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Institutional Level of Care Among Money Follows the Person Participants

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The Money Follows the Person (MFP) Demonstration supports states' efforts to (1) help Medicaid beneficiaries living in long-term care institutions transition back to community-based residences and (2) make long-term care services and supports more accessible. The program promotes community living for long-term institutionalized Medicaid beneficiaries, independent of the level of care required to support their health care needs.

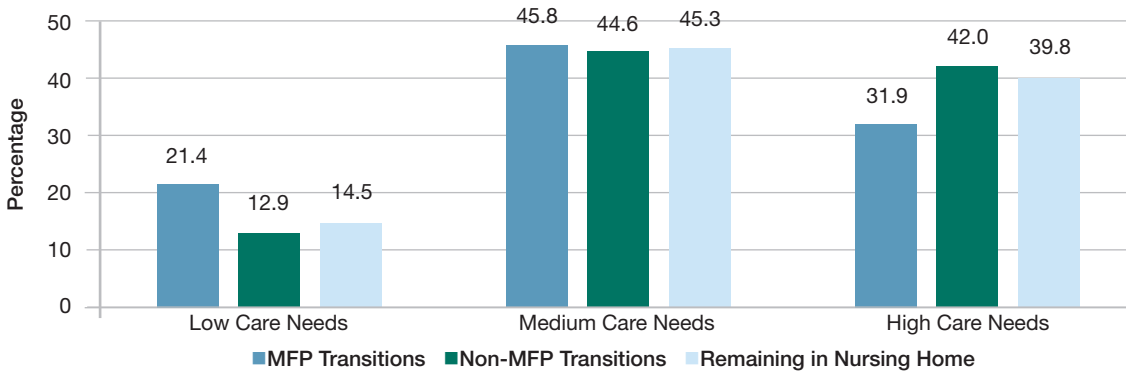
EXECUTIVE SUMMARY

This report is the first to characterize the care needs of MFP participants who transitioned from nursing homes in 2008 and 2009, during the initial phase of the program. Using nursing home Minimum Data Set (MDS) assessment data, we compared the care needs of MFP participants with (1) a cohort of Medicaid long-stay nursing home residents who transitioned to home and community-based services (HCBS) in MFP grantee states but were not enrolled in MFP and (2) a cohort of long-stay residents in MFP states who did not transition. This report provides important information on MFP participants and the types of individuals states are targeting through this program, providing context for program outcomes.

Key Findings

- *Among 3,891 MFP participants transitioning from nursing homes, approximately 21 percent were classified as having low care needs. The proportion of participants with low care needs varied widely by state, from a low of 3 percent (Kentucky) to a high of 72 percent (Illinois).*
- *MFP participants were younger and were more likely to have low care needs compared to others who transitioned without the benefit of the MFP program.*
- *MFP participants were also significantly less likely to be cognitively impaired relative to non-MFP transitioners.*

Figure 1. Care Needs By Transition Status



Sources: MFP Administrative files and Medicaid Analytic eXtract (MAX) data from 2008–2009; MDS 2.0 assessment data from 2007–2009.
Note: Series do not add up to 100 percent due to individuals who could not be classified.

ABOUT THE MONEY FOLLOWS THE PERSON DEMONSTRATION

The MFP Demonstration, first authorized by Congress as part of the Deficit Reduction Act of 2005 and then extended by the 2010 Patient Protection and Affordable Care Act, is designed to shift Medicaid's long-term care spending from institutional care to home and community-based services. Congress authorized up to $4 billion in federal funds to support a twofold effort by state Medicaid programs to (1) transition people living in long-term care institutions to homes, apartments, or group homes of four or fewer residents and (2) change state policies so that Medicaid funds for long-term care services and supports can "follow the person" to the setting of his or her choice. MFP is administered by CMS, which initially awarded MFP grants to 30 states and the District of Columbia and awarded grants to another 13 states in February 2011. Another 3 states received planning grants in March 2012. CMS contracted with Mathematica to conduct a comprehensive evaluation of the MFP demonstration and to report the outcomes to Congress.

INTRODUCTION

By the end of 2011, the MFP program facilitated the successful transition of nearly 20,000 Medicaid beneficiaries from institutional care settings to community-based long-term supports and services (LTSS) (Williams et al. 2012). Among early program participants, those who transitioned through March 2010, 85 percent were able to live in the community for at least a year (Schurrer and Wenzlow 2011). Self-reported quality of life was higher, in some cases substantially so, one year after transition to the community (Simon and Hodges 2011). Although analyses to date suggest that MFP has been a successful program, some of the positive outcomes for the program may be attributable to grantees using MFP to transition individuals with relatively low health care needs who do not necessarily need to receive care in institutional settings.

A study by Mor et al. (2007) found about 12 percent of long-stay nursing home residents had low care needs, and suggested that these individuals are the best candidates for transition to the community.[1] In this study as well as others, *nursing home residents with low care needs* were defined to be those who (1) were in the three lowest Resource Utilization Group (RUG-III) categories, which includes individuals with impaired cognition, behavioral problems, or reduced physical functions and (2) did not require physical assistance in any late-loss activities of daily living (ADLs) (bed mobility, transferring, toileting, and eating) (Ikegami 1997; Mor et al. 2007).[2] This definition of low care includes individuals who have few physical needs, but still may have significant cognitive or behavioral problems.

A key question for the MFP program is whether grantees have used the program to transition low care residents back into the community, or have instead used program resources to support those with higher care needs. There are multiple reasons for why states may have focused their efforts on either lower or higher care need nursing home residents. For example, some states may target their initial MFP transition efforts towards individuals with low care needs when they first start program operations and as they ramp up their programs. However, as programs acquire experience and build up community-based services and supports, individuals with higher care needs may have more opportunities to transition through MFP. On the other hand, because the MFP program provides additional benefits and flexibility not otherwise available to Medicaid programs, MFP participants may also be likely to have higher care needs than individuals who transition to HCBS through other avenues.

[1] Mor et al. define *long-stay* as 90 days or more. During the study period, eligibility for MFP was limited to Medicaid recipients with an institutional stay of at least 180 days who transition to a qualified residence. On March 23, 2010, the guidance changed to institutional stays of at least 90 days, not counting days covered by Medicare. Institutional residences include nursing homes, intermediate care facilities for the mentally retarded, psychiatric facilities, and acute care hospitals. Because assessment data were available only for residents of nursing homes, this study only examines participants who transitioned from nursing homes.

[2] Medicare pays for Part A skilled nursing facility stays based on a prospective payment system that uses information collected on the MDS assessments to categorize residents into resource utilization groups (RUGs) depending on their care and resources needs. The RUG-III consists of 44 distinct groups and was the payment system in place during the study period; it was replaced by RUG-IV beginning in October 2010.

While this paper focuses on national-level estimates of the care needs of MFP participants it is important to recognize that a variety of state-level factors significantly influence MFP programs, and consequently who transitions through MFP in each state. For example, all states had HCBS in place prior to MFP, but their ability to serve participants with more extensive care needs in the community varied significantly (Shirk 2006). This pre-existing variation in state HCBS infrastructure may have significantly influenced the types of individuals targeted by states' MFP programs, at least in the initial years of the program. States that had transition programs in place prior to MFP, such as Texas and Washington, may have used the additional resources of a national demonstration not only to expand their existing programs but also to support higher-need individuals in the community. In these states, we might expect MFP participants to have higher care needs than individuals who transitioned to HCBS via other avenues. Conversely, states that had no or minimal pre-existing transition programs, such as Arkansas and California, may have focused their initial transition efforts on low care individuals. Understanding how the care needs of MFP participants differ from those who transition to HCBS via other avenues therefore provides an important window into the implementation of MFP in each state.

This report is the first to examine MFP participants' pre-transition level of care needs, the clinical characteristics of MFP participants, and the ways in which programs have used the additional resources available through MFP to transition nursing home residents. We compare the pre-transition level of care for (1) MFP participants, (2) long-stay nursing home residents who transitioned to HCBS without MFP, and (3) long-stay residents who remained in nursing home care. We purposely limited this analysis to Medicaid beneficiaries in states participating in the MFP program to facilitate comparison between the three analysis groups. For calendar years 2008 and 2009, we linked MFP administrative data (for MFP participants) or Medicaid enrollment and service use records (for non-MFP transitions or those who remained in nursing homes) from 2008 and 2009 with MDS assessment data. Using the MDS data, we then determined the level of care for each person in each analysis group. Both comparison groups (those who transitioned to the community without using MFP resources and those who remained in nursing home care) included only long-stay nursing home residents (residents with a nursing home stay of 180 days or more), to conform with the length of stay requirement in effect for the MFP program during 2008 and 2009. Long-stay nursing home residents who were enrolled in or used HCBS within three months of the end date of their nursing home stay and who were not enrolled in MFP were classified as non-MFP transitions. The populations included in this analysis represent the first two years of MFP program operation.

POPULATIONS, DATA, AND DEFINITIONS USED IN THIS REPORT

MFP participants in our analytic sample included 3,891 individuals who transitioned from a nursing home by December 31, 2009, and could be matched to an MDS assessment within one year prior to their transition date. This sample represents 95 percent of the 4,078 MFP participants who transitioned from a nursing home through the end of 2009.[3]

To identify an appropriate comparison group for the MFP participants, we used Medicaid Analytic eXtract (MAX) data and MDS assessment records to identify long-stay nursing home residents who transitioned to HCBS without the benefit of the MFP program.[4] A total of 6,819 non-MFP Medicaid enrollees who transitioned from nursing homes to HCBS and had a pre-transition MDS assessment were identified during 2008 and 2009 in the 28 grantee states included in this analysis.[5]

We also sought to understand the level of care for persons eligible for MFP who did not leave institutional care. Therefore, in the 28 grantee states in this analysis, we identified and examined the level of care for 556,975 long-stay nursing home residents enrolled in Medicaid who did not transition to HCBS (either in or outside of MFP), die, or otherwise leave the nursing home during 2008 and 2009.[6] For these

[3] Based on MFP Finders Files data as of November 2011.

[4] See methods section for a description of the services included in our definition of HCBS.

[5] Although there were 30 MFP grantee states during 2008 and 2009, Iowa and the District of Columbia were excluded because they did not transition nursing home residents through MFP during this time period. For Hawaii, Missouri, New Hampshire, New York, North Dakota, Oklahoma, Washington, and Wisconsin, only 2008 data were included because 2009 MAX data were not available at the time this paper was prepared.

[6] See prior footnote about the restricted availability of 2009 MAX data.

participants, we used the latest available MDS record to infer level of care needs.

Using the matched MDS assessment, care levels were determined based on each person's RUG-III group assignment. We identified low care individuals using the definition employed by Ikegami (1997) and Mor et al (2007), that is, individuals who do not require physical assistance in any late-loss ADLs and were in the three lowest RUG-III categories. This definition of low care focuses primarily on physical functioning, and therefore individuals with impaired cognition or behavioral problems who can perform the late-loss ADLs without assistance may be included in the low-care group. The remaining individuals were further subdivided into mutually exclusive medium and high care need groups based on ADL functional abilities and RUG-III assignment. The methods box at the end of this report presents greater detail about the study methods and different groups used in the analysis.

CHARACTERISTICS OF STUDY POPULATIONS

MFP participants were more likely to be male and were younger than those who transitioned through other means or remained in nursing home care (Table 1). Males accounted for 44 percent of MFP participants, but only 33 percent of non-MFP transitioners and 31 percent of those who remained in nursing homes. In addition, MFP participants were strikingly younger on average, with approximately 56 percent of MFP participants under 65 years of age compared to only 30 percent of those who transitioned via other avenues and 18 percent of those who remained in nursing homes.

MFP participants were also more likely to have a longer Medicaid-funded institutional length of stay prior to transitioning compared to those who transitioned without the support of the MFP program (Table 1). Approximately 40 percent of MFP participants had an

TABLE 1. DEMOGRAPHIC CHARACTERISTICS OF STUDY POPULATIONS

Characteristic	Percentage Among MFP Participants (N=3,891)	Percentage Among Transitions to HCBS Outside of MFP (N=6,819)	Percentage Among Those Who Remained In Nursing Home (N=556,975)
Sex			
Male	44.3	33.3	30.9
Female	55.7	66.8	69.1
Age			
< 18 years	0.3	0.4	0.2
18 – 24	1.4	0.7	0.2
25 - 44	10.2	4.6	2.3
45 – 64	43.6	24.1	15.5
65 – 74	19.0	16.7	14.8
75 – 84	16.1	25.0	27.5
85+	9.4	28.6	39.6
Length of Stay Financed by Medicaid			
181 – 365 days	40.2	42.3	16.5
366 – 547	32.8	55.4	11.2
548 – 731	27.0	2.3	72.3

Source: Mathematica analysis of MFP administrative files and Medicaid Analytic eXtract (MAX) data from 2008–2009; MDS 2.0 data from 2007–2009.

Note: Iowa and the District of Columbia were excluded because their MFP programs did not transition nursing home residents through MFP during this time period. The length of stay calculations are restricted to a two-year look back period. In addition, Medicaid long-term care claims records are the only source data used to determine the length of stay. Hence, these data only reflect the length of stay financed by Medicaid and do not include days covered by Medicare, private insurance, or out of pocket. In addition, lenght of stay calculations for MFP participants are restricted to individuals who could be found in the MAX analytic file (n = 2,385).

institutional stay between 181 and 365 days, compared to 42 percent of non-MFP transitioners. Only 17 percent of those who remained in the nursing home fell into this category. Notably, 27 percent of MFP participants had an institutional stay of between 548 and 731 days, compared to only 2.3 percent of non-MFP transitioners. Those who remained in the nursing home were most likely to be in this category, accounting for 72 percent of this group.

MFP participants did not differ significantly in the number of active diagnoses noted on their MDS assessments relative to individuals who were non-MFP transitioners or who remained in nursing homes.[7] Overall, MFP participants had an average of 3.4 (standard deviation [SD] = 0.2) active diagnoses identified on the MDS, compared to 3.6 and 3.7 diagnoses among individuals who transitioned to HCBS via other avenues and those who remained in a nursing home (SD of 0.2 and 0.2, respectively).

Similarly, a consideration of the five most common diagnoses for MFP participants (hypertension, depression, diabetes, stroke, and Alzheimer's/other dementias) found few differences between MFP participants and those in the two comparison groups. Compared to other HCBS transitioners and those who remained in nursing homes, MFP participants had slightly higher rates of diabetes and lower rates of hypertension. Rates of depression and stroke were comparable across the study populations. These same conditions have also been identified as among the most common for the nursing home population in general, so these similarities are unsurprising (Kasper and O'Malley 2007).

An exception to this pattern emerged with respect to cognitive impairments, however. We found that individuals who transitioned through MFP had markedly lower rates of dementia than other HCBS transitioners and those who remained in nursing homes (Figure 2). Similarly, severe cognitive impairment, as measured through the MDS-based Cognitive Performance Scale (CPS) was substantially lower for MFP participants than for members of the other groups in this study (Morris et al. 1994).[8] Given the differences in mean age among the comparison groups, these findings are not unexpected.

[7] MDS coders are instructed to identify only active diagnoses on the MDS assessment.

[8] Severe cognitive impairment is defined as a CPS score of 5 or 6.

Finally, although the overall prevalence was low across each population (<5 percent), rates of highly disabling conditions such as quadriplegia, paraplegia, and traumatic brain injury were higher among MFP participants than among other individuals who transitioned to HCBS and those who remained in a nursing home (data not shown).

CARE NEEDS AMONG NURSING HOME RESIDENTS

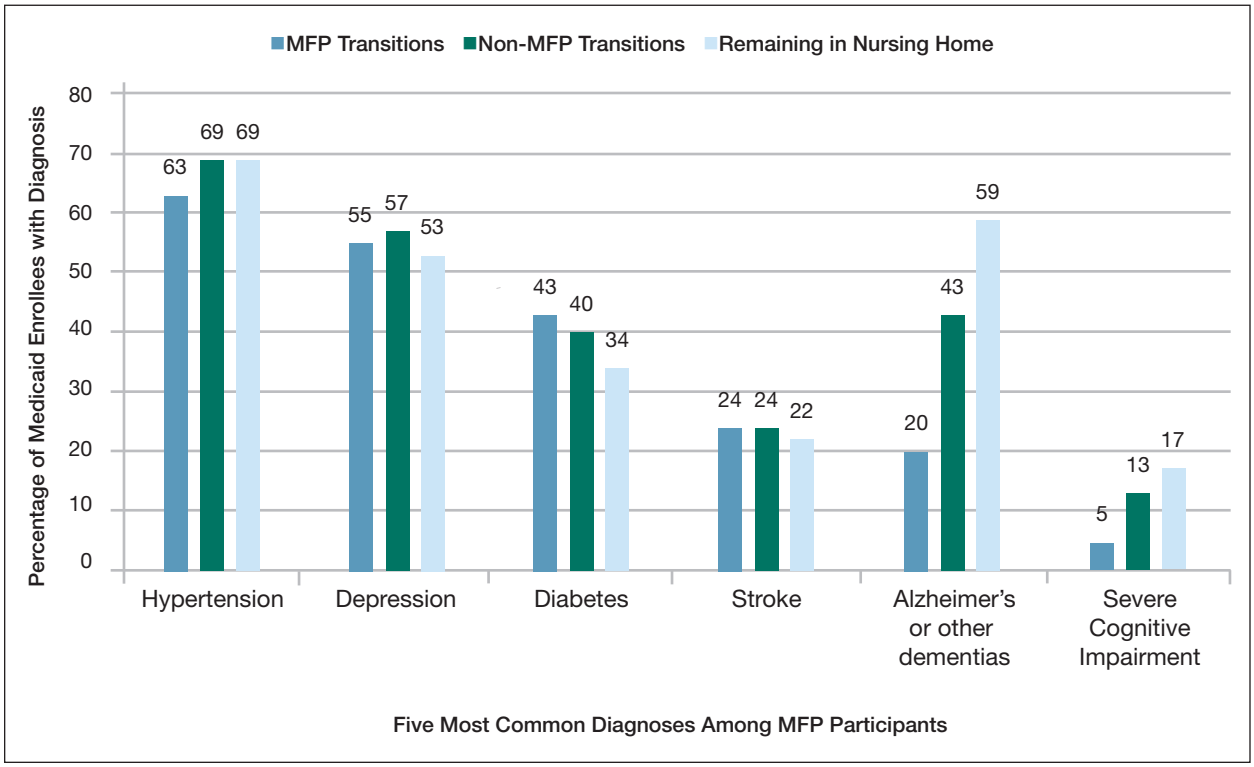
Overall, MFP participants disproportionately had low care needs (21 percent) compared to those who transitioned to HCBS via other avenues (13 percent) or remained in nursing homes (15 percent) (Table 2). Nearly half of MFP participants were classified as having medium care needs (46 percent), with the balance of participants classified as having high care needs (32 percent) or not categorized due to missing or invalid MDS values (<1 percent). Non-MFP transitioners and those who remained in nursing home care were more likely to have medium or high care needs than MFP participants.

VARIATIONS IN CARE LEVELS ACROSS STATES

Although it appears that at the national level the MFP demonstration is disproportionately transitioning people with low levels of need for care, the national average masks considerable variation among grantee states, as shown in Figure 3. Of the 20 states that had more than 30 MFP nursing home transitions by the end of 2009, only seven MFP programs were transitioning a disproportionately high percentage of individuals with low care needs via MFP. Among these seven, Illinois was an outlier; more than 70 percent of its MFP participants had low care needs and the state had the highest proportion of low care individuals in all three populations considered (MFP, non-MFP transitioners, and nursing home residents who did not transition). In Texas, which represented one-third of the sample, 30 percent of the MFP transitioners were classified as having low care needs. When Texas is excluded from the analysis, 17 percent of MFP participants are classified in the low need group.

Conversely, MFP participants in 13 grantees were well below the national average and relatively few have low care needs. In particular, the MFP programs in Kentucky (3 percent), Michigan (8 percent), and Wisconsin (8 percent) transitioned proportionally few low care individuals via their MFP programs.

Figure 2. Diagnoses Among MFP Participants, Non-MFP Transitioners, and Those Who Remained in Nursing Homes



Sources: Mathematica analysis of MFP administrative files and Medicaid Analytic eXtract (MAX) data from 2008–2009; MDS 2.0 assessment data from 2007–2009.
Note: Diagnoses are recorded on matched MDS assessment. Only active diagnoses related to current functional, cognitive, mood, and behavior status were indicated on the MDS 2.0 assessment form.

TABLE 2. LEVEL OF INSTITUTIONAL CARE NEEDS AMONG LONG-STAY NURSING FACILITY RESIDENTS BY TRANSITION STATUS

Analysis Group	Total (N)	Percentage Low Need	Percentage Medium Need	Percentage High Need
Transitioned Through MFP	3,891	21.4	45.8	31.9
Transitioned to HCBS Outside of MFP	6,819	12.9	44.6	42.0
Remained in Nursing Home	556,975	14.5	45.3	39.8

Source: Mathematica analysis of MFP administrative files and Medicaid Analytic eXtract (MAX) data from 2008–2009; MDS 2.0 data from 2007–2009.

Note: Percentages for each population do not add up to 100 percent because a small percentage of individuals could not be assigned a level of care because of missing or out-of-range MDS values.

Comparing the care needs of MFP participants within each state to those of non-MFP transitioners and residents who remain in nursing home care in the same state also provides an important window into how states are utilizing MFP resources. A close inspection of Figure 3 illustrates three general patterns across the 20 states in this segment of the analysis. The first general pattern is illustrated by eight states: Arkansas, Connecticut, Illinois, New Hampshire, New York, Pennsylvania, Texas, and Virginia. In these states, MFP

Figure 3. Proportion of Residents with Low Care Needs Among MFP Participants, Non-MFP HCBS Transitioners, and Those Who Remained in Nursing Homes

Source: Mathematica analysis of MFP administrative files and Medicaid Analytic eXtract (MAX) data from 2008–2009; MDS 2.0 data from 2007–2009.

Notes: Eight states with fewer than 30 MFP transitions from nursing homes during 2008 and 2009 were excluded from this comparison. The sample populations include 3,733 MFP participants, 10,987 non-MFP HCBS transitioners, and 726,678 individuals who remained in nursing home care.

program participants transitioning from nursing homes have the highest rate of low care needs, followed by non-MFP transitioners, and residents who remain in the nursing home. As a result, residents who remain in nursing home care tended to have the greatest care needs in these states.

The second pattern is seen in four states, California, Georgia, Missouri, and Ohio. MFP programs in these four states were also transitioning people who had lower needs than those who transitioned without the benefit of the MFP program or remained in the nursing home. However, in these four states, the group that remained in the nursing home had disproportionate numbers of residents with low care needs when compared to the non-MFP transitioners.

The third pattern is seen in eight states of the 20 states in this segment of the analysis, including Indiana, Kansas, Kentucky, Maryland, Michigan, Oregon, Washington, and Wisconsin. The MFP programs in these states were transitioning disproportionately fewer individuals with low care needs compared to those who transitioned without the benefit of the MFP program. Similar to the first group, the individuals who remained in the nursing homes were generally least likely to have low care needs, with the exception of Wisconsin, Michigan, and Kentucky.

DISCUSSION

Overall, we found that while the MFP program was starting up during 2008 and 2009, MFP grantees transitioned a larger proportion of nursing home residents with low care needs compared with other nursing home residents in the same states who transitioned to Medicaid-funded HCBS without the benefit of the MFP program. The finding that the MFP program was initially used by many states to transition those with the lowest care needs is unsurprising, as the individuals in our study may have had fewer barriers to a successful transition to community-based LTSS and MFP was able to facilitate their transition back to the community. This finding is consistent with the younger age demographic and lower levels of cognitive impairment found among MFP participants relative to those who transitioned via other avenues.

In other data analyses not presented here, we found that 13 percent of all long-stay nursing home residents from the 30 MFP grantee states had low care needs in 2008. A similar percentage of long-stay nursing home residents were classified as low care in 2009.This finding is consistent with the recent work of Mor et al. (2007), who reported a similar percentage of long-stay nursing home residents with low care needs using 2005 data. However, this finding also indicates that, as of 2009, MFP and other transition programs had yet to make a measurable impact on the prevalence of nursing home residents who had low care needs, which represents an opportunity for growth for the MFP program.

Although MFP transitioned a disproportionate number of nursing home residents with low care needs, MFP grantees' pre-transition level of care needs varied widely across states and several grantees transitioned a large proportion of individuals with very high care needs. In particular, more than half of all transitions from Kentucky, Oregon and Wisconsin through 2009 were individuals with the highest care needs. These three states, along with Indiana, Kansas, Maryland, Michigan, and Washington, appeared to be using the MFP program to transition higher care need nursing home residents compared to those who transitioned to HCBS via other avenues. One explanation for this pattern is that some states may have parallel transition efforts that serve those of low care needs. In these states MFP programs may be testing the notion of who can transition to community living, as well as testing the capacity of existing HCBS to enable higher-need individuals to live in the community. Alternatively, in these states it is also possible that there are political, economic, or other similar factors that have influenced MFP programs to focus on transitioning higher need individuals.

Although some MFP programs appear to be focused on transitioning those with the highest needs, other programs appear to be focused on transitioning low care need individuals.[9] In particular, among states with at least 30 MFP nursing home transitions by the end of 2009, Arkansas, Illinois, and Texas had the highest proportion of low care need MFP participants, followed by Connecticut, Kansas, Missouri, and New York. With the exception of New York, these states also had high rates of long-stay nursing home residents with low care needs in general (data not shown). Illinois was again the clear outlier, with 30 percent of its overall long-stay nursing home population identified as low care, followed by Missouri (23 percent)

[9] As noted previously, the definition of low care does include individuals with cognitive impairments and behavioral problems.

and Kansas (17 percent). In these states, it seems likely that MFP resources were focused on transitioning individuals currently in institutional care who could be served in the community with relative ease. The differences seen between MFP participants and others who do or do not transition to community-based care may also be partly explained by other factors such as the housing options available to the different groups. For example, most MFP programs provide additional resources for locating housing that is affordable and accessible. People in the other groups assessed in this study may not have had this type of assistance available to them or had a different type of assistance and, therefore, had a different array of housing options available to them. The semiannual progress reports that MFP grantee states submit and a series of interviews conducted with 10 program directors revealed that the lack of affordable, accessible housing is the single greatest barrier to moving more people out of institutions (Williams et al. 2012 and Lipson et al, 2011).

Given that Illinois was such an outlier during the study period, we conducted additional analyses with the Illinois data. Our understanding of the Illinois MFP program and nursing home care in the state led us to believe that this particular program was focusing resources on transitioning individuals with significant mental health needs but with few needs for assistance with ADLs. Examination of the MDS data for Illinois MFP participants indeed showed that the state transitioned a disproportionately large portion of individuals with mental illness, with 37 percent of participants having a diagnosis of schizophrenia, compared to 4 percent diagnosed with schizophrenia among all MFP participants nationally.

The overall results from the first two years of program operation suggest that the care needs of persons transitioned to the community vary across states. The differences in level of care between MFP and non-MFP transitioners suggest that, in some states, there is specific targeting of MFP toward individuals with a specific level of care need. As the program progresses, and as states gain experience and put more resources into strengthening HCBS programs, it will be useful to examine whether MFP programs begin to transition greater numbers of high care need individuals.

This descriptive analysis of pre-transition level of care needs provides important context for understanding the MFP program's progress and success, but several important limitations should be noted. First, the non-MFP transitioners differ from the MFP participants in important ways. This analysis did not attempt to match samples by age, gender, or health status. Although we did examine differences in length of stay, our findings are limited to the portion of the institutional stay paid for by Medicaid, and are limited to the two-year data period utilized in these analyses. In addition, although we excluded from our non-MFP transition group individuals who used Medicaid-funded hospice services after transitioning, the data sources used in this report did not allow us to identify and exclude hospice use provided under Medicare. We plan to explore the impact of these limitations in future work. We also note that these findings are limited to the early program participants as we only included individuals who transitioned through 2009. Although this work provides important initial insight into potential differences in MFP participants across states, we did not test for statistical significance and observed trends are likely subject to some degree of random variation.

As the program matures, we will continue to examine how the level of care needs among MFP participants changes. In addition to monitoring whether states that transitioned more low care need individuals in the early stages of the program begin to shift resources to other populations, we will also investigate whether the change in program eligibility from 180 to 90 days in March 2010 affects the level of care need observed among MFP participants. If the level of care need is related to length of stay, then we may observe that MFP participants with shorter stays have different care needs than those in institutional care for longer periods. Additional future work will examine reinstitutionalization rates, quality of care, satisfaction, and mortality rates by pre-transition level of care need for MFP and non-MFP transitioners, using statistical controls for differences between groups. Our evaluation will also use multivariate approaches to measure the utility of pre-transition level of care as a predictor of successful transitions.

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DATA AND METHODS

Data Sources

This study relied on data from (1) the MFP administrative data; (2) the Medicaid Analytic eXtract (MAX) and Beta-MAX eligibility, long-term care, and other services files; and (3) Minimum Data Set (MDS) 2.0 assessment records. For the MFP participants, we derived information on gender, age, institutional setting, start and end dates of program participation, and reason for leaving the program from the 2008–2009 MFP administrative data (the MFP Finders and Program Participation Data files). For non-MFP transitioners and individuals who remained in the nursing home, information on age, gender, use of nursing home services, and transition to HCBS was identified from MAX and Beta-MAX data. Level of care and current diagnoses were derived from the MDS assessments.

Identifying Analysis Groups

The MFP sample included all participants in the MFP Finders files who could be matched to an MDS assessment that occurred no earlier than a year before their transition date, and who were identified as transitioning from a nursing home in the MFP Program Participation Data files.

The nursing home long-stay residents included all individuals who had MAX long-term care claims for services that spanned at least 181 days of continuous care, for whom the last month of care was identified as occurring in a nursing home. The sample was also restricted to individuals who could be matched to an MDS assessment in the prior year. This sample was then used to construct the groups of non-MFP transitioners and individuals who remained in nursing homes, as follows:

- Non-MFP transitioners were identified by use or enrollment in Section 1915(c) waiver services or state plan HCBS (including personal care, home health for at least three months, home-based private duty nursing, residential care, or adult day care, but not hospice care) within three months following the institutional stay end date. All MFP participants were excluded from this subgroup.
- The population who remained in the nursing home included all long-stay nursing home residents who (1) did not transition to community living, (2) were still alive, and (3) had MAX long-term claims for nursing home services through the end of the year.

Defining Level of Care

The level of care information was determined using MDS 2.0 assessments from 2007 to 2009 that were matched either by Social Security number (SSN), gender, and birth date or SSN, gender, Medicaid Statistical Information System (MSIS) ID, and two of three date of birth fields. In addition, our matching criteria sought to identify the most recent MDS assessment that had complete RUG grouper variables and an assessment reference date no earlier than a year prior to the individual's transition or end of institutional care date. In general, the MDS assessment evaluated to determine each participant's level of care need was relatively recent, with an average of 53.8 days between the assessment reference date and date of transition.

We used the CMS-provided software to assign a RUG-III group to matched MDS assessments, and then assigned level of care categories as shown in Table 3.[10] Low care was defined as assignment to any of the following RUG groups: Impaired Cognition, Behavior Problems, or Reduced Physical Function and included participants who required no physical assistance in any of the late-loss ADLs of bed mobility, transferring, eating, or toilet use. This definition results in any of the following RUG-III groups meeting the definition of low care: IA1, IA2, BA1, BA2, PA1, and PA2. Medium care included the following RUG-III groups: Rehabilitation (Low, Medium), Extensive Services, Clinically Complex, Impaired Cognition (those with any dependence in late loss ADLs), Behavior Problems (those with any dependence in late loss ADLs) and Reduced Physical Function (those with moderate ADL impairment). The high care category included the following RUG-III groups: Rehabilitation (High, Very High, Ultra High), Extensive Services with highest ADL impairment, Special Care with highest ADL impairment (SSC), Clinically Complex with highest ADL impairment (CC1, CC2, CB1, CB2) and Reduced Physical Function with highest ADL impairment (PE1).

[10] RUG-III grouper software is available at https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MDS20SWSpecs/RUG-IIIVersion512GrouperPackageFiles.html

TABLE 3. RUG-III GROUPS MAPPED TO LEVEL OF CARE CATEGORIES

Care Need Level	RUG-III Group Description / ADL Score	RUG-III Group
Low	Cognitive Impairment with Nursing Rehab / ADL 4 - 5	IA2
	Cognitive Impairment / ADL 4 - 5	IA1
	Behavior Problem with Nursing Rehab / ADL 4 - 5	BA2
	Behavior Problem / ADL 4 - 5	BA1
	Reduced Physical Function with Nursing Rehab / ADL 4 - 5	PA2
	Reduced Physical Function / ADL 4 - 5	PA1
Medium	Rehabilitation Medium / ADL 15 - 18	RMC
	Rehabilitation Medium / ADL 8 - 14	RMB
	Rehabilitation Medium / ADL 4 - 7	RMA
	Rehabilitation Low / ADL 14 - 18	RLB
	Rehabilitation Low / ADL 4 - 13	RLA
	Extensive Special Care 1 / ADL > 6	SE1
	Special Care / ADL 4 - 14	SSA
	Clinically Complex / ADL 4 - 11	CA1
	Clin. Complex with Depression / ADL 4 - 11	CA2
	Physical Function with Nursing Rehab / ADL 11 - 15	PD2
	Physical Function / ADL 11 - 15	PD1
	Cog. Impairment with Nursing Rehab / ADL 6 - 10	IB2
	Cognitive Impairment / ADL 6 - 10	IB1
	Behavior Problem with Nursing Rehab / ADL 6 - 10	BB2
	Behavior Problem / ADL 6 - 10	BB1
	Physical Function with Nursing Rehab / ADL 9 - 10	PC2
	Physical Function / ADL 9 - 10	PC1
	Physical Function with Nursing Rehab / ADL 6 - 8	PB2
	Physical Function / ADL 6 - 8	PB1
High	Rehabilitation Ultra High / ADL 16 - 18	RUC
	Rehabilitation Ultra High / ADL 9 - 15	RUB
	Rehabilitation Ultra High / ADL 4 - 8	RUA
	Rehabilitation Very High / ADL 16 - 18	RVC
	Rehabilitation Very High / ADL 9 - 15	RVB
	Rehabilitation Very High / ADL 4 - 8	RVA
	Rehabilitation High / ADL 13 - 18	RHC
	Rehabilitation High / ADL 8 – 12	RHB
	Rehabilitation High / ADL 4 - 7	RHA
	Extensive Special Care 3 / ADL > 6	SE3
	Extensive Special Care 2 / ADL > 6	SE2
	Special Care / ADL 17 - 18	SSC
	Special Care / ADL 15 - 16	SSB
	Clin. Complex with Depression / ADL 17 - 18	CC2
	Clinically Complex / ADL 17 - 18	CC1
	Clin. Complex with Depression / ADL 12 - 16	CB2
	Clinically Complex / ADL 12 - 16	CB1
	Reduced Physical Function with Nursing Rehab / ADL 16 - 18	PE2
	Reduced Physical Function / ADL 16 - 18	PE1

Source: Mathematica summary of information contained in RUG-III grouper software.
Note: ADL = Activities of daily living.

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