in an institutional setting.

Key Finding

Total Medicaid and Medicare expenditures for MFP participants post transition are higher then the expenditures for other transitioners. This difference is primarily result of the greater expenditures that MFP participants incur for community-based LTSS, which is by design. However, higher inpatient care expenditures also contribute to their higher post-transition costs.

Expenditures and mental health conditions. The presence of a mental health condition does not appear to change the overall results; however, the data suggest that this type of condition attenuates the difference between MFP participants and other transitioners in most service categories. MFP demonstrations seem to be successful at ensuring participants with mental health conditions receive community-based mental health services, but MFP participants' expenditure profile otherwise is similar to that of other transitioners with a mental health condition.

Utilization of services. MFP participants and other transitioners alike use medical care at high rates (Table IV.3). Most transitioners had an ED visit in the year after the transition, and more than 40 percent had an inpatient acute care admission. Nearly all transitioners had a physician visit, but it is unclear whether these were for planned health maintenance or in response to an acute episode or declining health status. Regardless of the reason for physician visits, the overall high rates of inpatient admissions and emergency service utilization indicate that the transition to the community may be a particularly vulnerable time for older adults and persons with physical disabilities.

Table IV.2. MFP participants' and other transitioners' post-transition expenditures, for older adults and persons with physical disabilities, overall and for persons with mental health conditions

	Older adults			Persons with physical disabilities		
Post-transition expenditures ($)	MFP	Other transitioners	Regression-adjusted percentage difference	MFP	Other transitioners	Regression-adjusted percentage difference
Overall						
Total	67,780	59,963	17**	75,540	66,446	14**
Community LTSS	29,766	19,907	54**	38,487	28,492	38**
Institutional LTSS	3,878	6,886	-42**	3,305	4,643	-33**
Medical	34,386	33,560	7	33,748	34,068	0
Inpatient	11,812	9,820	25**	15,226	14,075	8
Skilled nursing facility	4,652	6,217	-12	4,305	3,915	27
Home health	6,615	4,493	68**	5,601	3,377	85**
Mental health conditions subgroup						
Total	70,725	62,287	13**	75,459	70,393	13**
Community LTSS	28,622	19,166	52**	36,356	29,285	31**
Institutional LTSS	4,852	6,322	-29**	3,588	4,626	-20*
Medical	37,682	36,896	1	36,346	36,585	6
Inpatient	13,470	10,545	22*	16,514	14,302	25**
Skilled nursing facility	5,204	6,096	-14	4,726	4,529	15
Home health	7,397	4,560	73**	5,951	4,030	80**

Source: Mathematica's analysis of Medicaid and Medicare expenditures for Medicaid beneficiaries who transitioned from institutional to community-based LTSS from 2008 through 2011. Pre-transition is defined as the 12 months before the transition, and post-transition is the 12 months after the transition.

Notes: The matched sample of other transitions is based on a propensity score matching approach described in more detail in Appendix C. The matched sample results are the regression-adjusted means and differences. Regression-adjusted percentage differences represent the results from a regression model that adjusts for all variables in the propensity score model, transition year, and dual eligibility status. As a result, the regression-adjusted percentage difference and absolute difference may not align exactly.

LTSS = long-term services and supports

Statistical notation: * = p-value < 0.05; ** = p-value < 0.001.

Table IV.3. MFP participants' and other transitioners' post-transition utilization, for older adults and persons with physical disabilities, overall and for persons with mental health conditions

	Older adults			Persons with physical disabilities		
Post-transition utilization (%)	MFP	Other transitioners	Regression-adjusted percentage difference	MFP	Other transitioners	Regression-adjusted percentage difference
Overall						
ED visit, no hospital admission	55	51	1.28**	64	60	1.29**
Inpatient admission	48	43	1.26**	47	44	1.20**
Physician visit	87	79	2.56**	91	85	1.77**
Subacute care facility stay	12	25	0.40**	16	27	0.54**
Treatment for ACSC	17	14	1.16	18	15	1.28**
Mental health conditions subgroup						
ED visit, no hospital admission	61	52	1.46**	67	65	1.26**
Inpatient admission	52	48	1.07	51	46	1.30**
Physician visit	91	82	2.49**	93	88	1.62**
Subacute care facility stay	12	28	0.37**	17	27	0.60**
Treatment for ACSC	19	17	1.04	20	17	1.29**
Inpatient admission for a mental health condition	2.7	5.4	0.46**	4.8	6.3	0.72*
Outpatient visit for a mental health condition	38	33	1.31**	45	46	0.95

Source: Mathematica's analysis of Medicaid and Medicare expenditures for Medicaid beneficiaries who transitioned from institutional to community-based LTSS from 2008 through 2011. Pre-transition is for the 12 months before transition, and post-transition covers the 12 months after the transition.

Notes: The matched sample of other transitions is based on a propensity score matching approach described in more detail in Appendix C. The matched sample results are the regression-adjusted means and differences. Regression-adjusted odds ratios represent the results from a regression, adjusting for all variables in the propensity score model, transition year, and dual status. The regression-adjusted percentage difference and absolute difference may not align exactly.

ACSC = ambulatory care sensitive conditions (see Appendix C); ED = emergency department.

Statistical notation: * = p-value < 0.05; ** = p-value < 0.001.

MFP participants transitioning from nursing homes are more likely than other transitioners to use inpatient, emergency, and physician services (Table IV.3). This association holds whether the analysis is based on frequency or prevalence measures of utilization (not shown). Conversely, they are less likely than other transitioners to use subacute care facilities (any use of rehabilitation hospitals, SNFs, and nursing homes). In additional analyses, we found that older adult MFP participants were more likely to receive home health care after an inpatient admission, whereas other transitioners were more likely to receive facility-based subacute care after inpatient care. The picture was mixed for those with physical disabilities. In general, the utilization patterns are consistent with the analysis of expenditures and suggest MFP demonstrations are successful at ensuring people receive community-based services whenever possible.

Key Finding

Several components of the analysis suggest that MFP demonstrations may be successful at ensuring people receive community-based rather than institutional-based subacute care services and LTSS whenever possible.

Utilization and mental health conditions. The presence of mental health conditions is not associated with any notable differences in the service utilization of MFP participants relative to other transitioners, although, in general, they use all types of services at a higher rate.

Quality of care. It is unclear whether the quality of care varies for MFP participants and other transitioners after returning to the community (Table IV.3). MFP participants are more likely than other transitioners to be treated for an ACSC condition, but not all these differences are statistically significant. Among older adults, the incidence of treatment for ACSC conditions does not differ between MFP participants and other transitioners. Among persons with physical disabilities, MFP participants receive care for ACSCs at a higher rate than other transitioners. This may mean the ambulatory care MFP participants receive is of lower quality than for other transitioners; however, it may also indicate that MFP participants have better access to care for these conditions than the other transitioners.

We examined the setting in which a person received care for an ACSC. We found that older adults were more likely to receive treatment in a non-inpatient setting, suggesting that this group of MFP participants may have better access to care during earlier stages, when they can be treated in a physician's office. We did not see a statistically significant difference among those with physical disabilities in terms of the setting in which a person received care for an ACSC. We also hypothesized that those who use hospice services may have a different care plan for treating ACSCs; therefore, we excluded hospice users as a sensitivity test. Our overall results, however, were not sensitive to this exclusion.

Quality of care and mental health conditions. Furthermore, among older adults with mental health conditions, MFP participants transitioning from nursing homes are less likely to use inpatient mental health services but more likely to have outpatient visits for a mental health condition. These results also suggest that MFP demonstrations may be effective at shifting the site of care for people with mental health conditions, at least for older adults.

Key Finding

The presence of mental illness tends to increase total expenditures for everyone who transitions, but the data suggest that MFP demonstrations made be effective at ensuring older adults with a mental health condition receive treatment in a community setting rather than in a facility setting.

Outcomes two years after the transition. Two years after transition, MFP participants' total expenditures are similar to those for other transitioners (Table IV.4). For the overall MFP target populations of older adults and persons with physical disabilities, total expenditures are lower compared to the first year after the transition and the total expenditures of former MFP participants are no different from those of other transitioners. The only subgroup where expenditures during the second year of community living are different between the groups is for younger adults with co-occurring physical disabilities and mental health conditions: former MFP participants in this subgroup have lower expenditures during the second year after the transition than others who transitioned.

Table IV.4. MFP participants' and other transitioners' post-transition expenditures during the second year of community living, for older adults and persons with physical disabilities, overall and for persons with mental health conditions

	Older adults			Persons with physical disabilities		
Expenditures 13 to 24 months after transition	MFP	Other transitioners	Regression-adjusted percentage difference	MFP	Other transitioners	Regression-adjusted percentage difference
Overall						
Total	55,853	57,124	< 1	60,914	64,239	-7
Community LTSS	21,802	17,832	26**	23,463	27,722	-18**
Institutional LTSS	7,999	14,560	-46**	6,962	10,096	-30**
Medical	24,540	24,135	14*	28,115	26,463	17**
Mental health conditions subgroup						
Total	60,187	57,572	2	63,092	70,401	-10*
Community LTSS	21,817	16,479	39**	22,714	29,392	-25**
Institutional LTSS	9,453	13,946	-44**	7,627	9,381	-19
Medical	26,481	26,160	14	30,621	29,226	21**

Source: Mathematica's analysis of Medicaid and Medicare expenditures for Medicaid beneficiaries who transitioned from institutional to community-based LTSS from 2008 through 2011. The two-years after period covers 13 to 24 months after the transition.

Table IV.4 (continued)

Notes: The matched sample of other transitions is based on a propensity score matching approach described in more detail in Appendix C. The matched sample results are the regression-adjusted means and differences. Regression-adjusted percentage differences represent the results from a regression, adjusting for all variables in the propensity score model, transition year, and dual status. The regression-adjusted percentage difference and absolute difference may not align exactly.

LTSS = long-term services and supports.

Statistical notation: * = p-value < 0.05; ** = p-value < 0.001.

Although total expenditures during the second year after the transition are similar for most transitioners, there are differences in subcategories of expenditures (Table IV.4). Among older adults, MFP participants continue to have higher community-based LTSS expenditures, but lower institutional LTSS expenditures, than other transitioners two years after the transition. In contrast, younger adult MFP participants have lower community and institutional LTSS expenditures than other transitioners, but higher medical care expenditures. This pattern is slightly different for persons with physical disabilities: MFP participants have higher medical expenditures than other transitioners but lower community- and institutional-based LTSS expenditures two years after transition. Due to claims data available for more recent transitioners, part of this association is due to the select set of participants with available data, and these results should be considered as preliminary and subject to change as more data become available.

E. Expenditures and utilization for persons with intellectual and developmental disabilities

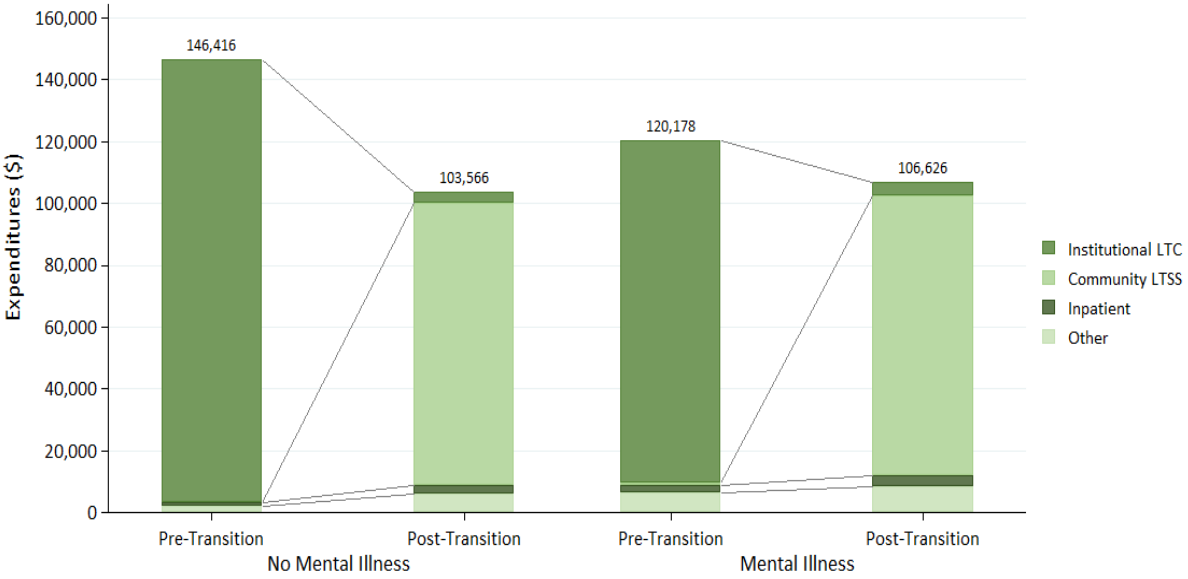
Persons with ID/DD differ from the other targeted populations in their demographic characteristics, health status, expenditures, and service utilization patterns. As Table IV.1 shows, compared to other target populations, persons with ID/DD have resided in institutions longer than other targeted populations and have higher total expenditures when residing in institutional settings. For these reasons, we report their expenditures and utilization separately.

Key Finding

MFP participants with ID/DD and no indication of a mental health condition experienced a 30 percent decline in their total expenditures on average. The largest post-transition decline of all the targeted populations analyzed.

Expenditures. As for other MFP participants, total expenditures decline after MFP participants with ID/DD return to the community (Figure IV.3). Expenditures decline an average of 11 to 30 percent, and those without mental health conditions have an especially large decline because of their particularly large pre-transition expenditures ($145,000 compared to $120,000 for persons with mental health conditions).

Figure IV.3. Distribution of pre- and post-transition expenditures for MFP participants with intellectual and developmental disabilities, by presence of a mental health condition



Source: Mathematica's analysis of Medicaid and Medicare expenditures for Medicaid beneficiaries who transitioned from institutional to community-based LTSS from 2008 through 2011. Pre-transition is for the 12 months before the transition, and post-transition covers the 12 months after the transition.

Notes: The matched sample of other transitions is based on a propensity score matching approach described in more detail in the Data and Methods appendix.

LTC = long-term care; LTSS = long-term services and supports; HH = Medicare-paid home health; SNF = Medicare-paid skilled nursing facility; Other = all other services, including, but not limited to, ED, physician, hospice, ambulatory surgery, durable medical equipment, and outpatient radiology.

Total expenditures for MFP participants with ID/DD are dominated by their LTSS expenditures (Figure IV.3). Pre-transition, institutional LTSS accounts for more than 90 percent of total expenditures for this targeted population. Post-transition spending on LTSS declines as spending shifts to community-based services; however, expenditures for LTSS continues to account for 90 percent of total expenditures for this population. We also observe a slight increase in medical expenditures for this population after the transition.

MFP participants with intellectual disabilities are similar to the other targeted populations in that their total expenditures post-transition are higher than the total expenditures of other transitioners (Table IV.5).

Table IV.5. MFP participants' and other transitioners' post-transition expenditures, for persons with ID/DD, overall and for persons with mental health conditions

Post-transition outcomes	MFP	Other transitioners	Regression-adjusted percentage difference
Overall			
Total	105,950	96,905	11**
Community LTSS	91,502	81,085	14**
Institutional LTSS	3,874	8,030	-42**
Medical	10,974	9,755	13*
Inpatient	4,883	2,472	114**
Skilled nursing facility[a]	538	256	95
Home health	949	173	291**
Mental health conditions subgroup			
Total	107,367	97,076	11**
Community LTSS	90,614	80,880	12**
Institutional LTSS	4,930	6,781	-22
Medical	13,036	10,669	18*
Inpatient	6,382	2,978	116**
Skilled nursing facility	1,082	599	38
Home health	3,271	307	249**

Source: Mathematica's analysis of Medicaid and Medicare expenditures for Medicaid beneficiaries who transitioned from institutional to community-based LTSS from 2008 through 2011. Pre-transition is for the 12 months before the transition, and post-transition covers the 12 months after the transition.

Notes: The matched sample of other transitions is based on a propensity score matching approach described in more detail in Appendix C. The matched sample results are the regression-adjusted means and differences. Regression-adjusted percentage differences represent the results from a regression, adjusting for all variables in the propensity score model, transition year, and dual status. The regression-adjusted percentage difference and absolute difference may not align exactly.

[a] The results are based on a regression model that only controls for dual status and transition year because full model with all propensity score variables would not converge.

LTSS = long-term services and supports.

Statistical notation: * = p-value < 0.05; ** = p-value < 0.001.

Their total expenditures are higher because the costs of their community-based LTSS are, on average, 14 percent higher. In addition, MFP participants in this population have inpatient and home health expenditures 114 and 291 percent higher, respectively, than the expenditures of other transitioners. MFP participants also have greater inpatient and home health expenditures, but significantly lower institutional-based LTSS expenditures. These findings are similar for MFP participants with and without mental health conditions and support the assessment that MFP participants receive more care in the community than other transitioners.

Key Finding

Many of the results seen for the targeted populations transitioning from nursing homes are also seen among those with ID/DD and transitioning from ICFs/IID.

Utilization. MFP participants with ID/DD use significantly more medical care than other transitioners with ID/DD (Table IV.6). Specifically, MFP participants in this population are more likely than other transitioners to have ED visits and inpatient admissions. MFP participants with ID/DD are slightly less likely to use facility-based services in the year after transition. Compared to other transitioners, MFP participants with ID/DD have significantly lower use of facility-based subacute care. We attempted to examine home health and SNF utilization separately, but sample sizes were too small for a robust assessment.

Table IV.6. MFP participants' and other transitioners' post-transition utilization, for persons with ID/DD, overall and for persons with mental health conditions

Post-transition outcomes	MFP	Other transitioners	Regression-adjusted odds ratio
Overall			
ED visit, no hospital admission	52	43	1.48**
Inpatient admission	21	15	1.57**
Physician visit	91	83	2.31**
Subacute facility stay	7	11	0.49**
Treatment for ACSC	8	6	1.38*
Mental health conditions subgroup			
ED visit, no hospital admission	54	45	1.51**
Inpatient admission	24	19	1.25
Physician visit	91	88	1.74**
Subacute facility stay	9	10	0.61**
Treatment for ACSC	9	7	1.29
Inpatient admission for a mental health condition	3	3	1.23
Outpatient visit for a mental health condition	67	67	1.07

Source: Mathematica's analysis of Medicaid and Medicare expenditures for Medicaid beneficiaries who transitioned from institutional to community-based LTSS from 2008 through 2011. Pre-transition is for the 12 months before the transition, and post-transition covers the 12 months after the transition.

Notes: The matched sample of other transitions is based on a propensity score matching approach described in more detail in Appendix C. The matched sample results are the regression-adjusted means and differences. Regression-adjusted odds ratios represent the results from a regression, adjusting for all variables in the propensity score model, transition year, and dual status. The regression-adjusted percentage difference and absolute difference may not align exactly.

ACSC = ambulatory care sensitive conditions (see Appendix C); ED = emergency department.

Statistical notation: * = p-value < 0.05; ** = p-value < 0.001.

Quality of care. We found that MFP participants had higher rates of treatment for ACSCs, but that having a mental health condition or using hospice services after the transition attenuated the difference and it was no longer statistically significant. As with our analysis of older MFP participants and those with physical disabilities, we examined whether there were differences in non-inpatient care for ACSCs but found none. We also found no difference in the use of mental health-related inpatient or outpatient services among transitioners with mental health conditions.

Outcomes two years after the transition. During the second year of community living, MFP participants with ID/DD have significantly lower total expenditures than other transitioners (Table IV.7). The lower expenditures for MFP participants are due to lower expenditures for institutional LTSS, suggesting that MFP participants are less likely to be reinstitutionalized during the second year of community living. The presence of a mental health condition does not change this result, but MFP participants with ID/DD and mental health conditions also have significantly lower community-based LTSS expenditures in the second year than other transitioners.

Table IV.7. MFP participants' and other transitioners' second-year post-transition expenditures, for persons with ID/DD, overall and for persons with mental health conditions

Expenditures 13 to 24 months post-transition	MFP	Other transitioners	Regression-adjusted percentage difference
Overall			
Total	96,455	114,930	-19**
Community LTSS	80,651	82,370	-4
Institutional LTSS	11,002	52,655	-72**
Medical	7,883	8,309	7
Mental health conditions subgroup			
Total	99,941	116,556	-20**
Community LTSS	78,687	88,687	-16**
Institutional LTSS[a]	10,120	20,043	-59*^
Medical	9,285	8,897	18

Source: Mathematica's analysis of Medicaid and Medicare expenditures for Medicaid beneficiaries who transitioned from institutional to community-based LTSS from 2008 through 2011. The two-years after period covers 13 to 24 months after the transition.

Notes: The matched sample of other transitions is based on a propensity score matching approach described in more detail in the Data and Methods appendix. The matched sample results are the regression-adjusted means and differences. Regression-adjusted percentage differences represent the results from a regression, adjusting for all variables in the propensity score model, transition year, and dual status. The regression-adjusted percentage difference and absolute difference may not align exactly.

[a] Results are based on a modified model that controls for dual status and transition year. The full regression model estimation failed due to small cell sizes and multicollinearity.

LTSS = long-term services and supports

Statistical notation: * = p-value < 0.05; ** = p-value < 0.001.

F. Discussion

In the year after transitioning to the community, total Medicaid and Medicaid expenditures decline for everyone who transitions, regardless of their participation in the MFP demonstration. Relative to other transitioners, MFP participants have higher post-transition total expenditures, mainly because of greater expenditures for community-based LTSS, which is by design. However, the data present evidence that MFP demonstrations may be successful at ensuring people get community-based medical care, as well as community-based LTSS. For example, compared to others who transition without the benefit of MFP, MFP participants typically have higher post-transition expenditures for Medicare home health services and community-based LTSS, but lower expenditures institutional-based LTSS, and sometimes lower expenditures for SNF services. These results carried over to utilization patterns, and MFP participants who experienced an inpatient admission were more likely than other transitioners to receive Medicare home health services and less likely to enter SNF or facility-based rehabilitation.

For MFP participants who transitioned from nursing homes, their post-transition medical expenditures are similar to those of other transitioners. Despite similar medical expenditures, MFP participants had greater post-transition utilization of physician office, inpatient, and emergency services. For individuals with intellectual disabilities, MFP participants had greater post-transition expenditures and were more likely to have a physician office visit, inpatient admission, or emergency visit than other transitioners. The data do not provide any information on whether the higher expenditures or higher rates of service utilization reflect better access to services, greater need for care, or a lower quality of community-based care.

When we assessed the receipt of care of ACSCs, such as falls, dehydration, and pressure ulcers, we found that MFP participants received treatment for these conditions at higher rates than other transitioners. When we examined the setting of care for ACSCs, we found that, compared to other transitioners, older adults served by MFP are more likely to receive treatment in a non-inpatient setting, indicating that the conditions are caught earlier for this population. This result is open to interpretation, however, because we did not find statistically significant differences in the location of care among persons with physical disabilities who receive treatment for an ACSC.

When we segmented the population and only assessed those with mental health conditions, the results were similar to those for the entire population. Although this subgroup has higher expenditures and uses health care at higher rates than others without a mental health condition, outcomes for MFP participants with mental health conditions are similar to what is seen in the overall population. However, these MFP participants are more likely than other transitioners with mental health conditions to have an outpatient visit for a mental health condition and less likely to have an inpatient admission. This result is also consistent with the evidence that suggests MFP demonstrations are able to ensure people receive community-based services and avoid institutional-based services whenever possible.

Unlike the results presented in the 2013 Annual Report (Irvin et al. 2015), we found with the analyses presented in this chapter that mental health conditions are not strongly associated with post-transition expenditures. The discrepancy in these findings are most likely due to differences in study design. The 2013 Annual Report created a separate mental health condition target

population, while in the analyses presented above we stratified each target population by mental health conditions. Because LTSS needs and expenditures vary greatly by target population, we will continue to use the stratified approach in future reports.

This is the first year we have reported on expenditures for the year after MFP participation ends; these results are preliminary, however, and taken alone, are difficult to interpret. The MFP participants for whom expenditures are available after participation ends are a select group of MFP participants, most likely representing the healthiest individuals joining MFP. Even though we constructed a matched sample of other transitioners, it is likely that we did not observe important markers of frailty. We found that hospice expenditures for MFP participants are much different from those of other transitioners in the year during and after MFP participation (not shown). It is unlikely that all the differences in hospice expenditures are attributable to MFP participation; instead, they most likely reflect unmeasured frailty and vitality before transition.

This study has several important limitations, many of which have been discussed in great detail previously (Bohl et al. 2014). First, we are limited by the data available to ascertain costs, define target populations, and develop a comparison group, which influences our results. We rely on Medicare and Medicaid claims and enrollment data, and for those transitioning from nursing homes, the NF-MDS assessments. Second, we removed MFP participants and other transitioners using managed Medicare and Medicaid, which is a growing population as the MFP demonstration progresses. Third, this study only included people who lived for at least a year after the transition. Because the analyses did not consider people who died within 12 months of the transition, the results are not representative of the full range of people who transition, some of whom are near the end of life. Fourth, although the expenditure measures only capture costs incurred by the Medicaid and Medicare programs, some important categories of costs are excluded. It is unclear how all these limitations influence our results.

One window into the likely biases introduced by our inability to control for important unobservable characteristics that differ between MFP participants and other transitioners is an analysis based on a different comparison group. The analyses presented in this chapter examine differences between MFP participants and a contemporaneous group of transitioners, but we found different results when comparing MFP participants to a matched comparison group of transitioners who moved to the community before MFP's implementation in 2008. In many instances, the statistical significance of the association between MFP participation and cost and use disappeared when the comparison was to the pre-MFP implementation comparison group. For example, among people with mental health conditions who transitioned from nursing homes (both older and younger adults), the post-transition health care expenditures of MFP participants were statistically significantly greater than those of the contemporaneous comparison group but no different from the expenditures of the pre-MFP implementation comparison group. The list of outcomes that changed statistical significance when using the pre-MFP implementation comparison group appears in Appendix C. The pre-transition characteristics of the contemporaneous and historical comparison groups were similar, suggesting that we had well-matched groups on observable characteristics. However, the differences in outcomes could point to a potential selection bias in this analysis.

These results do not represent the effect of MFP on expenditures. For a complete assessment of how MFP demonstrations are affecting overall state LTSS expenditure patterns, the analysis

also needs to account for MFP's effect on transition rates from institutional care. The results presented in this report could be used to build these types of estimates if other evidence suggests that MFP affects overall transition rates, because the demonstration was transitioning people who would have remained in institutional care or the demonstration had important spillover effects. However, the analyses presented in the previous chapter suggests that the MFP demonstration is only associated with increased transition rates among younger adults residing in nursing homes.

The MFP demonstration is an ongoing program not scheduled to end for several more years. The national evaluation will continue to track the progress of this program, and the analyses presented in this chapter and earlier ones will be repeated with more years of data, larger sample sizes, additional comparison groups, and considerations for the effect of MFP on transition rates. To determine the long-term effects of MFP, the evaluation will assess expenditures over a longer post-transition period and greater sample than was possible for this study. We also will explore more carefully the relationship between expenditures and use of services—particularly reinstitutionalizations and transitions to inpatient and subacute care—to better understand the causes of the changing expenditure profile of people who experience a transition in care settings for LTSS.

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V. CHANGES IN MFP PARTICIPANTS' QUALITY OF LIFE

An operating premise of the MFP demonstration is that many Medicaid beneficiaries who reside in institutions would rather live independently in their communities; that community living contributes to an increased sense of autonomy and life satisfaction; and that this increase in autonomy and life satisfaction is a function of enhancements across many domains of life. However, people transitioning from institutional to community-based settings may not experience an improvement in their quality of life if the home care services they receive are not adequate, the available and affordable housing is of poor quality, or family and friends cannot provide the support they need. One concern is that people who transition from institutional care to the community may not receive the assistance they need to conduct daily activities, resulting in an adverse consequence such as a pressure ulcer or fall that leads to hospitalization, subacute care, and long-term residence in a facility. Therefore, monitoring changes for participant-reported measures in these areas is important to identify whether participants are at increased risk for an adverse event in the community relative to what their risk would be in an institutional setting.

Previous studies have examined the extent to which MFP participants' quality of life changed during the first year of community living (Simon and Hodges 2011; Irvin et al. 2011, 2012), as well as during the second year, when MFP participation has ended (Irvin et al. 2013). In general, work to date has shown that participants experience significant improvements in reported quality of life across several domains. However, earlier work was limited by the small sample size available for these analyses. This chapter builds on earlier work by using a larger sample to explore changes in quality of life after one and two years of community living. This chapter also examines two new aspects of quality of life in the community: (1) how unmet care needs in the community may be associated with adverse care outcomes and medical service use, and (2) how one's integration in the community may be associated with depressive symptoms.

We report findings for all participants and, where applicable, report results separately for four MFP target populations: (1) older adults (age 65 or older) transitioning from nursing facilities, (2) participants with physical disabilities (age 64 or younger) transitioning from nursing facilities, (3) participants with intellectual disabilities transitioning from intermediate care facilities, and (4) participants transitioning from psychiatric facilities and institutions characterized as "other." Appendix D presents state-level data tables showing QoL survey outcomes at pre-transition, one year follow-up, and two years follow-up.

A. Research questions

The following three research questions guided the analyses presented in this chapter:

1. Compared to pre-transition status, how do key aspects of MFP participants' quality of life change after one and two years of community living? Prior research on a small number of MFP participants revealed that quality of life improves upon transition to the community and is sustained after two years of community living (Irvin et al. 2013). We replicate this analysis using a larger analytic sample of data to examine whether MFP participants

demonstrate significant improvements in quality of life after two years of living in the community, as past research indicated.

2. Compared to their status before transitioning to the community, to what extent do participants' unmet needs for assistance change during their first year of community living? Moreover, is there an association between unmet need for assistance during their first year of community living and adverse events such as a pressure ulcer, dehydration, falls/trauma, or delirium? We also explore the relationship between participants' unmet care needs and select medical service use during their first year in the community, including EDs, inpatient admissions, and subacute care.
3. Compared to the pre-transition period, how do aspects of participants' community integration change after one and two years of living in the community? We examine whether decreases in the level of community integration post-transition are linked to the presence of depressive symptoms as reported by participants.

B. Methods

1. Quality-of-Life survey

Since the beginning of the MFP demonstration, grantee states have been administering the MFP QoL survey to their participants. MFP participants complete the survey at three times: (1) before transitioning to the community; (2) one year after transitioning; and (3) two years after transitioning, when participation in MFP has ended and they are regular Medicaid beneficiaries. The instrument is based largely on the Participant Experience Survey, although a few items are drawn from other instruments (Sloan and Irvin 2007). The QoL instrument captures three areas of participant quality of life around which the findings in this chapter are organized: (1) life satisfaction, (2) quality of care, and (3) community life. Simon and Hodges (2011) addressed details concerning grantee responsibility for the survey and the timing of its administration relative to participant transition. Irvin et al. (2012) examined the relationship between the level of care needs and the change in quality of life, as well as work status and its association with the quality of life after returning to community living. Irvin et al. (2013) further explored these findings two years after participants returned to the community, one year after leaving MFP.

2. Analytic samples

The analyses presented in this chapter rely on three analytic samples (Table V.1). The first sample consists of 11,933 MFP participants with a completed QoL survey at baseline before the transition to the community and that survey could be linked to the one year post-transition survey, and both surveys could be matched to the administrative data grantees submitted to CMS through March 2015. This sample represents 23 percent of the 51,676 participants who transitioned through December 2014. The second sample is used to examine changes in QoL survey outcomes after MFP participants have left the demonstration. This sample consists of 5,571 MFP participants with a completed QoL survey at all three times that could be matched to the same administrative data. This sample represents 14 percent of the 40,693 participants who transitioned through December 2013, the last month someone in this sample transitioned. We constructed a third sample to examine the association between participants' reported quality of life, care outcomes, and medical service use during their first year in the community. This analytic sample is restricted to 4,999 participants with a completed QoL survey at baseline (pre-

transition) and one year post-transition matched to Medicaid and Medicare inpatient claims through 2011. This sample represents 42 percent of the 11,924 participants who transitioned through December 2010, the last month someone in this sample transitioned.

Table V.1 shows the size of each analytic sample and the number of cases excluded at each stage of construction, using data submitted by grantees through March 2015. A total of 28,794 participants had a completed pre-transition QoL survey (which represents 56 percent of the 51,676 people who transitioned by the end of December 2014). Of these, 11,933 participants had completed a survey at pre-transition and one year post-transition within the designated time frame; of these, 4,999 could be matched to the Medicaid and Medicare claims available through 2011. A total of 5,571 MFP participants completed all three surveys within the designated time frames.[20]

Table V.1. Analytic sample construction

Number of records	Description
28,794	Participants with pre-transition survey only
11,933	Participants with pre-transition survey + year 1 survey conducted in designated time frame[a]
5,571	Participants with pre-transition survey + year 1 survey + year 2 survey, all surveys conducted in designated time frames[a]
4,999	Participants with pre-transition survey + year 1 survey conducted in designated time frame[a] and matched to Medicaid Analytic eXtract (MAX) data through calendar year 2011

Source: Mathematica's analysis of MFP Quality-of-Life surveys and program participation data submitted to CMS through March 2015.

Notes: Includes MFP-QoL surveys that could be matched with administrative data to confirm MFP participation. Surveys with incomplete or missing identifiers cannot be matched with administrative data and therefore are not included in this analysis.

Excludes data from Alabama, Rhode Island, and West Virginia.

[a] Year 1 surveys conducted within 6 to 18 months of transition to the community; year 2 surveys conducted within 18 to 30 months of transition to the community.

A considerable proportion of MFP participants are excluded from the analyses because (1) the QoL surveys were not conducted; or (2) the QoL surveys were conducted, but they could not be matched to the administrative data, so it is not clear that these data can be used to generalize the results to the entire MFP population. Table V.2 presents information that identifies key characteristics of our samples and how they compare to the overall population of MFP participants. Based on how these samples are distributed across the targeted populations and age groups, the study samples are reasonably close to the overall populations. The study samples appear to slightly overrepresent participants with physical disabilities and participants between

[20] The analytic sample includes participants with a year one QoL survey completed within 6-18 months of transition; 2,131 participants had a pre-transition survey and year one survey but were excluded because the year one survey was completed outside of the designated range.

45 and 64 years old, but they also appear to underrepresent the youngest age group, participants 21 years or younger. The QoL survey was not designed specifically for children, and grantees are not required to administer the QoL when the participant is a child.

Table V.2. Demographic characteristics of analytic samples, by survey status

Characteristics	Participants with pre-transition and one-year post-transition surveys[a]	All MFP participants who transitioned through end of 2014	Participants with pre-transition, one-year, and two-year post-transition surveys[b]	All MFP participants who transitioned through end of 2013
Total (N)	11,933	49,838	5,571	37,967
Target population (%)				
Older adults	28.7	30.6	26.1	29.6
Physical disabilities	43.2	39.7	44.2	39.0
Intellectual disabilities	13.7	14.2	17.4	14.9
Psychiatric conditions	0.7	1.1	0.5	0.7
Other/unknown	13.7	14.3	11.8	16.0
Race/Ethnicity (%)				
White	58.7	38.9	65.5	47.7
Black or African American	16.2	11.7	18.6	14.2
Asian	1.1	0.7	1.1	0.8
Hispanic	2.5	1.3	2.8	1.7
American Indian/Alaska Native	0.7	0.3	0.9	0.4
Other/Unknown	1.1	0.7	1.2	0.9
Missing[c]	19.6	46.4	9.8	34.4
Age group[d] (%)				
< 21	1.7	4.8	2.1	4.1
21 to 44	16.2	14.5	17.2	15.2
45 to 64	47.5	44.1	49.4	44.3
65 to 84	28.2	29.7	25.7	29.2
> = 85	6.4	7.1	5.7	7.1
Sex (%)				
Female	50.2	50.5	50.2	50.6
Male	49.8	49.5	49.8	49.4

Source: Mathematica's analysis of MFP Quality-of-Life surveys and program participation data submitted to CMS through March 2015.

Notes: Depressive symptoms are identified through affirmative responses to two questions from the MFP QoL survey: (1) "During the past week have you felt sad or blue?" and (2) "During the past week have you felt irritable?"

[a] This sample includes participants who transitioned to the community between 2008 and 2014, which is through when participants in the sample transitioned to the community. Data from Alabama, Montana, Rhode Island, and West Virginia are excluded from the sample of participants with pre-transition and one-year post-transition surveys because they could not be matched to administrative data or did not have completed surveys at baseline and one year post-transition, with one-year post-transition surveys completed within 6 to 18 months of transitioning to the community.

Table V.2 *(continued)*

[b] This sample includes participants who transitioned to the community between 2008 and 2013, which is through when participants in the sample transitioned to the community. Data from Colorado, Delaware, Indiana, and Nevada are excluded from the sample of participants with pre-transition, one-year, and two-year post-transition surveys because they did not have two year follow-up surveys completed within 18 to 30 months of transitioning to the community.

[c] Race/ethnicity information comes from the Medicare enrollment records for those dually eligible for both Medicare and Medicaid coverage. At the time of the study, the most recent transitions were not linkable to Medicare or Medicaid data systems because of lags in state reporting of their regular Medicaid data files. Those with missing race/ethnicity information are predominately beneficiaries who transitioned in 2014 and Medicaid-only beneficiaries.

[d] The first two age group categories are slightly different between the QoL survey data and the program participation data; QoL survey data are categorized as < 21 and 21 to 44 years, and program participation data are categorized as < = 21 and 22 to 24 years. This table presents data following the QoL survey categories.

The remaining sections of this chapter describe key aspects of participants' quality of life after one and two years of community living. Section C examines changes in participants reported quality of life over time, focusing on life satisfaction, quality of care, and community life. Section D discusses changes in participants' unmet needs for personal assistance one year post-transition. Section E examines the relationship between participants' unmet needs for personal assistance and other factors, such as adverse care outcomes and medical service use, during participants' first year in the community. Section F explores how community integration changes between pre-transition and one and two years post-transition, as well as the relationship between community integration and participants' mood status after one year of community living.

C. Participants' quality of life following transition to community living

For the MFP demonstration to be successful, participants' life satisfaction must be maintained or improved after they transition from a long-term care institution to community living. In this section, we examine how reported quality of life across several domains changes after the transition to community living. We also assess quality of life two years post-transition, after participants complete their 365 days of MFP eligibility and leave the program. Table V.3 summarizes participants' rating of quality of life at each survey interval.

Similar to what was observed in prior studies of MFP participants' quality of life, participants in the analytic sample reported improvements in all aspects of life after one year of community living, and the improvements were sustained or continued to show further improvement two years later, when participants had left the MFP demonstration (Irvin et al. 2012, 2013). Two years post-transition, participants continued to report improvements reducing barriers to participating in the community, a key goal of the MFP demonstration. In several important domains, however, reported quality of life declined slightly after participants left the MFP demonstration. Although it is not clear these declines represent meaningful change, it may take additional effort after participation in the MFP demonstration ends to sustain people's satisfaction with their care, living arrangements, and life overall.

Table V.3. Quality of life at three different times (N = 5,571)

Quality-of-life domain	Pre-transition	One year post-transition	Two years post-transition
Overall life satisfaction	62.5	80.5***	79.1***, ++
Mood status[a]	42.9	36.1***	35.1***
Satisfaction with care	75.7	88.8***	87.7***,+
Any unmet need for personal care[a,b]	16.0	5.8***	5.4***
Respect and dignity	70.4	88.7***	88.8***
Satisfaction with living arrangements	60.0	92.4***	90.8***,+++
Barriers to participating in the community[a,c]	48.5	33.0***	28.2***,+++

Source: Mathematica's analysis of MFP Quality-of-Life surveys and program participation data submitted to CMS through March 2015.

Note: Excludes data from Alabama, Colorado, Delaware, Indiana, Montana, Nevada, Rhode Island, and West Virginia.

[a] lower percentage indicates an improvement in mood.

[b] Measured as "Any unmet care need" in bathing, eating, medication, and toileting.

[c] Measured as affirmative responses to the question: "Is there anything you want to do outside [the facility/your home] that you cannot do now?"

* Significantly different from pre-transition at the .10 level, two-tailed test.

** Significantly different from pre-transition at the .05 level, two-tailed test.

*** Significantly different from pre-transition at the .01 level, two-tailed test.

+ Significantly different from one-year post-transition at the .10 level, two-tailed test.

++ Significantly different from one-year post-transition at the .05 level, two-tailed test.

+++ Significantly different from one-year post-transition at the .01 level, two-tailed test.

1. Change in overall life satisfaction

Key Finding

MFP participants experience significant improvements in their life satisfaction after transitioning to the community. All populations experienced an improvement in the first year; the largest increases in life satisfaction are reported by participants with other types of impairments, followed by participants with physical disabilities. Except for participants with intellectual disabilities, all groups report a small decline in satisfaction after two years in the community.

Responses to the QoL survey appear to confirm MFP's basic premise that people, when given the option, prefer to reside in the community. Among all participants in the analytic sample, we observe significant improvements in life satisfaction, with 63 percent reporting being satisfied with the way they live their life while in institutional care and 81 percent of participants reporting life satisfaction one year after transition; improved quality of life was largely sustained after two years in the community (79 percent) (Table V.3).[21] These results are statistically significant at the $p < .01$ level and consistent with previous findings based on earlier samples of participants (Irvin et al. 2011, 2012). We observe the largest improvements in quality of life among participants with other types of impairments, who reported the lowest life satisfaction pre-transition (Appendix D). Among this group, overall life satisfaction increased from 56 percent at pre-transition to 81 percent after one year in the community; overall life satisfaction among this group declined slightly, to 77 percent two years post-transition. The next largest improvements in life satisfaction are seen among participants with physical disabilities, with 58 percent of participants reporting satisfaction with the way they live their life while in institutional care and 78 and 77 percent of participants reporting life satisfaction at one and two years post-transition, respectively. We also see increases in overall life satisfaction among older adults; life satisfaction increased from 61 percent at pre-transition to 76 percent one year after exiting institutional care and 74 percent two years post-transition. The smallest changes in life satisfaction are seen among participants with intellectual disabilities, the group with the highest percent reporting being satisfied with the way they live their life pre-transition (80 percent). Post-transition, 88 percent reported life satisfaction after one year of community living, and 91 percent reported life satisfaction after two years in the community.[22]

[21] The survey asks, "Taking everything into consideration, during the past week have you been happy or unhappy with the way you live your life?"

[22] Participants with mental illness reported slightly smaller improvements, but the small size of the group makes the information unreliable.

2. Quality of care

Key Finding

The proportion of participants reporting satisfaction with the care they received significantly increased from 76 percent while in institutional care to nearly 90 percent after one and two years in the community.

MFP participants also reported that they view the care they receive in the community more favorably than the care provided before they transitioned. When asked to rate their satisfaction with the quality of care received, 76 percent of participants in the analytic sample reported satisfaction with the care received while in the institution (Table V.3).[23] However, an even larger proportion of participants reported satisfaction with their care one year post-transition (89 percent), and this satisfaction remained equally high (at 88 percent) after two years of community living. The proportion of participants in the sample reporting an unmet need for personal assistance (with one or more unmet needs related to eating, bathing, toileting, and medication administration) declined from 16 percent pre-transition, while in institutional care, to between 5 and 6 percent one and two years later.

In care quality, we observed the largest improvements in reported treatment with respect and dignity by providers. Before transitioning, 70 percent of participants in the sample reported being treated the way they wanted and listened to carefully by the people who help them. One year post-transition, the proportion reporting respectful treatment by providers increased to 89 percent, a 19 percentage point increase, and remained so after two years in the community. This trend is similar to what was observed in prior studies of MFP participants' quality of care (Irvin et al. 2012).

[23] To assess satisfaction with care, the survey asks: "Taking everything into consideration, during the past week, have you been happy or unhappy with the help you get with things around the house or getting around your community?"

3. Community life

MFP demonstrations expend considerable resources locating and securing affordable and accessible housing for MFP participants that are in areas where they want to live. Among all seven domains of participants' quality of life, we observe the highest levels of reported satisfaction with participants' living arrangements.[24] At pre-transition, 60 percent of participants in the analytic sample reported liking their living arrangement while in institutional care. Nearly all participants (92 percent) reported liking where they lived one year after community living, which represents a 32 percentage point increase compared to when they were in institutional care. The share of participants reporting satisfaction with where they live declined slightly (91 percent) after two years in the community.

Key Finding

Across seven domains of quality of life, participants reported the highest level of satisfaction with their living arrangements; nearly all participants (92 percent) reported satisfaction with where they lived after one year in the community, compared to 60 percent reporting liking where they lived pre-transition.

Another aspect of living in a community setting is whether participants can participate in their community as much as they would like. The QoL survey also measures reported barriers to community integration by asking participants if there is anything they want to do outside of the facility/home that they cannot do now. Nearly half of participants in the analytic sample reported barriers to community integration while in institutional care (pre-transition), and this proportion decreased to 33 percent after one year in the community and 28 percent two years post-transition following the end of MFP participation. Declines in reported barriers to community integration indicate participants are more engaged in their community after exiting institutional care.

D. Changes in participants' unmet needs for personal assistance one year post transition

Institutional care offers residents structured round-the-clock supports and assistance with activities of daily living. After transitioning to the community, MFP participants may encounter difficulties obtaining enough personal care assistance if paid and unpaid caregivers who provide assistance are not readily available every time they are needed. To assess care quality in the community, the QoL survey asks questions about whether or not a participant's daily living needs are being met. We examined four unmet needs reported by participants in the areas of (1) bathing, (2) meal preparation, (3) medication administration, and (4) toileting. These needs were measured by asking participants if they ever went without doing the activity because there was no one there to help them.

[24] To assess satisfaction with living arrangements, the survey asks: "Do you like where you live?" The QoL survey asks several questions about community integration and this analysis focuses on the question: "Is there anything you want to do outside [the facility/your home] that you can't do now?"

Key Finding

After one year in the community, access to personal care services improved for MFP participants on average. The percentage of MFP participants reporting any unmet personal care needs after one year was ten percentage points lower than pre-transition.

Overall, among participants in our sample, levels of unmet care needs were higher while in institutional care (pre-transition) and improved one year after living in the community. Pre-transition, 16 percent of participants in the analytic sample reported having any unmet care need (Table V.4.a). The highest unmet needs were bathing and toileting: 11 percent of MFP participants reported going without bathing because no one was there to help them before the transition, and 8 percent reported not using the toilet when they needed to because no one was there to help. Unmet needs related to taking medications or having a meal were lower, reported by 3 and 2 percent of participants, respectively. After one year of living independently in the community, 6 percent of participants in the sample reported they had any unmet care needs. Of all four care needs, bathing continued to be the most frequently reported unmet need (4 percent), followed by toileting (2 percent). Approximately 1 percent of participants reported that they could not prepare a meal or take medications. Contrary to concerns that transitioning to the community could lead to unintended declines in meeting personal care needs, these data suggest that, after one year in the community, the care needs of participants in our sample were met at similar or higher levels than what was reported while in institutional care.

The level of unmet care needs varied by target population in our sample; however, across all groups, the proportion reporting any unmet care need (one or more in bathing, meal preparation, medications administration, and toileting) improved from pre-transition to one year post-transition, and the improvement remained so two years post-transition. Pre-transition, older adults and participants with physical disabilities reported similar levels of unmet care needs, with 18 percent of participants reporting any unmet need. One and two years post-transition, the levels of unmet care needs fell to 7 percent for older adults and 8 percent for individuals with physical disabilities. At all three points, participants with intellectual disabilities were least likely to report unmet care needs, with about 2 percent reporting any unmet care needs pre-transition and 1 percent reporting any unmet care needs at one and two years post-transition. These lower levels of unmet care needs are likely due to this group having fewer functional limitations and thus requiring less personal assistance to meet their care needs. Although the levels of unmet care needs varied by target populations, all populations reported fewer unmet needs after transitioning to the community, suggesting that MFP participants' care needs are being met adequately in the community.

Table V.4.a. Percentage of MFP participants reporting unmet needs for assistance, pre-transition and post-transition (N = 11,933)

Type of unmet care need	Pre-transition	One year post transition	Two years post transition
Bathing	11.0	3.5***	3.3***
Meals	1.5	1.2*	1.0*
Medications	2.6	1.3***	1.0***
Toileting	7.5	2.1***	1.9***
Any unmet care need[a]	15.8	6.2***	5.5***,+++

Source: Mathematica's analysis of MFP Quality-of-Life surveys and program participation data submitted to CMS through March 2015.

Notes: Excludes data from Alabama, Montana, Rhode Island, and West Virginia.

[a] Measured as "Any unmet care need" in bathing, eating, medication and toileting at one year follow-up.

*Significantly different from pre-transition at the .10 level, two-tailed test.

**Significantly different from pre-transition at the .05 level, two-tailed test.

***Significantly different from pre-transition at the .01 level, two-tailed test.

+Significantly different from one-year post-transition at the .10 level, two-tailed test.

++Significantly different from one-year post-transition at the .05 level, two-tailed test.

+++Significantly different from one-year post-transition at the .01 level, two-tailed test.

E. Factors associated with unmet needs for personal assistance

Given the overall importance of personal assistance for people who have disabilities, we examined the relationship between participants' unmet needs for personal assistance and other factors, such as adverse care outcomes and medical service use, during participants' first year in the community.

1. Care outcomes

Monitoring care outcomes among MFP participants is important to identify unintended adverse consequences resulting from potentially less intensive supervision in the community. For example, people who have unmet personal care needs may be more likely to develop pressure ulcers or experience dehydration, falls/trauma, and delirium. We compared the incidence of these adverse outcomes between those participants who had each of the unmet care needs to those participants who did not. We measured adverse outcomes over the first 12 months of community living corresponding to the participants' 365 days of MFP eligibility. All outcomes were measured as dichotomous variables, using claims data to identify whether or not a participant had experienced an adverse care outcome.

Overall, relatively small numbers of participants in the analytic sample experienced an adverse outcome soon after transitioning to community living. In our sample, the incidence of pressure ulcers, dehydration, falls/trauma, and delirium in the first year of living in the community were 2, 1, 5, and 2 percent, respectively. Therefore, the analyses reported in this

section are based on very small samples of participants and should be interpreted with caution. The proportion of participants who experienced an adverse care outcome and those who did not during their first year in the community varied by type of unmet care need (Table V.4.b). Participants reporting an unmet need related to bathing or meals were more likely to experience pressure ulcers, dehydration, and falls/trauma than participants who did not have these unmet needs, although these differences are not statistically significant. Participants reporting an unmet need related to medication or toileting were more likely to experience falls/trauma than participants without these unmet care needs, although these differences also were not statistically significant.

Although there is variation by care need, in general the only overall association between unmet care needs and an adverse outcome is with falls/trauma, with 7 percent of participants reporting any unmet care need experiencing a fall or trauma, compared to 5 percent who did not. This difference is not statistically significant, but it suggests that MFP participants in our sample who have an unmet personal care need may be at an increased risk for experiencing a fall or trauma. This may be because attempting to bathe or toilet without assistance could result in a fall, or because people more likely to fall are also more likely to have higher care needs.

When examining care outcomes by target population, participants with psychiatric conditions were the group most likely to report unmet care needs related to bathing one year post-transition (10 percent), and older adults were most likely to report unmet care needs related to toileting (4 percent) (data not shown). Future studies should investigate whether these MFP participants experience higher incidences of falls/trauma than other populations to assess whether providing participants with additional supports with bathing and toileting might prevent or reduce these adverse events.

Table V.4.b. Care outcomes, by unmet need for assistance one year post-transition (N = 4,999)

Type of unmet care need	N	Pressure ulcers	Dehy-dration	Falls/ trauma	Delirium
Bathing					
Unmet need	131	3.8	2.3	6.1	0.8
No unmet need	3,443	2.2	1.0	5.0	1.9
Meals					
Unmet need	33	6.1	3.0	9.1	0.0***
No unmet need	3,817	2.4	1.1	5.2	1.9
Medications					
Unmet need	45	2.2	0.0***	8.9	0.0***
No unmet need	3,768	2.3	1.2	5.4	1.8
Toileting					
Unmet need	111	0.9	0.9	7.2	2.7
No unmet need	3,656	2.2	1.2	5.3	1.8
Any unmet care need[a]	272	2.2	1.1	7.4	1.1
No unmet care need	2,930	2.1	1.2	4.9	1.8

Table V.4.b. (continued)

Source: Mathematica's analysis of MFP Quality-of-Life surveys and program participation data submitted to CMS through March 2015 and 2011 and MAX data.

Notes: Denominators for these measures are restricted to include those participants who responded "Yes" to the following question from the MFP QoL survey at one year follow-up: "Does anyone help you with things like bathing, dressing, or preparing meals?" The figures shown in the "Unmet need" rows are further restricted to include those participants who reported each type of unmet care need.

Excludes data from Alabama, Colorado, Delaware, Idaho, Indiana, Maine, Massachusetts, Mississippi, Montana, Nevada, Rhode Island, South Carolina, Vermont, and West Virginia.

For each of the four outcomes, a participant was considered to have the outcome if claims data could identify any admission within the first 12 months after transitioning to the community that had a primary diagnosis code for the outcome.

[a] Measured as "Any unmet care need" in bathing, eating, medication and toileting at one-year follow-up.

*Significantly different from not having the care outcome at the .10 level, two-tailed test.

**Significantly different from not having the care outcome at the .05 level, two-tailed test.

***Significantly different from not having the care outcome at the .01 level, two-tailed test.

2. Medical service use

Key Finding

More than three-quarters of participants in our sample were admitted to a medical facility during their first year in the community. Compared to the overall sample, participants who reported any unmet need for personal assistance one year post-transition had higher levels of medical service use across most measures.

Previous research has established that Medicaid beneficiaries who transition from nursing home care to the community are at greater risk for potentially preventable hospitalizations (Wysocki et al. 2014). Therefore, it is important to monitor participants' medical service use soon after they transition from an institution to the community to identify medical events that could stem from inadequate supervision and supports in the community. In this section, we examine the relationship between participants' unmet care needs and medical service use during their first year in the community, measured by (1) ED visits that did not result in an inpatient hospitalization, (2) ED visits that ended in an inpatient hospitalization, (3) inpatient admissions, and (4) admissions to nursing homes or subacute care facilities. Overall, 77 percent of participants in our sample had one of these types of service events during their first year in the community. The most frequent type of admission was an ED visit that did not result in a hospitalization (37 percent), followed by an inpatient admission (26 percent). ED visits resulting in a hospitalization and admissions to nursing homes or subacute care facilities were less likely to occur (11 and 7 percent, respectively) (data not shown).

ED visits not resulting in an inpatient hospitalization were especially high among participants with unmet care needs. In our sample, 63 percent of participants reporting any unmet

care need (one or more needs related to bathing, eating, taking needed medications, and toileting) one year post-transition had an ED visit that did not result in an inpatient admission, compared to 55 percent of those reporting no unmet care needs (Table V.4.c). Among participants reporting any unmet care need, ED visits not resulting in a hospitalization were most common among individuals with physical disabilities (68 percent) and individuals with intellectual disabilities (67 percent).

Compared to participants reporting no unmet care needs, participants reporting any unmet care need after one year in the community also had higher levels of inpatient hospitalization (47 percent) and ED visits resulting in an inpatient hospitalization (23 percent). Admissions to nursing homes or subacute care facilities were higher among those with unmet care needs (13 percent), compared to participants reporting no unmet care needs, but this difference was not statistically significant. Inpatient hospitalizations that do not start in the ED are typically planned or occur following an outpatient appointment. Higher levels of inpatient hospitalization among participants with any unmet care need suggest that these participants have either greater health needs or more access to health care than participants with no unmet needs.

The highest levels of inpatient hospitalization were among older adults (51 percent) and individuals with physical disabilities (48 percent) who transitioned from nursing home settings, compared to 13 percent of individuals with intellectual disabilities. This pattern is not surprising, because most participants transitioning from nursing home care have high health care needs due to a mental illness or chronic medical condition, such as hypertension, depression, diabetes, or stroke (Ross et al. 2012). These findings suggest that participants with unmet care needs, particularly older adults and individuals with physical disabilities, may be more prone to experiencing poor health outcomes post-transition and have higher health care needs in the community, compared to those who do not report unmet care needs.

We assessed which types of unmet needs are associated with the highest levels of medical service use during participants' first year in the community. We found that having an unmet need related to eating or taking medication is associated with a greater incidence of ED use (not resulting in hospitalizations); 75 percent of participants who reported missing medications because no one was there to help and 77 percent of participants who missed a meal because they lacked help had ED admissions not resulting in hospitalizations in the 12 months following transition to the community. Moreover, having an unmet need related to eating or toileting is associated with a greater incidence of inpatient admissions, because slightly more than half of participants reporting these two types of unmet care needs had an inpatient admission during their first year in the community (57 and 54 percent, respectively, compared to participants who did not have unmet care needs related to eating or toileting). Although the percentage of participants in our sample reporting these unmet needs is small, their medical service use appears to be greater than those of participants without unmet care needs; this suggests that the unmet care need may be a contributing factor to their need for more medical care.

Table V.4.c. Care utilization by unmet need for assistance one year post-transition

Type of unmet care need	N	ED visits not resulting in hospital-ization	ED visits resulting in inpatient admissions	Inpatient admissions	Nursing home/ subacute care facility admissions	No admiss-ions to any setting
Bathing						
Unmet need	131	56.7	21.2	36.5	12.5	23.7
No unmet need	3,443	56.1	18.3	38.5	9.3	23.7
Meals						
Unmet need	33	76.7**	23.3	56.7**	16.7	15.5
No unmet need	3,817	56.1	17.3	38.8	10.0	23.8
Medications						
Unmet need	45	75.0**	12.5	40.6	18.8	11.1***
No unmet need	3,768	55.5	17.4	38.8	9.8	24.3
Toileting						
Unmet need	111	58.2	25.3*	53.9***	12.1	27.0
No unmet need	3,656	55.4	17.1	38.1	9.6	24.1
Any unmet care need[a]	272	62.8**	22.8*	46.5**	13.5	21.3
No unmet care need	2,930	55.0	17.4	37.0	8.8	24.2

Source: Mathematica's analysis of MFP Quality-of-Life surveys and program participation data submitted to CMS through March 2015 and 2011 and MAX data.

Notes: Denominators for these measures are restricted to include those participants who responded "Yes" to the following question from the MFP QoL survey at one year follow-up: "Does anyone help you with things like bathing, dressing, or preparing meals?" The figures shown in the "Unmet need" rows are further restricted to include those participants who reported each type of unmet care need.

Excludes data from Alabama, Colorado, Delaware, Idaho, Indiana, Maine, Massachusetts, Mississippi, Montana, Nevada, Rhode Island, South Carolina, Vermont, and West Virginia.

[a] Measured as "Any unmet care need" in bathing, eating, medication and toileting at one-year follow-up.

ED = Emergency department.

*Significantly different from not having that type of admission at the .10 level, two-tailed test.

**Significantly different from not having that type of admission at the .05 level, two-tailed test.

***Significantly different from not having that type of admission at the .01 level, two-tailed test.

F. Community integration after the transition to community living

A fundamental assumption of MFP is that community engagement will increase after a participant transitions from an institutional care setting to the community, and that this increased community integration will contribute to an improved quality of life. Previous studies found that community integration among MFP participants increased after transitioning to the community and remained high two years after living in the community (Irvin et al. 2013). However, previous work has also shown that approximately one-third of MFP participants were unable to perform

activities outside of the home after they transitioned to the community, and that community integration was lowest among people who reported depressive symptoms or had unmet care needs (Irvin et al. 2012). In this section, we examine how community integration changes between pre-transition and one and two years post-transition. We also examine the relationship between community integration and participants' mood status after one year of community living.

1. Change in community integration

Key Finding

MFP participants experience significantly higher levels of community integration one and two years after the transition; the largest increases are seen in participants' ability to do what they wanted to in the community.

To measure community integration and inclusion, we constructed a community integration index score that sums positive responses to five QoL survey questions linked to community involvement.[25] A score of "5" represents high community integration, and a value of "0" represents low community integration. We assessed community integration at three points: (1) pre-transition, (2) one year post-transition, and (3) two years post-transition. As Table V.5 shows, the average community integration score significantly increased between pre-transition (3.2) and one year post-transition (3.7) and remained high at two years post-transition. All five component questions also significantly increased between pre-transition and one year post-transition and remained high at two years post-transition. The largest increase observed was participants' ability to do everything one wanted to in the community. Before transitioning to the community, 47 percent of participants replied that they could do everything they wanted in the community; this type of integration rose to 65 percent one year after transitioning and 70 percent two years post-transition. Moreover, 8 percent of participants reported working for pay one year after community living; the share of employed participants remained at 8 percent after two years in the community.[26] Also showing significantly large increases were participants' ability to do fun things in the community and participants not missing events due to lack of transportation.[27] The aspects of community integration showing increases of the greatest magnitude after transitioning from institutional care are those in which participants exhibit a degree of independence and self-sufficiency in the

[25] These questions are: (1) "Can you see your friends and family when you want to see them?" (2) "Can you get to the places you need to go, like work, shopping, or the doctor's office?" (3) "Do you go out to do fun things in your community?" (4) "Do you miss things or have to change plans because you don't have a way to get around easily?" and (5) Is there anything you want to do outside [the facility/your home] that you can't do now?"

[26] Participants were asked the question: "Are you working for pay right now?" The data do not allow us to distinguish the type of employment and whether it includes prevocational workshops.

[27] These questions are: (1) "I'd like to ask you a few questions about how you get around. Do you go out to do fun things in your community?" and (2) "Do you miss things or have to change plans because you don't have a way to get around easily?"

community. This suggests that participants experience greater autonomy after transitioning to the community, increasing their ability to engage in community life.

Table V.5. Indicators of community integration post-transition (percentages, unless noted otherwise) (N = 5,571)

Community integration indicator	Pre-transition	One year post-transition	Two years post-transition
Can do fun things in the community	58.7	70.5***	70.8***
Able to see friends and family	87.7	89.3***	89.5***
Able to get to needed places	86.6	93.3***	93.2***
Does not miss events due to lack of transportation	52.6	61.8***	63.7***,++
Able to do everything they want to do in the community	47.1	65.1***	70.0***,+++
Mean integration summary score (sum of 5 items)[a]	3.2	3.7***	3.7***,+++

Source: Mathematica's analysis of MFP Quality-of-Life surveys and program participation data submitted to CMS through March 2015.

Note: Because of variation in participant responses to each item, the mean summary score for community integration will not always equal the sum of individual measures.

Excludes data from Alabama, Colorado, Delaware, Indiana, Montana, Nevada, Rhode Island, and West Virginia.

[a] The community integration index score is a sum of affirmative responses to five questions: (1) "Can you see your friends and family when you want to see them?" (2) "Can you get to the places you need to go, like work, shopping, or the doctor's office?" (3) "Do you go out and do fun things in the community?" (4) "Do you miss things or have to change plans because you don't have a way to get around easily?" and (5) "Is there anything you want to do outside [your home] that you can't do now?" The questions are recoded so that high scores indicate greater community integration.

*Significantly different from pre-transition at the .10 level, two-tailed test.

**Significantly different from pre-transition at the .05 level, two-tailed test.

***Significantly different from pre-transition at the .01 level, two-tailed test.

+Significantly different from one-year post-transition at the .10 level, two-tailed test.

++Significantly different from one-year post-transition at the .05 level, two-tailed test.

+++Significantly different from one-year post-transition at the .01 level, two-tailed test.

2. Depressive symptoms

A previous analysis of MFP QoL data found that community integration after one year in the community was lower among participants reporting depressive symptoms (Irvin et al. 2012). In this section, we present a more in-depth analysis of participants' mood status using a larger sample of data. Our analyses reveal that more than a quarter of participants in our sample

reported depressive symptoms while in institutional care (27 percent) and that this share declined to 22 percent after one year in the community and 20 percent two years post-transition (data not shown).[28] This represents a 5 percentage point decrease in the share of participants reporting feeling sad or blue after one year in the community, and the share of participants reporting depressive symptoms continued to decrease one year after leaving the MFP demonstration.

We further explored the relationship between the community integration score and participants' mood status to assess how the degree of community integration among those reporting depressive symptoms changed before and after transitioning to the community. Table V.6 presents the community integration score for those participants who reported depressive symptoms pre-transition and one year post-transition. Among those who reported depressive symptoms while in institutional care, the rates of community integration increased after one year in the community (mean community integration score increased from 2.7 pre-transition to 3.4 one year post-transition, and this change was statistically significant at the $p < .01$ level) (Table V.6). Rates of community integration among those who reported depressive symptoms after one year in the community did not substantially increase between the pre- and post-transition time periods. This finding indicates that participants who report depressive symptoms one year after returning to the community show a small, but significant, increase in community integration after returning to the community.

Table V.6. Community integration among subgroups of participants pre-transition and one year post-transition

	Average community integration index[a]	
Presence of depressive symptoms[b]	**Pre-transition**	**One year post-transition**
Pre-transition	2.7	3.4**
One year post-transition	3.0	3.1**
Participants reinstitutionalized between:		
31 to 90 days post-transition	3.4	3.0
31 to 365 days post-transition	3.0	3.1

Source: Mathematica's analysis of MFP Quality-of-Life surveys and program participation data submitted to CMS through March 2015 and 2011 and MAX data.

Notes: Estimates related to depressive symptoms exclude data from Alabama, Montana, Rhode Island, and West Virginia.

Estimates related to reinstitutionalizations exclude data from Alabama, Colorado, Delaware, Idaho, Indiana, Maine, Massachusetts, Mississippi, Montana, Nevada, Rhode Island, South Carolina, Vermont, and West Virginia.

[28] Answered "Yes" to two questions from the MFP QoL survey: (1) "During the past week have you felt sad or blue?" and (2) "During the past week have you felt irritable?"

Table V.6. (continued)

Reinstitutionalizations are identified through MAX claims records and exclude reinstitutionalizations lasting fewer than 30 days.

Sample sizes for depressive symptoms are N = 11,933 (pre-transition and one-year post-transition) and N = 4,999 for reinstitutionalizations (pre-transition and one-year post-transition).

[a] The community integration index score is a sum of affirmative responses to five questions: (1) "Can you see your friends and family when you want to see them?" (2) "Can you get to the places you need to go, like work, shopping, or the doctor's office?" (3) "Do you go out and do fun things in the community?" (4) "Do you miss things or have to change plans because you don't have a way to get around easily?" and (5) "Is there anything you want to do outside [your home] that you can't do now?" The questions are recoded so that high scores indicate greater community integration.

[b] Answered "Yes" to two questions from the MFP QoL survey: (1) "During the past week have you felt sad or blue?" and (2) "During the past week have you felt irritable?"

[*]Significantly different from pre-transition at the .10 level, two-tailed test.

[**]Significantly different from pre-transition at the .01 level, two-tailed test.

3. Reinstitutionalizations

Finally, we assessed whether community integration levels were associated with a return to institutional care in the year following transition to the community. Table V.6 shows community integration levels for people who experienced a reinstitutionalization during the first year of community living. For these individuals, there was not a significant change in community integration levels between pre- and post-transition. In addition, community integration levels were lower than the overall sample at both times. This may be because conditions requiring the return to institutional care prevented individuals from engaging with the community. However, these results are based on a small sample and should be interpreted cautiously.

G. Conclusions

The MFP demonstration supports states' efforts in establishing formal transition programs to help long-term residents of institutions move back to the community. MFP also helps states rebalance their long-term services and supports to provide more choices to people who want to receive services in community-based settings. The results of these analyses show that MFP is not only helping states to establish formal transition programs, but is also having a much broader effect on improving participants' quality of life in fundamental ways.

- Consistent with past research, our analyses show that participants experience increases across all seven domains of their quality of life after transitioning to the community, and the improvements are largely sustained two years post-transition. The changes observed between pre-transition (baseline) and one and two years post-transition are positive and statistically significant across all measures. Among all seven domains of participants' quality of life, participants experienced the highest levels of satisfaction with their living arrangements; nearly all participants (92 percent) reported liking where they lived one year

after community living, which represents a 32 percentage point increase compared to when they were in institutional care.

- Contrary to concerns that transitioning to the community could lead to unintended declines in meeting personal care needs, our analyses indicate that, after one year in the community, the care needs of most participants in our sample were met at similar or higher levels than what was reported while in institutional care. Six percent of participants in our sample reported any unmet care need after one year in the community; assistance with bathing was the most frequently reported unmet need (4 percent), followed by toileting (2 percent).
- When people experienced an unmet need for personal care, they were also slightly more likely to experience a fall or trauma during their first year in the community. They also were more likely to have an ED visit (not resulting in a hospitalization), inpatient admission, and nursing home or subacute care facility stay one year post-transition.
- Participants reported increased community integration across all measures, both one and two years after transitioning. Not missing events due to lack of transportation and the ability to do fun things in the community continued to increase between one and two years post-transition.
- Participants reporting depressive symptoms pre-transition showed an increase in community integration after one year of living in the community. The increase in community integration among those who reported depressive symptoms after one year of living in the community was smaller, but still statistically significant.

1. Limitations

Several limitations of our analyses warrant consideration when interpreting the findings presented in this chapter. First, the findings should be viewed with caution because our analytic sample represents between 25 and 60 percent (depending on the sample used in the analysis) of all people who had transitioned by the end of 2011 (N = 19,728), which is when the last cohort of participants in our sample completed their pre-transition (baseline) QoL survey. Compared to all people who had transitioned through the MFP demonstration by the end of 2011, the current analytic sample is slightly younger. The analyses reported in this chapter may not reflect the experience of all MFP participants.

Second, program administration will always vary by state, affecting the method, timing, and quality of survey administration. Each grantee has established a unique set of goals for transitioning target populations—such as which beneficiaries will be the focus of their program and how many in each target population will be transitioned—and other related objectives. When transition coordinators or case managers administer the survey, participants may emphasize reports of satisfaction or conflate feelings of satisfaction with their living arrangement with feelings about the demonstration. Although there is no evidence that this situation occurred, it cannot be ruled out as a potential bias in the data.

Third, we have not controlled for unmeasured program- and individual-level factors likely to affect a participant's reported quality of life and changes to quality of life. Unmeasured factors include participants' health status, pre-transition conditions, community-level factors (such as access to public transportation and proximity to medical care settings, providers, and unpaid

caregivers), program maturation, and state policy and economic climates. These unmeasured factors may affect our analyses of participants' quality of life and factors that influence it.

Fourth, the results of the analyses of unmet care needs (Section E) should be interpreted with additional caution. People with unmet needs for personal assistance may be more vulnerable to declining health and less likely to complete a QoL survey. Therefore, our results may underestimate the level of unmet care needs among MFP participants living in the community; the incidences of pressure ulcers, dehydration, falls/trauma, and delirium; and the relationship between unmet care needs and poor health outcomes. In addition, we examined the care outcomes and medical service use during the first 12 months of community living and assessed unmet care needs at one point approximately 12 months after transitioning. Ideally, the analysis would focus on medical care use after the assessment of someone's unmet personal care needs. Future analyses should focus on the association of medical care events in the second year of living in the community and unmet care needs at the end of the first year of community living to better identify associations between unmet care needs and health outcomes.

Finally, because the QoL survey can be administered with assistance or even by a proxy respondent, data reported may not always accurately capture the perceptions and experiences of participants. Proxy respondents and survey assisters provided information on community-based quality of life for 12 and 34 percent, respectively, of all participants.[29] The use of proxies also varied widely by target population and the sample used in the analysis; among people participating in all three survey rounds, rates of proxy use were substantially higher among those with intellectual disabilities, where proxies completed about 40 percent of all post-transition interviews for this targeted population. Proxy use was considerably lower among nursing home residents (approximately 7 percent of those under 65 and about 13 percent of those 65 or older). Rates of survey assistance followed the same pattern as proxy use: highest among those with intellectual disabilities (approximately 73 percent) and lowest among younger nursing home residents (14 percent). Proxy-reported quality of life in the community was significantly higher than participant-reported quality of life when measured one and two years post-transition ($p < 0.01$ for all samples). Although proxy respondents and participants provided equivalent ratings of satisfaction for both administrations of the survey, some researchers question the validity of proxy responses for subjective questions, such as quality of life (Elliott et al. 2008). Future analyses could further explore the effect of proxy responses on our findings.

[29] A proxy respondent is defined as someone who responds to survey questions on behalf of a participant. A survey assister is defined as someone who assists the participant in interpreting and providing responses to survey questions and may serve as a proxy respondent for some questions.

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APPENDIX A:

STATE-BY-STATE TABLES ON THE NUMBER OF TRANSITIONS AND QUALIFIED HCBS EXPENDITURES

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Table A.1. Number of institutional residents who transitioned under MFP from January 1 to December 31, 2014, by population subgroup

State	Cumulative number through Dec 2014	Total number	Older adults	People with intellectual or developmental disabilities	People with mental illness	People with physical disabilities	Other
Alabama	37	29	0	0	0	29	0
Arkansas	641	139	28	65	0	46	0
California	2,033	317	119	41	4	153	0
Colorado	68	35	4	14	6	9	2
Connecticut	2,427	565	288	49	35	193	0
Delaware	232	61	26	1	1	33	0
District of Columbia	177	27	20	3	0	4	0
Georgia	2,033	301	77	4	71	144	5
Hawaii	361	84	52	1	0	31	0
Idaho	237	92	23	11	2	56	0
Illinois	1,703	604	155	114	184	191	0
Indiana	1,366	311	164	3	71	73	0
Iowa	353	80	0	63	0	0	17
Kansas	1,317	218	52	18	0	140	8
Kentucky	606	97	20	22	2	47	6
Louisiana	1,085	289	148	25	0	116	0
Maine	40	24	6	0	0	11	7
Maryland	2,153	254	102	27	0	116	9
Massachusetts	980	460	239	3	26	192	0
Michigan	2,204	372	200	0	0	172	0
Minnesota	34	27	3	1	11	8	4
Mississippi	251	104	15	65	0	24	0
Missouri	1,013	183	53	20	0	108	2
Montana	15	15	2	6	1	3	3
Nebraska	389	60	34	3	0	19	4
Nevada	144	85	27	10	0	48	0
New Hampshire	247	35	20	1	0	13	1
New Jersey	1,357	297	57	198	0	42	0
New York	1,573	341	65	122	0	69	85
North Carolina	495	116	35	37	0	44	0
North Dakota	237	60	17	14	0	27	2
Ohio	5,803	1,299	250	74	555	420	0
Oklahoma	674	136	14	94	0	28	0
Oregon[b]	306	0	0	0	0	0	0
Pennsylvania	1,877	295	179	8	0	103	5
Rhode Island	161	45	28	0	0	17	0
South Carolina	40	23	11	0	0	12	0
South Dakota[a]	10	10	2	4	0	4	0
Tennessee	1,078	277	145	12	0	120	0
Texas	9,289	1,166	474	214	0	478	0
Vermont[c]	153	55	40	0	0	15	0
Virginia	826	179	22	118	0	39	0
Washington	4,605	1,133	642	50	10	431	0
West Virginia	90	59	24	0	0	35	0
Wisconsin	956	299	118	78	0	103	0
TOTAL	**51,676**	**10,658**	**3,960**	**1,593**	**979**	**3,966**	**160**

Source: State MFP Grantee Semiannual Progress Reports, 2014.

[a] Montana and South Dakota started transitioning individuals during 2014.

[b] Oregon suspended program operations in 2010 and later rescinded its grant award.

[c] Vermont identified inaccuracies in the data submitted in its most recent semi-annual reports and expects to provide updated data after the publication of this report. Corrected data will be incorporated into future reports.

Table A.2. Qualified HCBS expenditures, by grantee, 2012 - 2014

State	Percentage of 2014 spending target achieved as of December 2014	Qualified HCBS expenditures as of December 2014	Qualified HCBS expenditures as of December 2013	Qualified HCBS expenditures as of December 2012	Percentage change from 2012 to 2013	Percentage change from 2013 to 2014
Alabama[b]	92.4%	$620,996,435	$593,124,952	n.a.	n.a.	4.7%
Arkansas	123.0%	$441,556,933	$289,364,648	$294,148,606	-1.6%	52.6%
California	87.4%	$9,126,286,212	$10,310,281,149	$9,819,315,380	5.0%	-11.5%
Colorado[b]	106.8%	$918,846,260	$902,847,972	n.a.	n.a.	1.8%
Connecticut[e]	36.3%	$1,443,462,871	$1,357,869,500	$4,301,824,725	-68.4%	6.3%
Delaware	n.a.	NR	$102,327,432	$104,699,997	-2.3%	n.a.
District of Columbia	54.5%	$423,793,456	$552,126,899	$407,729,935	35.4%	-23.2%
Georgia	89.9%	$1,113,054,488	$945,837,785	$1,091,322,670	-13.3%	17.7%
Hawaii	107.3%	$199,495,754	$201,189,927	$183,453,638	9.7%	-0.8%
Idaho	122.1%	$267,202,294	$240,209,812	$225,280,528	6.6%	11.2%
Illinois	111.8%	$2,050,547,538	$1,940,824,410	$1,486,642,184	30.6%	5.7%
Indiana	98.5%	$1,151,721,270	$853,703,487	$841,087,179	1.5%	34.9%
Iowa	109.7%	$768,098,278	$700,516,038	$637,203,118	9.9%	9.6%
Kansas	140.9%	$879,809,017	$720,073,244	$581,625,068	23.8%	22.2%
Kentucky	81.6%	$709,464,134	$635,238,537	$557,621,639	13.9%	11.7%
Louisiana	101.7%	$855,202,330	$836,384,603	$799,438,763	4.6%	2.2%
Maine[a]	77.5%	$359,846,464	$329,090,619	NR	n.a.	9.3%
Maryland	98.3%	$1,056,511,778	$1,099,063,761	$869,801,085		-3.9%
Massachusetts	93.4%	$3,735,320,858	$3,681,580,469	$3,538,657,330	4.0%	1.5%
Michigan	114.9%	$1,098,309,303	$1,004,095,683	$955,047,026	5.1%	9.4%
Minnesota[b]	96.2%	$2,925,597,621	$2,755,244,833	n.a.	n.a.	6.2%
Mississippi[a]	97.0%	$425,612,820	$373,453,323	$410,229,263	-9.0%	14.0%
Missouri	126.7%	$1,390,326,473	$1,273,658,732	$1,164,955,196	9.3%	9.2%
Montana[c]	95.8%	$133,360,929	n.a.	n.a.	n.a.	n.a.
Nebraska	99.4%	$341,976,302	$339,832,806	$308,129,544	10.3%	0.6%

State	Percentage of 2014 spending target achieved as of December 2014	Qualified HCBS expenditures as of December 2014	Qualified HCBS expenditures as of December 2013	Qualified HCBS expenditures as of December 2012	Percentage change from 2012 to 2013	Percentage change from 2013 to 2014
Nevada[a]	117.8%	$204,660,420	$184,736,193	$172,595,409	7.0%	10.8%
New Hampshire	83.2%	$288,930,348	$267,251,789	$265,265,236	0.7%	8.1%
New Jersey[f]	157.7%	$2,010,522,253	$2,623,743,619	$961,231,539	173.0%	-23.4%
New York	96.1%	$13,315,836,102	$12,740,251,651	$13,331,710,584	-4.4%	4.5%
North Carolina[d]	104.9%	$1,582,507,210	$1,509,284,533	$1,323,249,791	14.1%	4.9%
North Dakota[d]	102.7%	$198,017,524	$197,252,292	$169,246,963	16.5%	0.4%
Ohio	92.5%	$3,531,746,015	$2,683,885,108	$2,436,977,724	10.1%	31.6%
Oklahoma	89.7%	$511,250,334	$472,593,570	$457,829,646	3.2%	8.2%
Pennsylvania	125.9%	$3,684,335,106	$3,367,084,596	$2,896,371,697	16.3%	9.4%
Rhode Island	97.6%	$488,063,881	$470,092,979	$445,737,694	5.5%	3.8%
South Carolina[b]	102.0%	$564,033,555	$526,281,987	n.a.	n.a.	7.2%
South Dakota[c]	100.3%	$126,288,798	n.a.	n.a.	n.a.	n.a.
Tennessee	107.7%	$1,097,773,660	$1,055,346,830	$735,297,490	43.5%	4.0%
Texas	142.9%	$4,828,328,398	$4,628,299,597	$3,415,015,919	35.5%	4.3%
Vermont[a]	98.0%	$59,174,153	$58,934,060	$58,285,915	1.1%	0.4%
Virginia	95.7%	$1,436,785,471	$1,396,893,011	$1,182,874,562	18.1%	2.9%
Washington	104.9%	$941,773,582	$878,457,902	$859,167,918	2.2%	7.2%
West Virginia[b]	97.6%	$626,069,203	$617,980,267	n.a.	n.a.	1.3%
Wisconsin	103.4%	$2,347,053,993	$2,259,693,485	$1,964,438,418	15.0%	3.9%
TOTAL	97.7%	$70,279,549,824	$67,976,004,090	$59,253,509,379	14.7%	3.4%

Source: Mathematica's analysis of state MFP Grantee Semiannual Progress Reports for 2012 - 2014.

Table A.2 (*continued)*

[a] Maine, Mississippi, Nevada, and Vermont implemented new MFP demonstrations during 2012. Maine data are incomplete.

[b] Alabama, Colorado, Minnesota, South Carolina, and West Virginia implemented new MFP demonstrations during 2013

[c] Montana and South Dakota implemented new MFP demonstrations during 2014. Reported 2014 expenditures for South Dakota do not include spending for MFP participants.

[d] North Carolina's 2014 expenditure data includes PACE and Private Duty Nursing spending.

[e] Connecticut was not able to provide complete data for 2013-2014.

[f] New Jersey underreported their 2012 expenditures.

n.a. = not applicable; NR = not reported

APPENDIX B:

METHODS USED TO ESTIMATE TRENDS IN TRANSITIONS AND POST-TRANSITION OUTCOMES

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A. Data sources and sample

1. Medicaid Analytic eXtract (MAX) data

The primary data sources for the analyses presented in Chapter III are the 2006-2012 MAX data files. Over this period, MAX data were available for 48 states and the District of Columbia.[30] Because we required a full year of MAX follow-up data to verify whether or not individuals transitioned to community-based LTSS and maintained Medicaid eligibility, the 2012 MAX data were used only for verification purposes, and therefore, we do not report numbers for 2012 in any analyses.

For the descriptive trends in the size of the MFP-eligible population presented in Table III.1 and the descriptive trends in transition rates presented in Figures III.2 and III.3, we used all 48 states and the District of Columbia, regardless of whether or not they had started transitioning beneficiaries through an MFP demonstration during the period 2008-2011. Because states had varying MAX data availability from 2006-2012, we projected the number of MFP-eligible beneficiaries and the number of transitioners for state-years that were missing data during the time period.[31]

For all other analyses in Chapter III aside from the descriptive trends presented in Table III.1 and Figures III.1 and III.2, we only included states with a full panel of data from 2006-2011, and started their MFP demonstration at some point from 2008-2010. As noted above, we required a follow-up year of MAX data to verify whether or not an individual transitioned to community-based LTSS and maintained Medicaid eligibility. This requirement also allowed us to examine outcomes among transitioners for a full 12 months after a transition, so 2011 MAX data were used only for verification purposes, and individuals transitioning in 2011 are not included in the analyses.[32]

2. Identifying the MFP eligible population

Based on the MAX data, a Medicaid beneficiary was defined as an "MFP eligible" if he or she resided in an institution for 90 (or more) continuous days. Although the MFP demonstration

[30] Data from Arizona and Maine were not included in any analyses in Chapter III.

[31] We projected numbers for the following years and states: for 2009, we had to project for Kansas; for 2010, we had to project for Kansas and an additional 8 states including Colorado, the District of Columbia, Hawaii, Idaho, Massachusetts, Ohio, Texas, and Wisconsin; for 2011 we had project for an additional 22 states including Alabama, California, Florida, Illinois, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New Mexico, North Carolina, North Dakota, Oklahoma, Oregon, Rhode Island, Tennessee, Utah, and Vermont.

[32] The following states were included in the analyses because they had all years of MAX data from 2006-2011 and had an MFP demonstration during the period 2008-2010: Arkansas, California, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa (only for individuals with intellectual disabilities), Kentucky, Louisiana, Maryland, Michigan, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, Virginia, and Washington.

did not begin until 2008, we refer to all individuals with 90 days or more of institutional residency during 2006 and 2007 as "MFP eligible."[33]

3. Groups of interest

Using information from MAX data, we divided the MFP eligible population into four mutually exclusive target subgroups: (1) older adults, which includes individuals age 65 and older residing in nursing homes; (2) individuals with physical disabilities, which includes individuals less than age 65 residing in nursing homes; (3) individuals with intellectual disabilities residing in intermediate care facilities; and (4) individuals with severe mental illness residing in psychiatric facilities. We expect that the MFP demonstration affects individuals in these target groups in different ways, as each group has unique needs.

4. Identifying transitions

We defined a transition as any instance in which an MFP-eligible individual ended his or her institutional stay for more than 2 calendar months and also received home- and community based services (HCBS) within 60 days of ending institutional care.

To identify MFP participants in the MAX data, we first used the 2008-2010 MFP demonstration participation data files to identify MFP participants and their transition dates. To maintain consistency with data sources, we "flagged" MFP participants in the MAX data in the following way:

- For individuals who appear in the MFP demonstration participation data files, we looked for evidence of the end of an institutional stay in MAX. If the transition date listed in the MFP demonstration participation data file fell within 32 days of the end of an institutional spell in MAX, then we retained that individual and coded him or her as a MFP participant.
- If we could not verify a MFP participant using the MAX data with this algorithm, then the person was not retained in the analysis.

To be considered a transitioner, individuals also had to meet several other criteria. He or she had to maintain Medicaid eligibility and not be enrolled in Medicaid managed care in the year following the transition. Additionally, if the individual died or used hospice within two calendar months of transitioning, he or she was not considered a transitioner for purposes of our analyses.

5. Characteristics of the MFP-eligible population

We used MAX data to determine demographic characteristics of the MFP-eligible population, including age, race/ethnicity, and gender. We used data from the NF-MDS to identify additional characteristics of members of the MFP-eligible population who resided in nursing homes (the older adult and physically disabled target groups). The RUG grouper was applied to the NF-MDS data and used to determine a "level of care" score (high, medium, low,

[33] When MFP began in 2008, the program required a six-month institutional stay to be MFP eligible. The Affordable Care Act decreased the required amount of time in an institution to 90 days, not including Medicare-covered skilled nursing days. We applied the 90-day requirement throughout the entire time period for these analyses.

or unknown level of care needed). Additionally, the activities of daily living (ADL) score was calculated. Both the MAX variables and NF-MDS characteristics were used in the regression models as control variables, when available.

6. Twelve-month post-transition outcomes

Among the group of transitioners in our analytic sample (which includes both MFP participants and non-MFP transitioners), we assigned each individual to one of three mutually exclusive outcome categories: (1) reinsitutionalization within twelve months of transition, (2) death within twelve months of transition, or (3) still in the community at twelve months post-transition.[34]

In addition, because we rely on MAX data to flag outcomes, our analysis was also restricted to individuals who maintained Medicaid eligibility, and were not enrolled in Medicaid managed care, for the full year following their transition.

a. Reinstitutionalizations

A transitioner was coded as becoming reinstitutionalized if we observe an institutional claim in MAX within 365 days of his or her transition date.

b. Mortality

MAX data include three sources of death dates. For individuals with dates of death available in more than one of these sources, we used the death dates in the following order: (1) the Social Security Administration (SSA) Death Master File, (2) the Medicare Enrollment Database (EDB), and (3) the Medicaid Statistical Information System (MSIS). The EDB date of death is available for people dually eligible for Medicare and Medicaid. The MSIS date of death is considered to be the least reliable source of death dates among these three data sources. To ensure consistency and accuracy of the death date information, any analysis that modeled mortality as an outcome is limited to the dually eligible population, because this is the only group for which we had a reliable and stable source of death date information across all years of the study.

c. Still in community ("Successful" transitions)

If a person neither died nor returned to an institution within twelve months of the transition date, then we code the person as having a "successful" transition. If a person loses Medicaid eligibility after his or her transition, it is possible that he or she could return to an institution and we would not observe that readmission in the MAX data, unless they also reestablished Medicaid eligibility at about the same time. Therefore, we required that a person maintain Medicaid eligibility during the entire twelve month post-transition period to avoid potentially misclassifying that person as a successful transition.

[34] We observed a small number of transitioners who became reinstitutionalized and then died within twelve months of their transition. In these cases, we assigned them to the reinstitutionalized category, because that is the first outcome we observed for the person.

B. Regression methods

1. Introduction

The regression analyses were designed to estimate the effect of the implementation of the MFP demonstration on the number of people who transition from institutions to community-based LTSS, as well as the effect of the program on post-transition outcomes. The approach relies on controlling for preexisting trends in transition rates and post-transition outcomes that were present in the years before the rollout of the MFP demonstration. We test whether transition rates and post-transition outcomes change in the years when MFP was in place (2008-2010), controlling for the pre-MFP trend. We describe the regression methods and models below.

2. Probability of transitioning to community-based LTSS

- **Estimation sample**. We considered the MFP-eligible population from 2006 through 2010 from four target groups: (1) older adults, (2) individuals with physical disabilities, (3) individuals with intellectual disabilities, and (4) individuals with severe mental illness. We estimated regression models separately for each target population.
- **Outcome of interest/dependent variable**. We model the probability of transitioning to community-based LTSS in a calendar quarter. The dependent variable is an indicator variable that equals 1 if a person transitions to community services in quarter q (where q=1 for Q1-2006, q=2 for Q2-2006, etc.) and 0 otherwise. All MFP participants are considered to have transitioned to community-based LTSS.
- **Unit of analysis**. The unit of analysis is a person-quarter for each calendar quarter that a person is eligible for MFP. A person can be eligible for MFP across quarters. We treat each observation as a separate observation (no person fixed effects), and cluster on the person-year level to adjust the standard errors.
- **Control variables**. We take control variables from the MAX data (age, race, and gender), and from the NF-MDS. The NF-MDS control variables included level of care needs and the ADL score. NF-MDS information was only available for the older adult and physically disabled target groups, so the regressions for individuals with intellectual disabilities or severe mental illness only included MAX control variables. The analytic sample was limited to those with valid information from these sources. We also include a squared term for age, quarter of year indicators to control for "seasonality" in transition rates, the quarter in which the person became MFP-eligible (and its square), and state fixed effects.
- **Time trend**. We include a quartic time trend term in the regression models for the elderly, individuals with physical disabilities, and individuals with intellectual disabilities and a cubic time trend term in the regression model for individuals with severe mental illness.
- **Variables of interest**. In addition to the time trend variable, we include indicator variables for whether the observation is from 2008, 2009, or 2010. The coefficients on these indicator variables represent the average change in quarterly transition rates in 2008-2010, respectively, holding constant the trend in transition rates during baseline (2006-2007).
- Model specifications.
    - Specification for older adults, individuals with physical disabilities, and individuals with intellectual disabilities:

$$y_{it} = \beta_0 + \sum_{j=1}^{4} \beta_j Trend^j + \gamma' X + \beta_{5i2008} + \beta_{6i2009} + \beta_{7i2010} + \varepsilon_{it}$$

Specification for individuals with severe mental illness:

$$y_{it} = \beta_0 + \sum_{j=1}^{3} \beta_j Trend^j + \gamma' X + \beta_{4i2008} + \beta_{5i2009} + \beta_{6i2010} + \varepsilon_{it}$$

Each model includes the set of control variables *X*, described above.

- **Estimation**. We estimate the model using a logit specification, and cluster standard errors on the person-by-year level.
- **Choice of polynomial order in trend term**. For each target population, we began by estimating models with a linear trend term and subsequently added additional trend terms to the models. We reviewed the model fit for each regression model to determine the appropriate trend term to include for each target population.
- **Calculating counts of transitions**. The chapter displays both regression-adjusted counts of transitions and counterfactual counts of transitions: the difference between the two represents "new" transitions that occurred in 2008 through 2010. Here are the steps we took to calculate those counts:
- Estimate the model within a target population.
- Retain estimated coefficients.
- Calculate predicted probability of transitioning to community-based LTSS for each observation.
- Set the 2008, 2009, and 2010 indicator dummies to 0 for all observations.
- Use the retained coefficients on the transformed data to calculate predicted counterfactual probability of transitioning to community services.
- Sum both sets of predicted values (observed and counterfactual) by year of eligibility.
- Calculate the difference between these two counts.
- Compute standard errors and confidence intervals using the bootstrap method.

3. Twelve-month post-transition outcomes

We considered three mutually exclusive post-transition outcomes in our regression analyses: (1) reinstitutionalization within twelve months of transition, (2) death within twelve months of transition, and (3) "still in community" at twelve months post-transition. As with the transition analysis, we estimated regressions separately for each target population. Because death is a relatively rare event among transitioners with intellectual disabilities or severe mental illness, we did not model twelve-month mortality as a post-transition outcome for these populations.

The general framework of these analyses is similar to the one used to model transitions: we control for preexisting trends in the rates of post-transition outcomes and then test whether these

rates changed in 2008-2010, after the implementation of the MFP demonstration. In each model, a linear trend term appeared to best fit the data. Therefore, the general specification is given by:

$$y_{it} = \beta_0 + \beta_1 Trend + \gamma' X + \beta_{2i2008} + \beta_{3i2009} + \beta_{4i2010} + \varepsilon_{it}$$

The exact form of the dependent variable, the estimation approach, and the set of control variables depend on the target population being analyzed. We explain these details below.

a. Elderly and people with physical disabilities

- **Outcome variable and estimation**. We modeled the older adult and physically disabled target groups separately, but the methods used for these populations were the same. First, we assigned each transitioner into one of the three post-transition outcome categories. Therefore, the dependent variable in the estimating equation takes on the following values:

$$y_{it} = \begin{cases} 0 \text{ if still in community} \\ 1 \text{ if reinstitutionalized} \\ 2 \text{ if died} \end{cases}$$

  We then used a multinomial logit model to estimate the change in the probability of each outcome that occurred in 2008-2010, holding constant preexisting trends in rates of post-transition outcomes.

- **Sample restrictions and control variables**. We limited the sample for the older adult and people with physical disabilities to transitioners dually eligible for Medicare and Medicaid to ensure that we had a reliable and stable source of death date information across all years of the study. We used demographic information from MAX data and level of care and ADL information from the NF-MDS as control variables in the regression. Therefore, the analytic sample was also limited to those with valid information from these sources. We also included a squared term for age and quarter of year indicators to control for "seasonality."

b. Individuals with intellectual disabilities or severe mental illness

- **Outcome variable and estimation**. We modeled estimates for the groups with intellectual disabilities or severe mental illness separately, but the methods used for these populations were the same. We estimated two separate logit models for these target populations. In one model, the outcome of interest is whether the person was reinstitutionalized. In the other model, the outcome of interest is whether the person remained in the community. We then use the estimated coefficients to test whether the rate of either outcome changed in 2008-2010, given preexisting trends.

- **Sample restrictions and control variables**. We used demographic information from MAX data as control variables in the regression models. Therefore, the analytic sample was limited to those with valid (non-missing) demographic information. We also included a squared term for age and quarter of year indicators to control for "seasonality."

APPENDIX C:

METHODS USED TO ESTIMATE THE CHANGES IN POST-TRANSITION COSTS AND UTILIZATION

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A. Data

The analyses presented in chapter IV used Medicare and Medicaid claims and enrollment files, Nursing Facility Minimum Data Set (NF-MDS) assessment data, and Money Follows the Person (MFP) services files. These files allowed us to identify Medicaid beneficiaries who transitioned from institutional care to community-based LTSS at any point from 2008 to 2011, beneficiaries who enrolled in the MFP demonstration, expenditures in the 12 months before and up to 24 months after the transition, and person-level characteristics to perform a propensity score matching analysis. We included Medicare claims from the Medicare Provider Analysis and Review (MedPAR), Carrier, Home Health, Outpatient, Home Health Agency, and Durable Medical Equipment files, Medicaid claims from the Medicaid Analytic eXtract (MAX) Other (which includes claims for outpatient, laboratory, home health, and premium payments), Long-Term Care, and Inpatient files, and claims for MFP-paid community-based LTSS from the MFP services file. Enrollment and demographic information came from the Medicare Master Beneficiary Summary File, the MAX Person Summary file, and the MFP Program Participants file.

B. Identifying MFP participants and other transitioners

We identified MFP participants by using the MFP national evaluation enrollment records from 29 states with active grants at any point in 2008 through 2011.[35] Only those MFP participants with at least one MFP-paid claim for community-based LTSS were included in this study.

The comparison group of Medicaid beneficiaries who transitioned from institutional care to community-based LTSS outside of the MFP demonstration during the same 2008 through 2011 period was selected from all states except for Arizona and Maine because MAX data were not available for these states. In brief, the procedure to define a transition identified Medicaid beneficiaries with at least three contiguous months of institutional long-term care claims followed by a claim for community-based LTSS (or record of enrollment in a 1915(c) waiver) in the month of transition or in either of the next two months. See Irvin et al. 2012 for a more detailed description for identifying transitions outside of the MFP demonstration.

C. Target populations

We stratify our analysis based on the target population category for all transitioners. In general, target populations are intended to capture the care needs of transitioners and reflect populations targeted by MFP demonstrations. In the past, we relied solely on a Medicaid beneficiary's age and the institution from which they transitioned from. This study alters that approach slightly by also using diagnosis and procedure codes to identify people with mental health conditions.

[35] The 29 states include: Arkansas, California, Connecticut, Delaware, District of Columbia, Georgia, Iowa, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Michigan, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Texas, Virginia, Washington, and Wisconsin.

Transitioners were divided into three target populations: (1) adults 65 and older who transition from nursing homes, (2) people with physical disabilities under the age of 65 who transition from nursing homes, and (3) people with intellectual disabilities who transition from intermediate care facilities for individuals with intellectual disabilities (ICFs-IID). Within each target group, we further divided our analysis by examining people with or without mental health conditions. People with mental health conditions include those who had a claim with relevant diagnostic, procedure, revenue center, or provider codes for mental health condition during the 12 months before transition.[36]

Appendix Table C.1 presents the sample size of the MFP participants and other transitioners and the distribution of each target population. MFP participants are a much smaller group of transitioners during the 2008 to 2011 period compared to the group that transitioned without the benefit of the MFP demonstration. People with mental health conditions are a subgroup within the larger target population, whereas the previous analyses created a separate population for persons with mental health conditions.

Table C.1. Comparison of two approaches to defining the target populations

	Definition used in this chapter		Previous definition	
Target population	MFP participants 2008 to 2011	Transitioners from 2008 to 2011	MFP Participants 2008 to 2011	Transitioners from 2008 to 2011
Number of people in unmatched sample	6,657	21,767	6,657	21,767
Older adults	2,019	14,793	644	4,066
Mental health conditions	1,176	9,361	1,375	10,727
Physical disabilities	2,779	2,107	719	515
Mental health conditions	1,856	1,437	2,060	1,592
Intellectual disabilities	1,859	4,867	541	1,436
Mental health conditions	784	2,393	1,318	3,431

Source: Mathematica analysis of MFP transitioners from 29 states and Medicaid beneficiaries who transition outside of the program from 49 states from 2008 through 2011.

Note: The previous definition is presented in Irvin et al. 2015 and Bohl et al. 2014.

[36] For outpatient claims records, we only flagged people as having a mental health condition if they had at least two outpatient claims records for services on two different days that included a diagnosis for a mental health condition. For inpatient claims records, we required only one claim to have a diagnosis for a mental health condition. Mental health conditions included: schizophrenic disorders; episodic mood disorders; delusional disorders; other nonorganic psychoses; pervasive developmental disorders; obsessive-compulsive disorders; dysthymic disorders; personality disorders; acute reaction to stress; adjustment reaction; depressive disorder, not elsewhere classified, disturvance of conduct, not elsewhere classified; disturbance of emotions specific to childhood and adolescence; and hyperkinetic syndrome of childhood.

D. Exclusions

For our main analysis, we excluded people who (1) were enrollment in Medicare or Medicaid managed care; (2) had no record of receiving community-based LTSS after the transition, including MFP participants who had no claim for an MFP-financed community-based long-term service or support; (3) received Medicare or Medicaid-paid hospice services prior to transition; (4) had Medicaid-paid hospice services in the month of transition or in either of the next two calendar months; (5) died within the first 12 months after transition; or (6) had more than a 1-month gap in Medicaid enrollment in the 12 months before or after transition. For the two-year cost analysis, we excluded those who died in the first 24 months after transition or who had more than a 1-month gap in Medicaid enrollment in the 24 months before or after the transition. For persons included in the 2-year analysis, in addition to the above criteria, we excluded anyone without available MAX data or who did not survive 730 days after transition.

E. Measures of expenditures

The expenditures analysis takes the perspective of the Medicaid and Medicare programs. There are three expenditure categories of interest: (1) total overall expenditures, (2) long-term services and supports (LTSS), and (3) medical care expenditures. We further divide LTSS into community- or institutional-based LTSS. Medical expenditures are categorized as inpatient (acute hospital care), Medicare-paid skilled nursing facility (SNF), Medicare-paid home health, physician office visits, and emergency department visits.

Total expenditures include all Medicaid-paid services and Medicare-paid Part A and Part B services (for those dually-eligible for Medicare and Medicaid). Medicaid- or Medicare-paid prescription drugs were excluded. LTSS expenditures consist of all Medicaid payments for community- and institutional-based LTSS. Medical care expenditures are all Medicaid payments not otherwise classified as LTSS expenditures plus all Medicare expenditures. Inpatient, physician office, emergency, and hospice expenditures come from Medicare and Medicaid payments, but SNF and home health are only from Medicare claims. All medical services not categorized into these categories (such as ambulatory surgery) were included in total or medical expenditures but not in a specific category.

Expenditures were defined using the "amount paid" field on Medicare and Medicaid claims, with one exception: we summed the Medicare payment amount and the pass through amount for inpatient and skilled nursing facility claims. Based on the year of transition, we inflated all expenditures by the annual medical care consumer price index to represent 2011 dollars. We did not consider housing grants, out-of-pocket expenditures, or any administrative expenses. Because we identified transitions between 2008 and 2010, the pre- and post-transition expenditures may reach into 2007 or 2011, respectively.

F. Measures of utilization and quality

The utilization variables capture emergency department (ED) visits, inpatient stays, physician visits, and subacute facility care. We distinguished between two types of ED visits: those that resulted in an inpatient stay, and those that did not. We used Medicare and Medicaid claims to define the utilization variables. Inpatient admissions were identified using the MedPAR and MAX inpatient files. ED visits resulting in an inpatient admission were identified in the

MedPAR and MAX inpatient files where the source of the inpatient admission for a MedPAR record was the ED or the UB-92 Revenue Center Code in the MAX Inpatient file indicated ED services. ED visits not resulting in an inpatient admission were identified in the Medicare Outpatient files using revenue center and procedure codes that indicated services furnished in an ED. In the Medicaid Other file, revenue center codes, place of service, and procedure codes were used to identify ED visits not resulting in a hospitalization. Table C.2 presents the revenue center and procedure codes used to identify ED use. Facility-based subacute care used Medicare and Medicaid claims where the location of service was a nursing or rehabilitation facility.

Table C.2. UB 92 revenue center codes and CPT codes used to identify ED use

Code type	Codes
UB-92 revenue center	0450-0459, 0981
CPT	99281-99285

We also identified utilization for ambulatory care sensitive conditions (ACSCs) and mental health conditions. Using ICD-9 diagnosis codes, we identified inpatient, outpatient, and emergency utilization with diagnosis codes for falls, pressure ulcers, dehydration, and delirium. We analyzed utilization of these services as a composite to indicate whether a transitioner had utilization of any type (inpatient, outpatient, or emergency based care) for any of these ACSC conditions. We also identified transitioners using inpatient or outpatient services for mental health conditions.

G. Comparison group selection

The key methodological challenge in estimating the effects of MFP participation on expenditures is approximating the counterfactual – the outcomes that would have happened in the absence of MFP. Those who transition outside of the MFP demonstration are a non-random, select group of transitioners that are most likely different from other Medicaid beneficiaries who transition from institutional care to community-based LTSS.

To find a group of transitioners that resemble the sample of MFP participants, we used a matching procedure commonly referred to as propensity score matching (Rosenbaum and Rubin 1983). Matching allows for an approximation of an experimental design by assuming that the decision to participate is random conditional on a set of observable characteristics. The propensity score is estimated from a logistic regression fit on our analytic sample that includes both MFP participants and other transitioners. The dependent variable is MFP participation, and the independent variables (Table C.3) include factors that are hypothesized to be related to participation in the MFP demonstration.

Table C.3. Independent variables included in the propensity score estimation

Variable name
Age at time of transition
Non-white
Gender
Natural logarithm of total expenditures in the year prior to transition
Ratio of medical expenditures to total expenditures in the year prior to transition
ED visit not resulting in an inpatient admission in the year prior to transition
ED visit resulting in an inpatient admission in the year prior to transition
Inpatient admission in the year prior to transition
Number of conditions identified in the year prior to transition (CDPS)[b]
Mental health condition identified prior to transition[a]
Number of days in institution prior to transition
90-179
180-364
365 +
NF-MDS level of care[c]
Low
Medium
High
NF-MDS ADL summary score (0-28)
0-5
6-13
14-19
20-28

Note: NF-MDS Variables only included for people transitioning from nursing facilities. The ADL summary score captures a beneficiary's ability to perform the following ADLs independently: personal hygiene, locomotion, toilet use, eating, dressing, bed mobility and transferring. The measure ranges from 0 to 28, with lower scores representing greater independence.

[a] For our sub-analysis of people with mental health conditions, this variable was removed because the analysis was conditional on having a mental health condition identified in the pre-transition period.

[b] The CDPS is a hierarchical diagnostic classification system developed to describe the severity of illness among Medicaid beneficiaries (Kronick et al. 2000). Using ICD-9 diagnosis codes, the CDPS constructs major categories based on body systems (such as cardiovascular), or condition (such as diabetes).

[c] See Ross et al. 2012 for details on the construction of the level of care indicators.

ADL = activities of daily living; CDPS = Chronic Disability and Payment System; ED = emergency department; NF-MDS = nursing facility minimum data set.

To select individuals for the counterfactual, or control group, we implemented the matching process in two steps:[2]

1. **Estimate the propensity score.** For the main analysis, we used logistic regression to model the probability of transitioning from an institution to the community by enrolling in the MFP demonstration. We fit separate models for each target population. For the analysis of those people with mental health conditions, we repeated the estimation but restricted it to those identified as having a mental health condition prior to their transition to the community.
2. **Select the single nearest neighbor (with replacement).** There are multiple approaches for matching using propensity scores, and we used the single nearest neighbor approach with replacement. Using the results from the above models, for each participant we select the potential comparison group member with the closest absolute propensity score to serve as their counterfactual. To minimize potential bias in our estimates, the matching process is conducted with replacement, so potential comparison group members can form the counterfactual for more than one participant. If potential comparison group members are selected more than once, that person received an additional weight in the final matched analysis. We also imposed the common support restriction, which excluded MFP participants with a propensity score either lower than the minimum score of other transitioners or higher than the maximum score. In our main analysis this led to the exclusion of 15 older adult MFP participants and 1 MFP participants with physical disabilities. In our analysis of people with mental health conditions, 18 older adult MFP participants and 2 MFP participants with physical disabilities were excluded.

For each target population, we built two sets of propensity score models: one for the entire target population, and another for the subgroup of individuals with mental health conditions. Using matching to select a comparison group will produce unbiased estimates if two assumptions are met: (1) the set of observable characteristics used in the matching procedure includes all the factors that are related to both participation and the outcomes and (2) participants and comparison group members are "balanced" on observable characteristics conditional on their propensity score–that is, for each participant, there needs to be matched comparison group member(s) similar to the participant on observed characteristics (Rosenbaum and Rubin 1985). To determine whether the latter condition was met, we performed several statistical tests to assess the quality of our matches.

H. Assessing the matching quality

Following Caliendo and Kopeinig (2008), we examined differences in means, standardized bias,[3] and joint significance of the variables used in the matching process. We found that our models produced a matched comparison group with transitioners that looked similar to MFP participants for the characteristics included in the model.

[2] The propensity score estimation, matching, and testing algorithms were implemented using Stata version 14's pscore, psmatch2, and ptest routines.

[3] The difference of sample means in the treated and matched control subsamples as a percentage of the square root of the average of sample variances in both groups (Rosenbaum and Rubin [1985]).

To assess the quality of the matches, we verified that the matching procedure produced few differences in the mean values between the MFP and comparison groups for the observed variables included in the models (Appendix Tables C.4 and C.5). To do so, we compare the means of covariate values conditional on the propensity score to test for differences between the MFP and comparison group for each target population. After matching, there were no statistically significant differences at the 5 percent level for our main analysis. For the analysis of those with mental health conditions the only remaining statistically significant differences were the percent female among people with intellectual disabilities and the percent of people with physical disabilities who were in an institution 180 to 364 days prior to transition. The propensity score models also reduced the overall differences in means between the two groups, as measured by the standardized bias, in each of the regression models for each target group (results not shown in tables).

Table C.4. Means and P-values for variables included in the propensity score estimation: Primary analysis

Characteristic (mean values)		Older adults			People with physical disabilities			People with intellectual disabilities		
		MFP	Other trans-itioners	p >|t|	MFP	Other trans-itioners	p >|t|	MFP	Other trans-itioners	p >|t|
Age	Unmatched	76.3	77.8	<0.001	51.1	51.1	0.900	45.4	41.1	<0.001
	Matched	76.3	75.9	0.106	51.1	51.3	0.364	45.4	45.2	0.698
Non-white	Unmatched	31.8%	37.5%	<0.001	38.1%	38.2%	0.891	29.2%	28.0%	0.324
	Matched	32.0%	34.1%	0.158	38.1%	39.2%	0.378	29.2%	29.1%	0.942
Female	Unmatched	65.6%	72.1%	<0.001	46.3%	53.1%	<0.001	37.7%	38.1%	0.734
	Matched	65.7%	63.1%	0.104	46.3%	47.1%	0.572	37.7%	37.7%	0.999
Natural logarithm of total pre-transition expenditures	Unmatched	11.2	11.3	<0.001	11.3	11.4	<0.001	11.7	11.9	<0.001
	Matched	11.2	11.2	0.137	11.3	11.3	0.445	11.7	11.6	0.442
Ratio of total expenditures to medical expenditures in the year prior to transition	Unmatched	35.0%	50.5%	<0.001	27.8%	43.9%	<0.001	5.1%	4.7%	0.241
	Matched	35.2%	34.8%	0.646	27.8%	28.2%	0.571	5.1%	5.0%	0.812
ED visit not resulting in an inpatient admission in the year prior to transition	Unmatched	46.9%	64.5%	<0.001	56.8%	71.7%	<0.001	33.0%	37.5%	0.001
	Matched	47.2%	46.8%	0.820	56.8%	57.9%	0.386	33.0%	33.1%	0.944
ED visit an inpatient admission in the year prior to transition	Unmatched	33.1%	49.5%	<0.001	29.6%	46.6%	<0.001	8.7%	9.8%	0.150
	Matched	33.1%	31.1%	0.187	29.6%	29.8%	0.883	8.7%	9.1%	0.643
Inpatient admission in the year prior to transition	Unmatched	53.6%	65.5%	<0.001	49.7%	68.8%	<0.001	15.2%	16.5%	0.201
	Matched	53.3%	50.4%	0.075	49.7%	50.7%	0.486	15.2%	15.6%	0.749
Number of conditions identified in the year prior to transition (CDPS)	Unmatched	7.0	10.4	<0.001	8.6	10.2	<0.001	6.5	8.0	<0.001
	Matched	7.0	7.1	0.641	8.6	8.6	0.400	6.5	6.5	0.895
Mental health condition prior to transition	Unmatched	58.2%	63.3%	<0.001	66.8%	69.1%	0.018	42.1%	49.2%	<0.001
	Matched	58.1%	58.0%	0.922	66.8%	68.3%	0.218	42.1%	43.4%	0.405
Number of days in institution prior to transition: 180-364	Unmatched	33.7%	21.1%	<0.001	27.9%	23.7%	<0.001	7.0%	6.4%	0.435
	Matched	33.2%	33.0%	0.891	27.9%	28.2%	0.834	7.0%	6.5%	0.599
Number of days in institution prior to transition: 365+	Unmatched	49.1%	36.0%	<0.001	62.7%	38.6%	<0.001	90.5%	88.6%	0.023
	Matched	49.4%	50.9%	0.331	62.6%	62.8%	0.934	90.5%	90.8%	0.777
NF-MDS level of care: medium	Unmatched	48.7%	41.9%	<0.001	43.8%	45.0%	0.266	-	-	-
	Matched	48.4%	48.6%	0.897	43.8%	44.3%	0.725	-	-	-
NF-MDS level of care: high	Unmatched	28.0%	44.0%	<0.001	26.2%	36.1%	<0.001	-	-	-
	Matched	28.3%	27.8%	0.745	26.2%	24.7%	0.207	-	-	-

Characteristic (mean values)		Older adults			People with physical disabilities			People with intellectual disabilities		
		MFP	Other trans-itioners	p >|t|	MFP	Other trans-itioners	p >|t|	MFP	Other trans-itioners	p >|t|
NF-MDS ADL summary score: 6-13	Unmatched	25.4%	26.4%	0.368	21.8%	24.1%	0.010	-	-	-
	Matched	25.6%	26.3%	0.631	21.8%	23.0%	0.274	-	-	-
NF-MDS ADL summary score: 14-19	Unmatched	28.5%	30.5%	0.076	20.6%	24.3%	<0.001	-	-	-
	Matched	28.3%	29.7%	0.317	20.7%	20.3%	0.740	-	-	-
NF-MDS ADL summary score: 20-28	Unmatched	17.8%	23.5%	<0.001	18.6%	20.9%	0.007	-	-	-
	Matched	17.9%	16.6%	0.324	18.6%	17.7%	0.384	-	-	-

Source: Mathematica analysis of MFP participants from 29 states and other Medicaid transitioners from 49 states from 2008 through 2011.

Note: Reference categories for the categorical variables included in the model are: NF-MDS Level of Care: Low and NF-MDS ADL Summary Score: 0-5.

Table C.5. Means and P-values for variables included in the propensity score estimation: Mental health analysis

Characteristic (mean values)		Older adults			People with physical disabilities			People with intellectual disabilities		
		MFP	Other trans-itioners	p >|t|	MFP	Other trans-itioners	p >|t|	MFP	Other trans-itioners	p >|t|
Age	Unmatched	75.5	76.9	<0.001	51.4	51.2	0.359	44.4	40.0	<0.001
	Matched	75.6	75.4	0.569	51.4	51.6	0.438	44.4	44.0	0.678
Non-white	Unmatched	25.4%	32.3%	<0.001	34.1%	33.6%	0.661	26.7%	29.1%	0.210
	Matched	25.5%	24.2%	0.490	34.1%	35.1%	0.535	26.7%	26.4%	0.863
Female	Unmatched	68.6%	73.2%	0.001	50.1%	55.9%	<0.001	40.2%	39.0%	0.569
	Matched	68.9%	67.6%	0.521	50.1%	49.4%	0.670	40.2%	35.3%	0.046
Natural logarithm of total pre-transition expenditures	Unmatched	11.2	11.4	<0.001	11.3	11.4	<0.001	11.5	11.8	<0.001
	Matched	11.2	11.2	0.880	11.3	11.3	0.137	11.5	11.5	0.576
Ratio of total expenditures to medical expenditures in the year prior to transition	Unmatched	39.6%	51.5%	<0.001	30.9%	46.1%	<0.001	8.4%	6.4%	<0.001
	Matched	39.8%	37.8%	0.113	30.9%	31.7%	0.373	8.4%	8.4%	0.924
ED visit not resulting in an inpatient admission in the year prior to transition	Unmatched	53.7%	68.3%	<0.001	60.5%	74.4%	<0.001	43.9%	45.7%	0.396
	Matched	54.3%	51.5%	0.200	60.5%	61.7%	0.459	43.9%	43.9%	0.999
ED visit an inpatient admission in the year prior to transition	Unmatched	36.0%	51.8%	<0.001	30.4%	48.5%	<0.001	10.7%	12.6%	0.161
	Matched	36.4%	35.3%	0.594	30.5%	30.6%	0.943	10.7%	9.2%	0.309
Inpatient admission in the year prior to transition	Unmatched	58.7%	68.2%	<0.001	52.9%	70.9%	<0.001	21.1%	21.2%	0.940
	Matched	58.6%	55.2%	0.111	52.9%	52.3%	0.693	21.1%	20.5%	0.802
Number of conditions identified in the year prior to transition (CDPS)	Unmatched	7.6	10.8	<0.001	9.0	10.7	<0.001	7.2	8.7	<0.001
	Matched	7.7	7.7	0.903	9.0	9.1	0.648	7.2	7.1	0.648
Number of days in institution prior to transition: 180-364	Unmatched	33.7%	22.0%	<0.001	27.1%	24.5%	0.019	9.8%	8.9%	0.420
	Matched	33.2%	31.7%	0.439	27.1%	30.3%	0.032	9.8%	8.7%	0.430
Number of days in institution prior to transition: 365+	Unmatched	49.4%	36.6%	<0.001	62.9%	38.3%	<0.001	85.9%	83.6%	0.121
	Matched	49.5%	52.1%	0.232	62.9%	60.4%	0.129	85.9%	86.2%	0.883
NF-MDS Level of care: medium	Unmatched	48.3%	42.1%	<0.001	43.7%	44.6%	0.456	-	-	-
	Matched	48.4%	49.8%	0.495	43.7%	43.5%	0.921	-	-	-
NF-MDS Level of care: high	Unmatched	25.7%	42.9%	<0.001	23.5%	34.6%	<0.001	-	-	-
	Matched	26.1%	25.3%	0.661	23.5%	23.7%	0.877	-	-	-
NF-MDS ADL summary score: 6-13	Unmatched	25.9%	26.5%	0.642	22.6%	25.1%	0.023	-	-	-
	Matched	26.2%	26.1%	0.961	22.6%	23.1%	0.696	-	-	-
NF-MDS ADL summary score: 14-19	Unmatched	25.7%	30.2%	0.002	19.9%	24.0%	<0.001	-	-	-
	Matched	26.0%	25.5%	0.807	19.8%	19.3%	0.679	-	-	-
NF-MDS ADL summary score: 20-28	Unmatched	16.4%	22.4%	<0.001	15.5%	18.2%	0.007	-	-	-
	Matched	16.5%	17.7%	0.461	15.5%	16.4%	0.446	-	-	-

Source: Mathematica analysis of MFP transitioners from 29 states and other Medicaid transitioners from 49 states from 2008 through 2011.

Note: Reference categories for the categorical variables included in the model are: NF-MDS Level of Care: Low and NF-MDS ADL Summary Score: 0-5.

As a final check, we conducted a likelihood ratio test on the joint significance of all characteristics included in the propensity score model. Before matching, the independent variables were jointly statistically significant (Unmatched Column in Appendix Table C.6), but these independent variables were not jointly significant when comparing MFP participants to the matched comparison group (Matched Column in Appendix Table C.6).

Table C.6. Joint significance tests, by target group

	Unmatched		Matched	
Sample	LR chi2	p-value	LR chi2	p-value
Older adults	2,584	<0.001	17.22	0.440
Older adults with mental health conditions	1,485	<0.001	8.83	0.920
People with physical disabilities	1,493	<0.001	9.08	0.938
People with physical disabilities who have mental health conditions	987	<0.001	12.15	0.734
People with intellectual disabilities	628	<0.001	2.57	0.998
People with intellectual disabilities who have mental health conditions	328	<0.001	6.85	0.811

I. Post-matching regression adjustments

After identifying our matched comparison group of transitioners, we estimated a series of regressions with an indicator of MFP participation and all of the covariates included in the propensity score models with the addition of year of transition and dual eligibility. A smaller proportion of the non-MFP transitioners were identified in 2011 because fewer states had 2011 MAX data relative to other years. Because of this we did not include the transition year in the propensity score model to select a matched comparison group, but instead controlled for it in our post-matching regression. Dual eligibility is included in the regression models to attempt to control for remaining variation not captured by our target population identification. We include the variables in the propensity score model in our post-matching regression models to account for the relationships between the year of transition and dual-eligibility with the other variables in our propensity score models to improve the precision of our final estimates.

For our cost and utilization count outcomes, we specified a generalized linear model with the Gamma family and log link to account for the positively skewed distribution of these outcomes. For binary outcomes, such as the probability of having an inpatient admission, we specified a binomial distribution and a logit link for our regressions. The coefficient of the MFP participation indicator is the estimated effect of MFP on the outcome relative to our matched group of other transitioners controlling for the year of transition, dual-eligibility status, and the other variables included in the propensity score model. To facilitate the interpretation of the results, we present predicted costs and predicted probabilities for binary outcomes, holding the variables included in the regressions at their respective means pooled across the MFP and other transitioner group. We also report the predicted percent change from the models.

J. Pre-MFP implementation comparison group

As a robustness check, we repeated our analysis using a comparison group of transitioners who returned to the community before MFP was implemented in 2008. To create the matched comparison group, we re-ran the propensity score models using the same covariates. We then re-ran all regression models using the same covariates but removing transition year, because the MFP and comparison groups do not overlap on these variables.

The information in Table C.7 shows the outcomes that changed statistical significance when using different comparison groups. In general, using the pre-MFP implementation comparison group decreased the number of outcomes that were statistically significantly associated with MFP participation, especially for people with physical disabilities. Using the pre-implementation comparison group, there was no statistically significant association between MFP participation and ED or inpatient use, among people with physical disabilities overall and in the subgroup with mental health conditions. In addition to the possibility that the effect of MFP on expenditures and utilization changes over time, other explanations for these differences include unobserved characteristics between the MFP and comparison groups, differences in the MFP participants retained for analysis after matching, and sample size.

Table C.7. Differences in the association between MFP participation and outcomes when using different comparison groups

		Statistically significant association with MFP participation at the 0.05 level	
Target population	Outcome	Contemporaneous transitioners	Pre-MFP transitioners
Older adults	SNF expenditures		X
Mental health conditions subgroup	Total expenditures	X	
	SNF expenditures		X
	Inpatient admission		X
Persons with physical disabilities	Medical expenditures		X
	ED visit, no hospital admission	X	
	Inpatient admission	X	
Mental health conditions subgroup	Total expenditures	X	
	Inpatient expense	X	
	ED visit, no hospital admission	X	
	Any inpatient admissions	X	
2-year outcomes	Total expenditures	X	
	Medical expenditures	X	
Persons with intellectual disabilities	Institutional LTSS	X	
	Medical expenditures	X	
Mental health conditions subgroup	Subacute care facility stay	X	
	Inpatient admission		X
2-year outcomes	Institutional LTSS	X	
	Medical expenditures	X	

Source: Mathematica's analyses of MFP transitioners from 29 states and contemporaneous Medicaid transitioners from 49 states from 2008 through 2011, and transitioners from 49 states before MFP implementation (2006-2008).

APPENDIX D:

QUALITY OF LIFE SURVEY OUTCOMES BY TIME PERIOD, TARGET POPULATION, AND STATE

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State	Overall life satisfaction[a]			Mood status[b]			Satisfaction with care[c]			Any unmet need for personal care[d]		
	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post
ALL STATES (N)	11,600	11,501	5,464	11,619	11,550	5,420	11,607	11,484	5,482	11,739	11,665	5,515
Older adults (%)	60.7	76.0	73.7	44.2	37.3	36.7	76.1	86.8	83.3	17.7	7.0	6.7
People with PD (%)	58.3	77.7	76.9	49.4	41.0	39.4	72.9	86.4	86.2	17.9	7.5	6.6
People with ID (%)	79.6	88.3	91.0	23.8	22.8	21.9	83.9	91.4	94.3	2.3	1.3	0.6
People with MI (%)	65.4	72.5	63.3	46.8	51.3	44.8	75.6	77.5	80.0	16.9	12.5	0.0
Other (%)	56.1	80.9	77.0	44.2	36.6	35.1	67.0	89.2	85.3	11.9	2.5	2.0
Unknown (%)	58.2	77.3	80.3	47.9	39.3	36.7	70.0	86.9	86.9	20.4	5.4	7.2
Excluded participants												
No match (N)	1,354	1,217	229	1,363	1,216	224	1,364	1,228	235	1,375	1,227	230
Out of range (N)	1,850	710	346	1,823	631	300	1,965	929	402	1,864	630	291
ALABAMA (N)	-	-	-	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-	-	-	-
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
ARKANSAS (N)	-	-	-	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-	-	-	-
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
CALIFORNIA (N)	684	678	229	684	675	226	683	672	230	691	683	231
All participants (%)	52.0	77.7	80.3	49.3	36.9	35.4	65.4	85.9	87.4	15.2	5.1	4.3
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	69	17	-	68	16	-	69	16	-	70	17	-
COLORADO (N)	-	-	-	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-	-	-	-
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
CONNECTICUT (N)	1,594	1,594	1,035	1,587	1,597	1,033	1,582	1,567	1,019	1,603	1,607	1,040
All participants (%)	59.9	76.4	75.8	44.9	39.4	38.7	73.8	87.9	87.4	17.3	7.5	7.6

State	Overall life satisfaction[a]			Mood status[b]			Satisfaction with care[c]			Any unmet need for personal care[d]		
	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	27	27	26	27	27	26	27	27	26	27	27	26
DIST. OF COLUMBIA (N)	86	89	66	88	91	67	87	88	66	91	91	67
All participants (%)	81.4	93.3	93.9	21.6	20.9	13.4	81.6	93.2	92.4	7.7	3.3	0.0
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
DELAWARE (N)	-	-	-	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-	-	-	-
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	31	-	-	38	16	-	119	120	56	97	44	20
GEORGIA (N)	509	496	264	509	506	264	507	495	266	514	506	265
All participants (%)	72.1	80.6	90.2	30.6	31.8	17.8	81.7	86.3	95.5	9.5	7.9	2.6
Excluded participants												
No match (N)	22	16	-	23	16	-	22	16	-	23	16	-
Out of range (N)	79	14	-	79	14	-	79	14	-	80	14	-
HAWAII (N)	101	103	47	101	100	47	103	98	46	103	103	47
All participants (%)	57.4	70.9	85.1	35.6	33.0	27.7	72.8	86.7	93.5	14.6	4.9	4.3
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	26	-	-	27	-	-	27	-	-	28	-	-
IOWA (N)	172	162	125	174	161	124	174	160	122	178	168	126
All participants (%)	77.3	84.0	85.6	33.3	35.4	33.1	83.9	89.4	90.2	5.1	3.6	2.4
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	21	19	12	20	19	12	22	19	12	21	20	12
IDAHO (N)	74	74	18	75	74	18	76	75	18	76	75	18
All participants (%)	48.6	79.7	94.4	44.0	47.3	27.8	68.4	86.7	94.4	23.7	12.0	0.0
Excluded participants												

State	Overall life satisfaction[a]			Mood status[b]			Satisfaction with care[c]			Any unmet need for personal care[d]		
	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	13	-	-	13	-	-	13	-	-	13	-	-
ILLINOIS (N)	540	547	325	545	546	313	545	550	325	549	550	326
All participants (%)	59.6	90.1	95.4	38.0	26.2	16.9	68.8	90.2	95.1	7.7	1.3	0.3
Excluded participants												
No match (N)	46	46	-	45	45	-	43	46	-	46	46	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
INDIANA (N)	-	-	-	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-	-	-	-
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
KANSAS (N)	124	120	11	120	122	11	124	120	11	122	123	11
All participants (%)	65.3	82.5	90.9	48.3	39.3	18.2	68.5	92.5	100.0	32.8	4.9	0.0
Excluded participants												
No match (N)	87	88	34	85	88	33	86	88	34	85	88	34
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
KENTUCKY (N)	225	243	104	220	246	101	228	240	103	240	246	110
All participants (%)	60.0	86.4	81.7	34.5	19.9	27.7	66.7	91.7	89.3	16.3	2.8	4.5
Excluded participants												
No match (N)	33	18	-	35	18	-	35	18	-	36	18	-
Out of range (N)	257	34	56	262	34	55	259	33	56	266	35	56
LOUISIANA (N)	40	41	25	41	41	25	41	41	25	41	41	25
All participants (%)	80.0	87.8	100.0	19.5	22.0	24.0	85.4	87.8	96.0	4.9	0.0	0.0
Excluded participants												
No match (N)	73	73	22	73	73	22	73	73	22	73	73	22
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
MASSACHUSETTS (N)	85	78	-	85	84	-	84	85	-	84	86	-
All participants (%)	56.5	78.2	-	40.0	26.2	-	73.8	91.8	-	19.0	1.2	-
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-

State	Overall life satisfaction[a]			Mood status[b]			Satisfaction with care[c]			Any unmet need for personal care[d]		
	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
MARYLAND (N)	50	49	-	49	49	-	50	50	-	50	50	-
All participants (%)	66.0	91.8	-	46.9	53.1	-	74.0	90.0	-	12.0	4.0	-
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
MAINE (N)	11	12	-	12	12	-	12	12	-	12	12	-
All participants (%)	27.3	66.7	-	58.3	58.3	-	33.3	75.0	-	41.7	25.0	-
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
MICHIGAN (N)	136	141	13	142	142	13	139	138	19	142	143	17
All participants (%)	65.4	85.1	76.9	52.8	35.2	61.5	79.1	94.2	57.9	21.8	11.9	23.5
Excluded participants												
No match (N)	242	234	17	249	233	17	246	235	17	254	236	17
Out of range (N)	227	52	-	228	60	-	228	106	-	235	81	-
MISSOURI (N)	339	338	187	341	341	188	339	340	187	342	343	191
All participants (%)	63.1	83.4	81.3	41.6	38.1	39.9	76.1	85.0	87.2	15.5	3.8	2.1
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	40	11	-	40	11	-	40	11	-	40	11	-
MISSISSIPPI (N)	151	147	69	147	146	69	150	147	69	150	147	69
All participants (%)	67.5	89.8	84.1	44.9	36.3	30.4	77.3	89.8	87.0	8.0	1.4	0.0
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
NORTH CAROLINA (N)	65	66	12	68	68	12	66	68	12	68	69	12
All participants (%)	69.2	84.8	50.0	45.6	42.6	8.3	78.8	92.6	83.3	7.4	4.3	0.0
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-

State	Overall life satisfaction[a]			Mood status[b]			Satisfaction with care[c]			Any unmet need for personal care[d]		
	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post
NORTH DAKOTA (N)	63	63	29	63	63	29	63	61	29	62	63	29
All participants (%)	68.3	82.5	93.1	47.6	28.6	44.8	82.5	91.8	86.2	11.3	1.6	3.4
Excluded participants												
No match (N)	22	20	13	22	20	13	22	20	13	23	21	13
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
NEBRASKA (N)	155	144	87	152	143	86	154	146	104	156	147	99
All participants (%)	63.2	91.0	93.1	46.7	32.2	30.2	72.1	91.8	75.0	16.7	2.0	4.0
Excluded participants												
No match (N)	20	13	-	20	14	-	20	17	-	20	16	-
Out of range (N)	69	-	-	67	-	-	68	45	-	72	32	-
NEW HAMPSHIRE (N)	54	54	12	54	54	11	53	54	12	54	54	12
All participants (%)	57.4	87.0	91.7	35.2	53.7	63.6	86.8	90.7	100.0	14.8	3.7	0.0
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
NEW JERSEY (N)	439	442	272	441	446	273	442	445	275	454	452	276
All participants (%)	73.1	83.3	80.9	33.3	30.3	30.8	83.0	88.8	86.9	11.2	2.7	2.9
Excluded participants												
No match (N)	219	182	18	221	185	18	221	184	18	224	186	18
Out of range (N)	54	22	17	55	22	16	54	22	17	56	22	17
NEVADA (N)	26	23	-	26	22	-	26	23	-	26	23	-
All participants (%)	38.5	69.6	-	57.7	50.0	-	69.2	87.0	-	26.9	8.7	-
Excluded participants												
No match (N)	24	18	-	24	18	-	24	18	-	24	18	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
NEW YORK (N)	692	745	326	701	747	324	694	746	330	706	757	332
All participants (%)	53.8	83.0	79.4	47.9	35.5	36.1	68.0	89.3	87.0	12.3	2.9	3.0
Excluded participants												
No match (N)	28	20	-	30	20	-	30	20	-	30	20	-
Out of range (N)	304	13	34	305	13	34	307	12	34	312	13	34
OHIO (N)	945	945	334	945	946	336	943	942	333	944	946	336
All participants (%)	66.8	78.3	77.2	46.5	43.9	39.6	78.5	84.5	85.3	12.5	7.3	6.5

State	Overall life satisfaction[a]			Mood status[b]			Satisfaction with care[c]			Any unmet need for personal care[d]		
	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	18	-	-	18	11	-	18	11	-	18	11	-
OKLAHOMA (N)	201	201	75	201	200	74	202	201	76	203	204	77
All participants (%)	80.1	92.0	93.3	26.9	24.5	28.4	85.6	94.5	93.4	3.0	0.5	1.3
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	69	52	12	70	52	13	68	52	13	70	53	13
OREGON (N)	250	160	68	252	162	69	251	163	69	251	164	70
All participants (%)	51.6	84.4	85.3	54.0	31.5	30.4	62.2	96.9	88.4	28.7	6.7	4.3
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
PENNSYLVANIA (N)	109	107	64	105	108	40	106	110	68	104	111	29
All participants (%)	61.5	83.2	56.3	45.7	32.4	55.0	67.9	88.2	52.9	13.5	6.3	6.9
Excluded participants												
No match (N)	30	27	-	27	23	-	30	26	-	26	20	-
Out of range (N)	183	186	81	138	88	33	202	202	81	90	13	-
RHODE ISLAND (N)	-	-	-	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-	-	-	-
Excluded participants												
No match (N)	49	49	-	49	49	-	49	47	-	49	49	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
SOUTH CAROLINA (N)	12	11	-	12	12	-	12	11	-	12	12	-
All participants (%)	66.7	90.9	-	41.7	33.3	-	75.0	100.0	-	16.7	0.0	-
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
TENNESSEE (N)	595	590	249	595	594	249	595	596	249	595	596	249
All participants (%)	65.0	77.8	77.9	49.4	44.1	41.4	76.3	89.4	87.6	21.8	6.5	8.8
Excluded participants												

State	Overall life satisfaction[a]			Mood status[b]			Satisfaction with care[c]			Any unmet need for personal care[d]		
	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post	Pre	1 Yr post	2 Yr post
No match (N)	14	14	-	14	14	-	14	14	-	14	14	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
TEXAS (N)	951	961	350	953	968	351	951	967	350	953	970	354
All participants (%)	67.7	82.2	86.6	39.6	34.9	31.6	77.4	88.3	90.0	12.7	7.0	4.0
Excluded participants												
No match (N)	211	121	23	212	212	23	212	211	24	212	212	24
Out of range (N)	63	49	12	64	50	12	61	49	12	63	39	12
VIRGINIA (N)	67	69	27	67	69	27	68	69	27	69	70	28
All participants (%)	58.2	91.3	85.2	31.3	15.9	37.0	63.2	97.1	92.6	10.1	2.9	10.7
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	33	34	-	35	34	-	35	34	-	35	34	-
VERMONT (N)	44	38	-	43	38	-	43	38	-	44	38	-
All participants (%)	40.9	63.2	-	72.1	52.6	-	53.5	76.3	-	29.5	13.2	-
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-	-	-	-
WASHINGTON (N)	1,791	1,740	959	1,802	1,746	958	1,792	1,731	958	1,823	1,781	983
All participants (%)	55.6	63.8	64.4	51.7	43.8	44.1	77.5	81.0	81.9	23.3	10.3	8.9
Excluded participants												
No match (N)	126	94	42	128	93	43	128	94	43	128	94	44
Out of range (N)	157	97	50	159	99	51	158	99	50	160	100	51
WISCONSIN (N)	207	214	58	206	215	58	203	214	56	210	215	58
All participants (%)	61.8	74.8	75.9	41.3	39.1	37.9	76.4	88.3	91.1	13.3	4.2	12.1
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	38	-	-	38	-	-	38	-	-	39	-	-
WEST VIRGINIA (N)	-	-	-	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-	-	-	-
Excluded participants												
No match (N)	-	-	-	-	-	-	-	-	-	-	-	-
Out of range (N)	22	20	-	22	20	-	21	20	-	22	20	-

State	Respect and Dignity[e]			Satisfaction with Living Arrangements[f]			Barriers to Community Integration[g]		
	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post
ALL STATES (N)	10,759	9,900	4,655	9,500	10,860	5,225	11,509	11,481	5,425
Older Adults (%)	73.5	88.6	86.5	62.9	92.0	89.6	45.2	31.9	28.8
People with PD (%)	66.9	87.5	88.7	53.9	90.8	89.5	54.9	35.6	31.8
People with ID (%)	81.9	88.4	92.7	76.5	93.6	92.6	35.4	20.3	16.9
People with MI (%)	81.0	90.5	57.1	84.7	80.8	64.0	43.6	37.0	81.0
Other (%)	56.1	80.9	77.0	44.2	36.6	35.1	67.0	89.2	85.3
Unknown (%)	71.1	90.3	87.4	56.3	92.2	92.4	45.3	33.0	28.1
Excluded participants									
No match (N)	1,262	1,011	217	1,136	1,153	220	1,360	1,206	225
Out of range (N)	1,664	479	252	1,614	926	398	1,797	692	314
ALABAMA (N)	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
ARKANSAS (N)	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
CALIFORNIA (N)	636	628	213	576	630	214	675	674	226
All participants (%)	64.8	84.6	85.0	50.9	91.6	94.4	47.4	25.7	27.0
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	65	14	-	59	16	-	68	15	-
COLORADO (N)	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-
Excluded participants									

State	Respect and Dignity[e]			Satisfaction with Living Arrangements[f]			Barriers to Community Integration[g]		
	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
CONNECTICUT (N)	1,504	1,265	813	1,224	1,509	964	1,584	1,579	1,026
All participants (%)	70.3	90.5	89.5	44.4	89.3	86.9	56.6	41.9	37.2
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	26	20	23	19	26	25	27	27	26
DIST. OF COLUMBIA (N)	77	85	66	80	90	67	88	90	66
All participants (%)	87.0	89.4	89.4	68.8	94.4	89.6	39.8	24.4	13.6
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
DELAWARE (N)	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	22	-	-	112	119	55	94	104	48
GEORGIA (N)	511	483	252	436	460	260	506	503	266
All participants (%)	78.1	85.7	93.7	68.3	96.7	95.0	48.8	35.0	27.4
Excluded participants									
No match (N)	23	16	-	18	13	-	23	16	-
Out of range (N)	79	14	-	52	12	-	78	14	-
HAWAII (N)	100	101	46	91	100	47	100	100	47
All participants (%)	75.0	91.1	97.8	70.3	92.0	97.9	48.0	36.0	27.7
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	27	-	-	24	-	-	27	-	-
IOWA (N)	142	133	93	152	159	119	171	166	125

State	Respect and Dignity[e]			Satisfaction with Living Arrangements[f]			Barriers to Community Integration[g]		
	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post
All participants (%)	83.1	81.2	90.3	75.7	91.2	86.6	43.9	31.3	35.2
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	18	19		17	19	12	22	19	12
IDAHO (N)	74	72	17	58	70	18	74	74	18
All participants (%)	59.5	88.9	100.0	51.7	94.3	94.4	58.1	48.6	50.0
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	13	-	-	-	-	-	13	-	-
ILLINOIS (N)	353	310	177	374	493	297	541	541	314
All participants (%)	64.3	90.6	97.2	45.2	95.3	97.0	57.3	14.2	4.5
Excluded participants									
No match (N)	24	30	-	27	42	-	46	45	-
Out of range (N)	-	-	-	-	-	-	-	-	-
INDIANA (N)	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
KANSAS (N)	118	119	11	94	112	-	122	120	11
All participants (%)	73.7	91.6	100.0	54.3	92.0	-	48.4	36.7	0.0
Excluded participants									
No match (N)	84	88	34	77	82	32	85	87	33
Out of range (N)	-	-	-	-	-	-	-	-	-
KENTUCKY (N)	227	220	93	181	237	107	231	245	103
All participants (%)	55.5	95.9	95.7	51.9	97.0	92.5	58.0	13.1	23.3
Excluded participants									
No match (N)	35	17	-	23	18	-	36	18	-
Out of range (N)	255	31	52	177	35	53	257	35	56

State	Respect and Dignity[e]			Satisfaction with Living Arrangements[f]			Barriers to Community Integration[g]		
	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post
LOUISIANA (N)	40	39	24	37	41	25	41	41	25
All participants (%)	87.5	84.6	95.8	70.3	85.4	96.0	34.1	36.6	16.0
Excluded participants									
No match (N)	72	68	22	62	68	21	73	73	22
Out of range (N)	-	-	-	-	-	-	-	-	-
MASSACHUSETTS (N)	78	80	-	61	75	-	85	85	-
All participants (%)	73.1	95.0	-	60.7	96.0	-	56.5	31.8	-
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
MARYLAND (N)	31	44	-	49	48	-	50	49	-
All participants (%)	80.6	93.2	-	75.5	97.9	-	46.0	26.5	-
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
MAINE (N)	11	12	-	-	-	-	12	12	-
All participants (%)	54.5	66.7	-	-	-	-	66.7	41.7	-
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
MICHIGAN (N)	133	122	13	121	126	18	139	137	19
All participants (%)	82.7	91.0	76.9	66.9	97.6	66.7	52.5	51.1	31.6
Excluded participants									
No match (N)	233	206	17	207	213	16	248	229	16
Out of range (N)	219	48	-	179	108	-	226	105	-
MISSOURI (N)	320	276	151	283	321	179	336	342	189
All participants (%)	69.7	87.7	86.1	63.6	90.0	89.4	55.1	38.6	30.2
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-

State	Respect and Dignity[e]			Satisfaction with Living Arrangements[f]			Barriers to Community Integration[g]		
	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post
Out of range (N)	33	-	-	29	-	-	39	11	-
MISSISSIPPI (N)	126	122	64	128	143	61	147	147	68
All participants (%)	83.3	90.2	85.9	60.9	92.3	86.9	83.7	51.7	47.1
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
NORTH CAROLINA (N)	62	65	-	63	66	11	66	65	12
All participants (%)	82.3	90.8	-	63.5	95.5	90.9	37.9	47.7	41.7
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
NORTH DAKOTA (N)	46	43	18	50	61	28	63	63	29
All participants (%)	82.6	95.3	100.0	66.0	88.5	96.4	47.6	31.7	17.2
Excluded participants									
No match (N)	20	15	12	20	20	13	23	20	13
Out of range (N)	-	-	-	-	-	-	-	-	-
NEBRASKA (N)	150	134	82	105	133	94	140	142	97
All participants (%)	60.0	88.8	89.0	46.7	94.0	79.8	44.3	9.9	7.2
Excluded participants									
No match (N)	20	11	-	13	18	-	20	17	-
Out of range (N)	65	-	-	56	44	-	65	39	-
NEW HAMPSHIRE (N)	48	52	12	37	49	11	53	53	12
All participants (%)	89.6	98.1	100.0	75.7	100.0	100.0	37.7	28.3	25.0
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
NEW JERSEY (N)	429	437	267	387	428	261	426	445	272
All participants (%)	79.0	94.3	93.3	65.6	93.5	91.2	51.2	29.0	29.0
Excluded participants									

State	Respect and Dignity[e]			Satisfaction with Living Arrangements[f]			Barriers to Community Integration[g]		
	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post
No match (N)	211	177	16	180	175	16	216	183	18
Out of range (N)	54	21	16	49	21	16	54	21	17
NEVADA (N)	26	22	-	15	21	-	26	23	-
All participants (%)	65.4	86.4	-	46.7	85.7	-	57.7	39.1	-
Excluded participants									
No match (N)	23	17	-	19	18	-	24	17	-
Out of range (N)	-	-	-	-	-	-	-	-	-
NEW YORK (N)	597	625	287	511	672	302	705	751	331
All participants (%)	71.0	86.6	87.8	38.6	92.4	93.0	61.0	32.2	29.9
Excluded participants									
No match (N)	25	18	-	23	19	-	29	20	-
Out of range (N)	273	11	31	240	-	30	310	13	34
OHIO (N)	896	631	254	751	888	310	891	915	326
All participants (%)	71.7	87.3	91.7	65.9	87.2	89.4	45.9	32.7	33.1
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	18	-	-	13	-	-	17	11	-
OKLAHOMA (N)	182	190	72	177	197	72	199	197	75
All participants (%)	87.9	96.3	91.7	72.3	95.4	91.7	45.2	22.3	32.0
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	54	47	13	63	50	12	70	51	13
OREGON (N)	248	163	69	194	153	68	248	163	69
All participants (%)	62.1	87.1	91.3	50.5	98.0	97.1	51.2	36.2	26.1
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
PENNSYLVANIA (N)	98	105	27	90	101	74	102	109	27
All participants (%)	73.5	92.4	88.9	40.0	92.1	70.3	53.9	32.1	29.6

State	Respect and Dignity[e]			Satisfaction with Living Arrangements[f]			Barriers to Community Integration[g]		
	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post
Excluded participants									
No match (N)	25	23	-	25	29	-	25	18	-
Out of range (N)	96	19	13	212	224	93	65	-	-
RHODE ISLAND (N)	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-
Excluded participants									
No match (N)	48	48	-	42	43	-	49	48	-
Out of range (N)	-	-	-	-	-	-	-	-	-
SOUTH CAROLINA (N)	12	12	-	11	11	-	12	12	-
All participants (%)	83.3	91.7	-	63.6	90.9	-	75.0	58.3	-
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
TENNESSEE (N)	588	546	212	502	564	241	595	592	247
All participants (%)	73.8	93.0	90.1	62.2	94.3	91.7	40.0	36.0	31.2
Excluded participants									
No match (N)	13	13	-	12	14	-	14	14	-
Out of range (N)	-	-	-	-	-	-	-	-	-
TEXAS (N)	815	805	313	833	920	344	947	966	353
All participants (%)	78.9	92.8	90.1	73.2	91.8	91.0	44.2	32.0	23.2
Excluded participants									
No match (N)	181	178	20	188	201	24	212	211	24
Out of range (N)	52	40	-	53	39	12	62	39	12
VIRGINIA (N)	67	65	25	49	69	27	65	68	27
All participants (%)	64.2	83.1	84.0	55.1	92.8	88.9	53.8	29.4	33.3
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	30	29	-	27	31	-	34	33	-
VERMONT (N)	42	31	-	34	35	-	44	38	-

State	Respect and Dignity[e]			Satisfaction with Living Arrangements[f]			Barriers to Community Integration[g]		
	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post	Pre	1 Yr Post	2 Yr Post
All participants (%)	64.3	87.1	-	55.9	94.3	-	63.6	52.6	-
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	-	-	-	-	-	-	-	-	-
WASHINGTON (N)	1,761	1,643	894	1,557	1,658	921	1,808	1,743	959
All participants (%)	66.8	81.4	81.7	71.7	90.2	90.0	36.4	30.3	26.9
Excluded participants									
No match (N)	128	91	42	113	82	40	128	92	43
Out of range (N)	158	93	47	134	91	47	160	95	50
WISCONSIN (N)	202	204	56	166	194	51	201	211	58
All participants (%)	78.7	84.8	80.4	61.4	90.7	92.2	42.8	31.8	22.4
Excluded participants									
No match (N)	-	-	-	-	-	-	-	-	-
Out of range (N)	38	-	-	33	-	-	38	-	-
WEST VIRGINIA (N)	-	-	-	-	-	-	-	-	-
All participants (%)	-	-	-	-	-	-	-	-	-
Excluded participants									
No match (N)	21	20	-	14	20	-	22	20	-
Out of range (N)	-	-	-	-	-	-	-	-	-

Source: Mathematica's analysis of MFP Quality-of-Life surveys submitted to CMS through March 2015.

Notes: '-' indicates that a cell is suppressed because the count is less than 11. The tables present only the overall rates, by state, because the small population sizes in many states creates a privacy concern.

The N's shown reflect the number of participants who answered each survey question, by state. The percentages show the % of participants who answered "Yes" to each question, by state, described in more detail in the footnotes for each question.

In the "Excluded participants" rows, the "No match" counts represent the number of records in each state that were excluded because the QoL survey could not be matched to administrative data due to an issue with the Medicaid ID. The "Out of range" counts represent the number of records in each state that were excluded because the QoL survey was

completed outside of the designated timeframe (year one surveys must be conducted within 6-18 months of transition to the community; year two surveys must be conducted within 18-30 months of transition to the community).

[a] The percent of participants who responded "very happy" or "a little happy" to the question "Taking everything into consideration, during the past week, have you been happy or unhappy with the way you live your life?"

[b] The percent of participants who reported feeling sad or blue in the past week.

[c] The percent of participants who responded "very happy" or "a little happy" to the question "Taking everything into consideration, during the past week have you been happy or unhappy with the help you get with things around the house or getting around your community?"

[d] The percent of participants who have any unmet care need in the areas of bathing, eating, medication, and toileting.

[e] The percent of participants who reported being treated with respect and dignity by providers, measured by two questions: "You said that you have people who help you. Do the people who help you treat you the way you want them to?" and "Do the people who help you listen carefully to what you ask them to do?"

[f] The percent of respondents who responded yes to "Do you like where you live?"

[g] The percent of respondents who responded yes to "Is there anything you want to do outside [the facility/your home] that you cannot do now?"

Pre = surveys conducted pre-transition, 1 Yr Post = surveys conducted one year post-transition, 2 Yr Post = surveys conducted two years post-transition, PD = Physical disabilities, ID = intellectual disabilities, MI = serious mental illness

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