

# Transitioning Residents from Nursing Homes to Community Living

## Impact of Washington State’s Roads to Community Living (RCL) Demonstration on Medicaid Long-Term Services and Supports Costs

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Report to the DSHS Aging and Long-Term Support Administration

**R**OADS TO COMMUNITY LIVING (RCL), which is part of the federally funded “Money Follows the Person (MFP)” program, is a demonstration project in Washington State designed to help people with complex, long-term care needs move from institutions back into the community. Under RCL, Medicaid beneficiaries who reside in a nursing facility for at least 90 days receive services to support their transition to a community-based care setting of their choice.

### Key Findings

**Relative to a matched comparison group, Medicaid savings for the 1,738 RCL treatment group clients were \$21.5 million (all funds) from the month of entry into the RCL program through the 24-month follow-up period.**

- Nursing home cost savings more than offset RCL demonstration services costs and the increased use of home- and community-based services by the RCL group.
- Substantial added savings are likely accruing beyond the 24-month follow-up period used in this study.

### Overall Cost Impact Summary

ALL FUNDS

Nursing Home Savings	– \$46.2 million
Community Residential Services	+ 8.5 million
In-Home Services	+ 11.9 million
RCL Demonstration Services	+ 4.3 million
<b>NET SAVINGS</b>	<b>– \$21.5 million</b>

Represents the overall cost difference between the 1,738 clients in the RCL treatment group and the 1,738 clients in the matched comparison group, from the entry month through the 24-month follow-up period.

**RCL clients transitioned from nursing facility to community settings at a far higher rate than the comparison group.**

- Nursing home residents in the RCL treatment group were almost twice as likely to transition to the community within 6 months, relative to the comparison group (66 percent vs 35 percent).
- Among clients transitioning to the community, subsequent rates of nursing home reentry were slightly lower for the RCL treatment group, but the difference was not statistically significant.
- Mortality rates at the 12- and 24-month follow-up points were slightly lower for RCL clients, but differences were not statistically significant.
- Inpatient hospitalization rates in the 24-month follow-up period were comparable between RCL treatment group and matched comparison group.

## Background

The supports provided by the RCL demonstration include: (1) a person-centered care plan tailored to individual needs, (2) services and support needed to move from an institutional care setting and successfully live in the community, and (3) access to additional services and supports not available through existing Medicaid waivers for one year after the person has moved into the community. For example, the community choice guide provides intensive one-on-one relocation support as authorized by the DSHS case manager, which includes services such as: conducting an RCL pre-transition consultation with potential participants; locating and arranging for appropriate and accessible housing; setting up the participant's new home, including services such as arranging utility hook-ups and the acquisition of furnishings and household goods; and helping the participant to access health services in the community (1-3). After exhausting the 365 days of eligibility for RCL demonstration services, participants continue to receive home and community-based services (HCBS) through the state plan and 1915(c) waiver program.

Lessons learned from the RCL demonstration can help inform the future of long-term services and supports (LTSS) delivery and financing in Washington State. Because the demonstration was expected to help rebalance Medicaid LTSS usage from institutional to community settings, this policy brief examines impacts on rates of transition from nursing facility to HCBS services, and the associated impact on overall LTSS costs. We also explore rates of inpatient hospital admissions and mortality, and rates of nursing home reentry following community transition.

## Methods

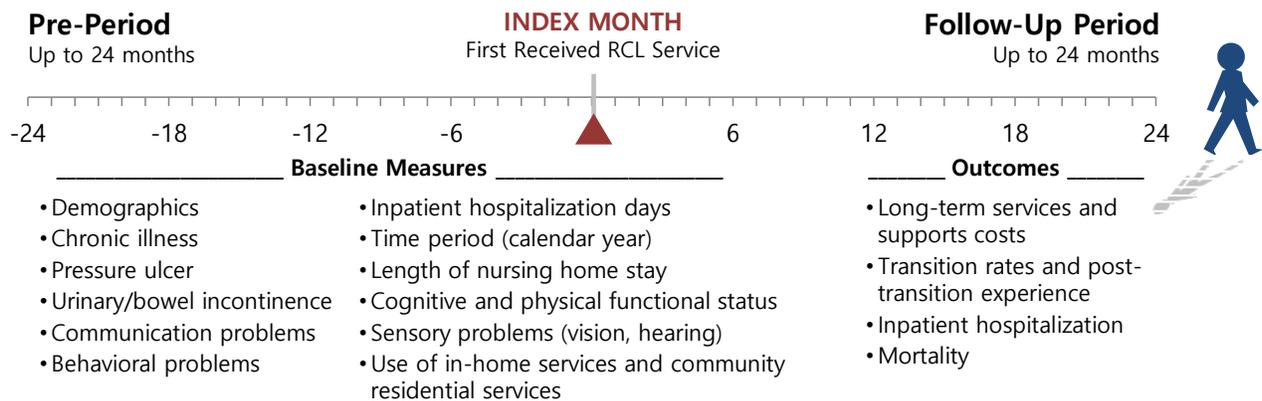
This study focused on nursing home residents who were eligible for the RCL demonstration (living in a nursing home for at least 3 months and receiving Medicaid to pay for care) and who first received RCL services between October 1, 2010 and December 31, 2013 (the "intake window"). We leveraged the availability of comprehensive longitudinal administrative data to create a comparison "matching frame" of months of service associated with nursing home residents who met eligibility criteria but did not participate in the RCL demonstration in the intake window, the baseline "pre period", or the follow-up period.

Propensity score matching was used to select from the "matching frame" the nursing home residents who most closely matched an RCL treatment group member at the point in time when the treatment group member began receiving RCL services. The full set of variables used for propensity score matching is listed in Appendix Table 1. The treatment and comparison groups were well-matched based on standard criteria. For clients in the RCL treatment group, an "index month" was defined as the month of first receipt of an RCL service. For clients in the comparison group, the index month refers to the selected time point when their baseline experiences closely matched a treatment group member.

We then examined the impact of the RCL demonstration on Medicaid LTSS costs, comparing the LTSS costs between the RCL treatment group and matched comparison group from the index month through a 24-month follow-up period. The net financial impact of the RCL demonstration was calculated based on the difference in total costs (including LTSS costs and RCL demonstration services costs). We also compared rates of transition to the community within 6 months of the index month between clients who received RCL services and the matched comparison group. For those who transitioned to community, the post-transition outcomes (nursing facility return rates within 6 months of transition, and rates of returning to the community within 6 months of reinstitutionalization) were examined. We also investigated differences in mortality rates and inpatient hospitalization rates in the 24-month follow-up period.

FIGURE 1.

## Study Timeline



## Client Characteristics Before and After Propensity Score Matching

We identified 1,738 nursing home residents who first received RCL services between October 1, 2010 and December 31, 2013, and a comparison matching frame associated with nursing home residents who met eligibility criteria but did not participate in the demonstration. To help ensure comparability with the RCL group, the comparison matching frame was restricted to clients with a community discharge preference identified in their current Minimum Data Set (MDS) assessment and who were referred for regular community placement services. These restrictions reduced the size of the comparison matching frame from 316,101 potential person-months to 6,999 person-months.

Prior to matching, compared to residents in the comparison matching frame, residents participated in the RCL demonstration were younger, less likely to have dementia (22 percent vs. 33 percent), less likely to have urinary/bowel incontinence (33 percent vs. 47 percent), less dependent in ADLs (ADL score: 11.2 vs. 14.4), and more like to be cognitively intact (78 percent vs. 67 percent). Propensity score matching resulted in 1,738 RCL treatment-group members and 1,738 comparison-group members. There was a high degree of similarity in client characteristics after matching (see Appendix Table 1), with absolute standardized differences generally less than 0.10.

FIGURE 2.

## Age Distribution

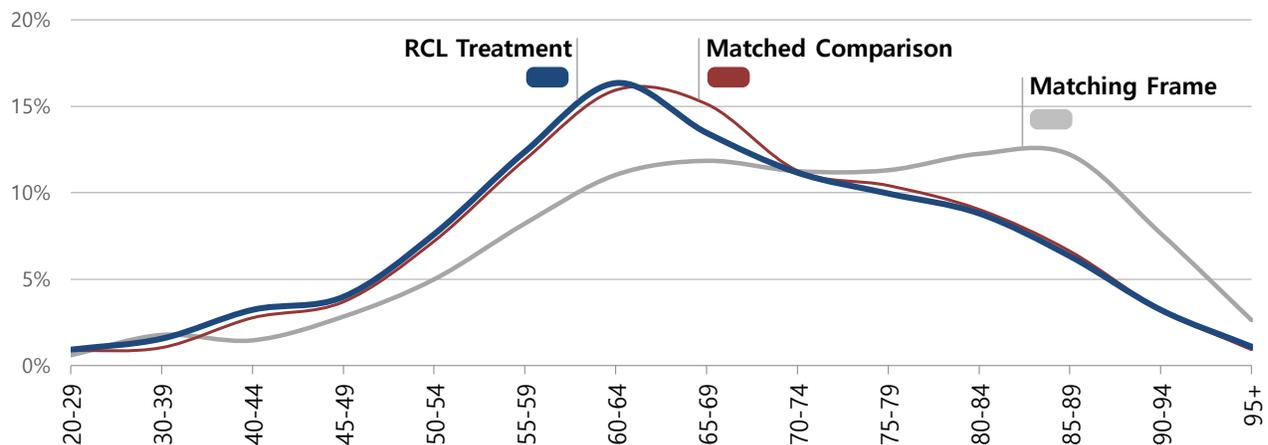
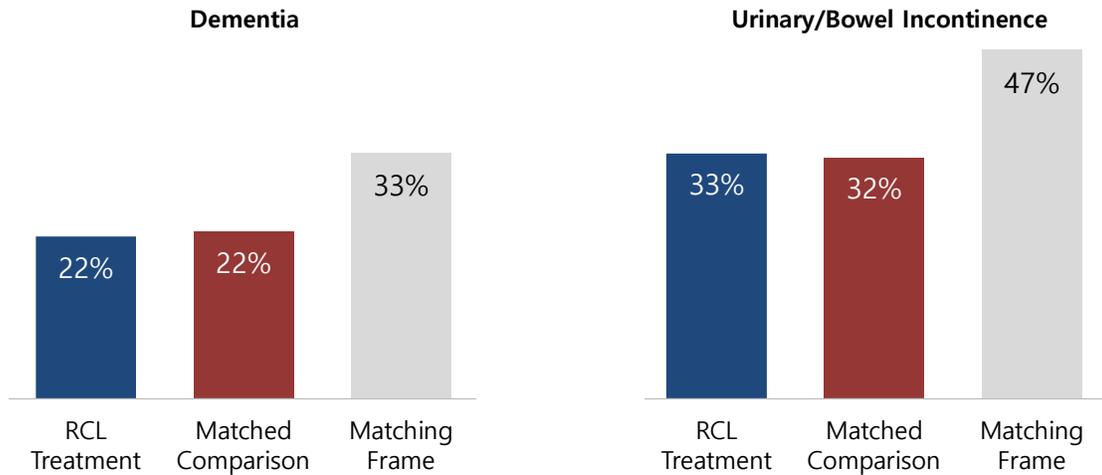


FIGURE 3.

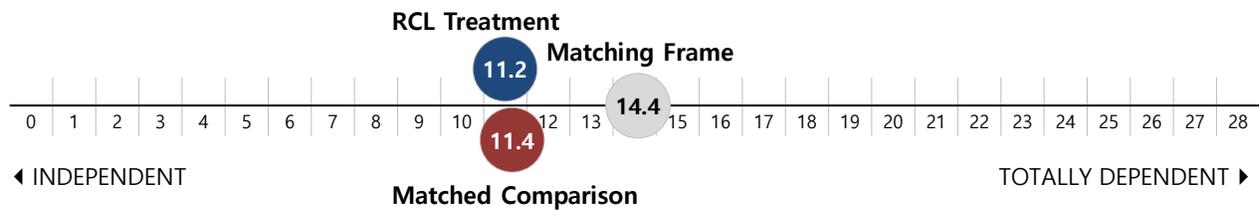
### Balance on Selected Health Conditions



Source: Baseline MDS assessment data.

FIGURE 4.

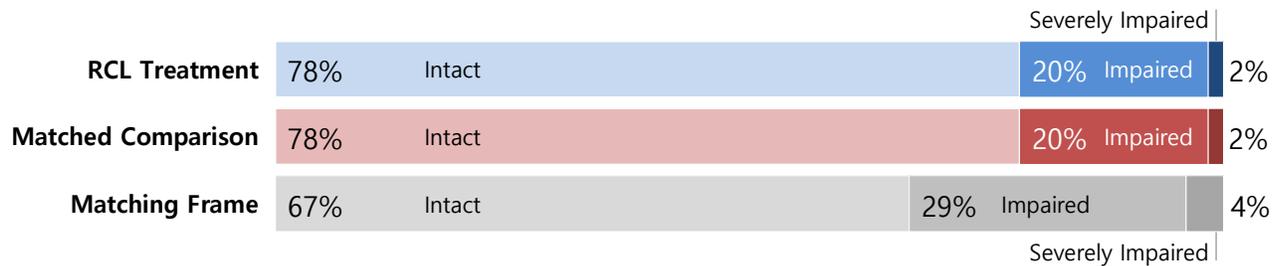
### Activities of Daily Living Score



Source: Baseline MDS assessment data.

FIGURE 5.

### Cognitive Performance Scale Category



Source: Baseline MDS assessment data.

# Overall Cost Impacts

FIGURE 6.  
LTSS Costs and RCL Demonstration Services Costs

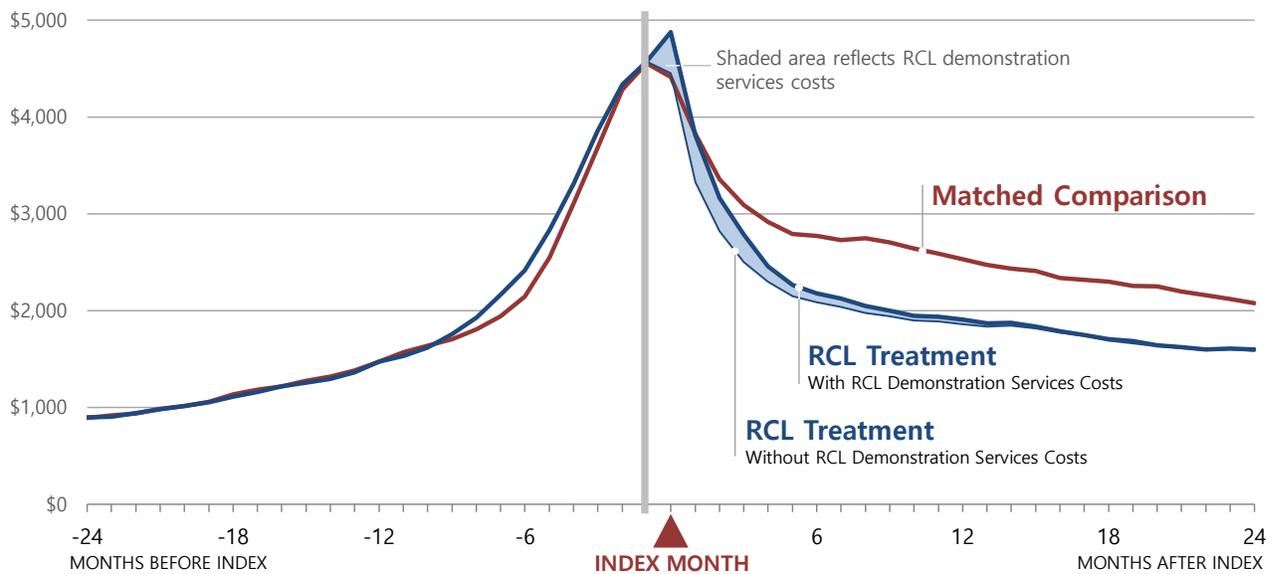
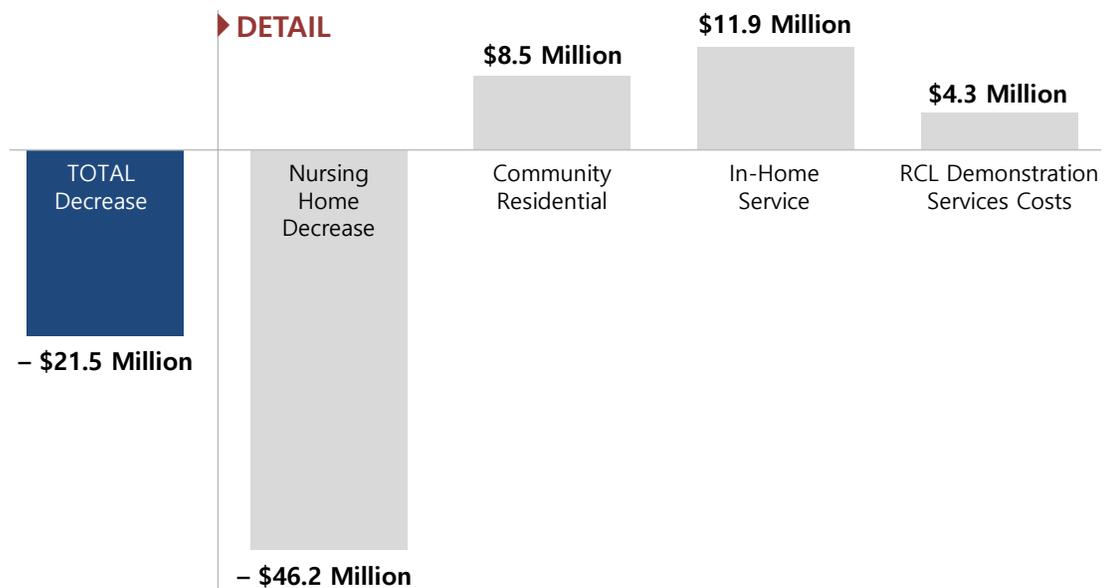


FIGURE 7.  
Overall Cost Impact Summary  
All Funds



In the pre-period, the average LTSS costs for RCL participants closely resembled the average LTSS costs for members in the matched comparison group. Starting from the 1<sup>st</sup> month after the index month, the LTSS costs (excluding RCL demonstration service costs) were significantly lower in the RCL treatment group than in the matched comparison group. The average RCL demonstration services costs (shaded area, Figure 6) were highest in the index month (\$427) and in the first 4 months after the index month and decreased quickly afterwards.

Figure 7 shows the decomposition of the cost differences between the 1,738 matched pairs over the index month and the 24-month follow-up period. The RCL demonstration has produced significant savings for the Medicaid program. In the follow-up period, nursing home service costs were significantly lower in the RCL treatment group than in the matched comparison group – a reduction of \$46.2 million (all funds). The RCL treatment group experienced increased Medicaid expenditures for community residential services and in-home services, and incurred additional demonstration service costs collectively totaling \$24.7 million (all funds) over the same period. The net savings for the Medicaid program were \$21.5 million (all funds) for the 1,738 RCL treatment group clients over the index month and the 24-month follow-up period. In other words, nursing home savings more than offset the increased use of HCBS and RCL demonstration services expenditures.

## Impacts on Community Transitions and Related Outcomes

**Q.** Did clients in the RCL treatment group **TRANSITION** from nursing facilities at a higher rate?

► **Yes.** RCL clients transitioned from nursing facility to community settings at a far higher rate than the comparison group. Nursing home residents in the RCL treatment group were nearly twice as likely to transition to community than their counterparts in the comparison group within 6 months of the index month (65.6 percent vs 34.7 percent,  $p < 0.0001$ ).

**Q.** Did RCL clients who transitioned from a nursing facility **RETURN** to a nursing facility at a higher rate?

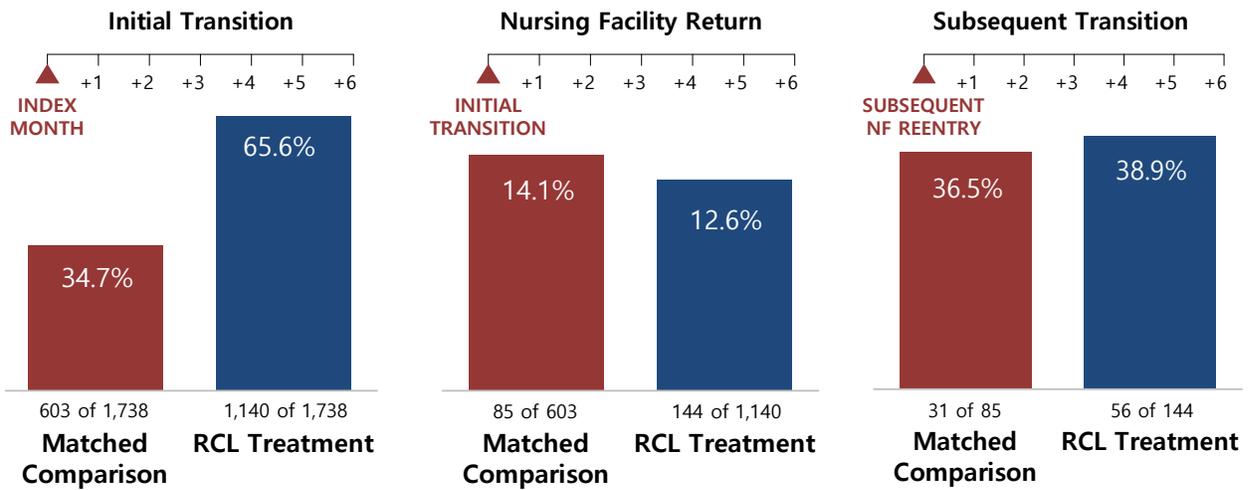
► **No.** Differences in nursing facility return rates were not statistically significant. In the RCL treatment group, 12.6 percent of clients who transitioned to the community subsequently returned to a nursing facility within 6 months of the initial transition, compared to 14.1 percent in the comparison group ( $p = 0.39$ ).

**Q.** Did RCL clients who returned to a nursing facility **SUBSEQUENTLY TRANSITION** from a nursing facility at a higher rate?

► **No.** Differences in subsequent rates of transition to the community following reinstitutionalization were not statistically significant. In the RCL treatment group, 38.9 percent of those who returned to a nursing facility transitioned back to the community within 6 months of reinstitutionalization, compared to 36.5 percent in the comparison group ( $p = 0.72$ ).

FIGURE 8.

## Rates of Community Transition



## Mortality and Inpatient Hospitalization

Compared to clients in the matched comparison group, clients who received RCL services were not at greater risk of death or inpatient hospital admission in the follow-up period.

- The all-cause mortality rates at 12 months and 24 months after the index month were 15.5 percent and 27.5 percent, respectively, in the RCL treatment group.
- Mortality rates were significantly lower for clients who transitioned to the community in both the RCL treatment and comparison group. Overall, 9.6 percent of clients who transitioned died within a year, compared to 23.2 percent of clients who did not transition. This suggests that higher acuity clients may be more difficult to transition to care in the community.
- Differences between RCL participants and members of the comparison group in mortality rates at the 12- and 24-month follow-up points were not statistically different ( $p=0.18$  and  $p=0.62$ , respectively).
- In the post period, inpatient hospital admission rates (not adjusted for attrition) were highest in the second month after the index month (about 10 percent) and then drifted down to 5 percent.
- Inpatient hospitalization rates were comparable between the RCL treatment group and matched comparison group.

FIGURE 9.

### Mortality

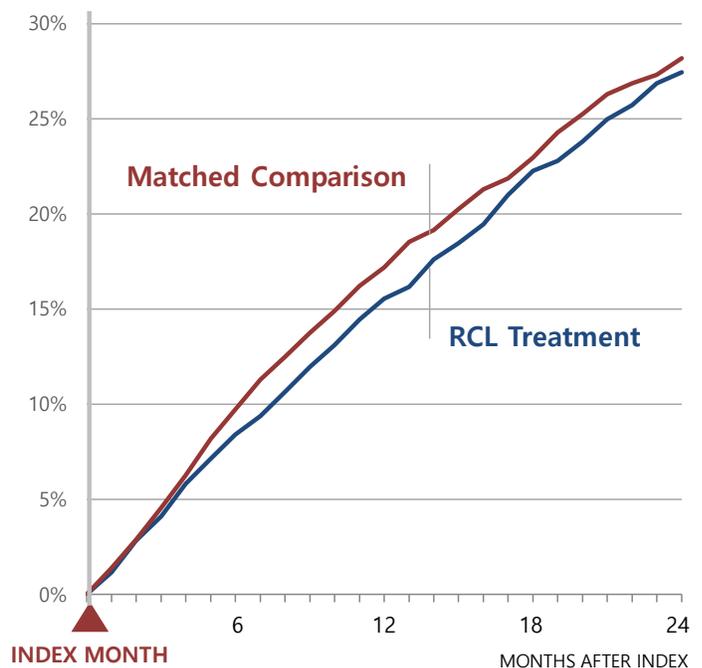
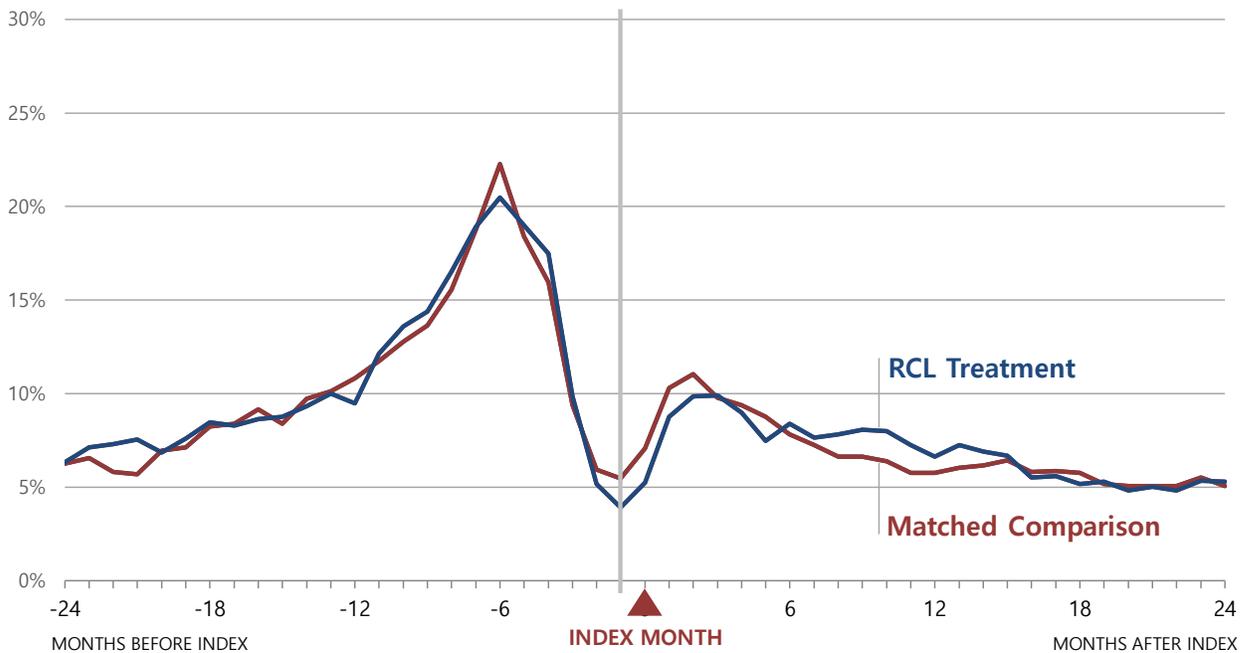


FIGURE 10.

### Monthly Proportion Experiencing Inpatient Hospitalization



## Discussion

Long-term nursing home residents face considerable barriers to moving back to the community. In Washington State, prior to the RCL demonstration most transition efforts in nursing facilities focused on individuals within the first two months of their nursing home stay (1). The RCL demonstration provided the opportunity to offer additional time-limited services to help facilitate a successful transition to the community for long-term nursing home residents.

Our results indicate that RCL clients transitioned from nursing facility to community settings at a far higher rate than the matched comparison group. In addition, among clients transitioning to the community, subsequent rates of nursing home reentry were low and similar to the rates experienced by clients who transitioned without the benefit of the RCL demonstration. This indicates that the RCL demonstration was able to successfully transition nursing home residents to community settings and help clients live stably in the community.

Previous studies found that nursing home residents discharged to the community were more likely to be younger, continent, minimally dependent in ADLs, cognitively intact or only mildly impaired, and without significant behavioral problems (4-6). Therefore it is not surprising that RCL participants were much healthier than the general nursing home population. However, it is important to note that RCL participants have substantial physical and cognitive care needs that often require more intensive services than the general population of Medicaid beneficiaries receiving HCBS (7).

We found that significant cost savings were realized in the Medicaid program through the implementation of RCL demonstration. The net savings are due to the shift in LTSS spending from nursing home services to community-based care. The Money Follows the Person (MFP) program provides states with enhanced federal Medicaid matching funds for 12 months for each Medicaid beneficiary who transitions from an institution to the community. However, the current funding allocation for MFP is set to expire in 2016, although states have the option to request to transition

MFP participants through December 2018 and to spend unused funds until 2020. Our results provide strong evidence that the State should continue funding RCL services when enhanced federal funding for MFP expires.

Previous studies have indicated that Medicare-Medicaid dual eligible nursing home residents who transition to the community can be at greater risk for inpatient hospital admission (8). We found that hospitalization rates were comparable between RCL participants and clients in the comparison group. The services and supports provided by the RCL demonstration, along with HCBS supports, appear to have mitigated the risk of increased use of acute hospital care. In addition, we found no statistically significant differences in mortality rates at the 12- and 24-month follow-up points.

We note the following limitations to our findings. Our results cannot be generalized to persons with intellectual disabilities residing in intermediate care facilities or persons with serious mental illness residing in psychiatric facilities, which nationally accounted for 26 percent of MFP participants in 2014 (9). Because participation in the RCL demonstration is voluntary, selection bias is a potential risk to the validity of the study findings. To mitigate this risk, propensity score methods were used to match RCL treatment and comparison group members with respect to a large set of client characteristics taken from MDS data. In addition, the comparison matching frame was restricted to a highly selective group of clients with a community discharge preference identified in their current MDS assessment and who were referred to Home and Community Services for regular community placement services. However, we were not able to match on unobserved factors such as the availability of family members to provide care in the community.

## APPENDIX | Client Characteristics Before and After Matching

TABLE 1.

### Client Characteristics Before and After Propensity Score Matching

Proportion/Mean

	<b>MATCHING FRAME</b> Before Matching TOTAL = 6,999	<b>COMPARISON GROUP</b> After Matching TOTAL = 1,738	<b>RCL TREATMENT GROUP</b> TOTAL = 1,738
<b>Age group</b>			
20-29	0.6%	0.9%	0.9%
30-39	1.8%	1.0%	1.6%
40-44	1.5%	2.8%	3.2%
45-49	2.8%	3.7%	4.0%
50-54	5.0%	7.2%	7.6%
55-59	8.2%	11.9%	12.4%
60-64	11.0%	15.9%	16.3%
65-69	11.8%	15.1%	13.5%
70-74	11.2%	11.3%	11.2%
75-79	11.3%	10.4%	10.0%
80-84	12.2%	9.0%	8.8%
85-89	12.2%	6.6%	6.3%
90-94	7.6%	3.2%	3.2%
95 and Over	2.6%	0.9%	1.1%
<b>Race/ethnicity</b>			
American Indian/Alaskan Native	2.2%	2.5%	2.4%
Asian	6.4%	2.1%	2.4%
African American	6.4%	6.2%	7.1%
Hispanic	3.1%	1.7%	2.0%
Native Hawaiian/Pacific Islander	1.4%	0.5%	0.7%
White	79.1%	85.7%	84.1%
<b>Marital Status</b>			
Married	19.4%	17.4%	17.7%
<b>Admitted from ...</b>			
Community	7.0%	6.4%	5.8%
Nursing Home	4.0%	4.5%	4.3%
Hospital	87.9%	88.0%	88.6%
Other Facility	1.0%	1.2%	1.4%
<b>Health Conditions</b>			
Dementia	33.0%	22.4%	21.7%
Psychiatric disorder	32.9%	35.3%	35.6%
Depression	54.4%	55.8%	55.9%
Diabetes	41.3%	41.5%	42.4%
Cancer	5.4%	5.7%	5.6%
Asthma/COPD	27.9%	28.7%	28.6%
Heart failure	20.2%	17.8%	19.3%
Coronary artery disease	17.2%	16.4%	16.2%
Stroke	14.9%	14.6%	15.2%
Parkinson disease	5.3%	4.3%	3.7%

	<b>MATCHING FRAME</b> Before Matching	<b>COMPARISON GROUP</b> After Matching	<b>RCL TREATMENT</b> <b>GROUP</b>
Renal failure	15.7%	16.1%	15.5%
Quadriplegia/hemiplegia/paraplegia	13.7%	15.8%	15.5%
Vision highly/severely impaired	3.8%	3.3%	3.4%
Hearing severely impaired	0.9%	0.1%	0.3%
Pressure ulcer (stage>=2)	6.2%	4.2%	4.1%
Urinary/bowel incontinence	46.8%	32.3%	32.8%
Severe communication problem	2.4%	1.5%	1.3%
Severe behavioral problem	5.3%	2.4%	3.1%
<b>Functional Status</b>			
Activities of daily living score (0=independent, 28=totally dependent)	14.4	11.4	11.2
<b>Community residential service months</b>			
1-3 months before index month	0.1	0.0	0.0
4-6 months before index month	0.3	0.1	0.1
7-12 months before index month	0.8	0.4	0.4
13-24 months before index month	1.4	0.9	0.8
<b>In-home service months</b>			
1-3 months before index month	0.1	0.0	0.0
4-6 months before index month	0.4	0.2	0.2
7-12 months before index month	1.1	0.9	0.8
13-24 months before index month	2.2	1.7	1.7
<b>Nursing home stay (days)</b>			
1-3 months before index month	87.0	90.0	90.1
4-6 months before index month	62.8	71.5	71.3
7-12 months before index month	62.5	81.3	79.7
13-24 months before index month	78.8	94.6	92.7
<b>Inpatient hospitalization (days)</b>			
1-3 months before index month	1.9	1.3	1.3
4-6 months before index month	5.7	5.1	5.2
7-12 months before index month	6.3	7.9	8.1
13-24 months before index month	6.9	7.8	7.8
<b>Calendar year</b>			
2010	3.2%	3.9%	4.4%
2011	27.6%	35.1%	36.4%
2012	33.4%	29.3%	29.3%
2013	35.8%	31.8%	29.9%
<b>Gender</b>			
Female	58.6%	54.5%	54.5%
<b>Cognitive performance scale (CPS) category</b>			
Intact	66.9%	78.5%	78.5%
Impaired	29.2%	19.9%	19.9%
Severely impaired	3.9%	1.6%	1.6%

## TECHNICAL NOTES

**RCL Treatment group:** Persons residing in a Medicaid-paid nursing home for at least 3 months are eligible for the RCL demonstration. A total of 2,637 nursing home residents initiated RCL services between October 1, 2010 and December 31, 2013. RCL services were identified from SSPS payment records as reflected in the RDA Client Services Database. We defined the index month as the month of first receipt of an RCL service. Clients were excluded from the study if they met any of the following conditions: (1) no MDS assessment within 4 months of the index month; (2) were comatose or died before the end of the index month; (3) had missing values for key matching variables; or (4) individual identifiers were not linkable between different data sources. After the exclusion criteria were applied, 1,738 persons remained in the RCL treatment group.

**Comparison matching frame:** We created a comparison "matching frame" of nursing home residents eligible for, but not enrolled in, the RCL demonstration. The matching frame considered all nursing home service months when a facility resident might closely match the baseline experience of an RCL client when they began receiving RCL services. The initial matching frame included 316,101 person-months. In addition to the exclusion criteria applied to the RCL treatment group, the comparison matching frame was further restricted to persons with (1) a community discharge preference identified in their current MDS assessment and (2) a Home and Community Services (HCS) intake within 6 months of the index month. With these additional restrictions, the size of the comparison matching frame was reduced to 6,999 person-months.

**Propensity score matching:** To reduce the potential impact of selection bias, nearest neighbor propensity score matching (1:1) was used to select individuals who were most similar to RCL treatment group clients. Members in the comparison matching frame were matched to RCL demonstration participants on a number of baseline characteristics including demographics, chronic illness conditions, cognitive and physical functional status, pressure ulcer, urinary/bowel incontinence, communication problems, behavioral problems, sensory problems (vision, hearing), length of nursing home stay, use of in-home services and community residential services, inpatient hospitalization days, and time period (calendar year of the index month). Baseline nursing home, HCBS, and inpatient hospital utilization were measured over the 24-month period prior to the index month. Variables derived from the MDS were based on the current MDS as of the index month. The full set of variables used for propensity score matching are listed in Appendix Table 1.

Activities of daily living (ADL) support needs were measured by ADL scores ranging from 0 to 28 (10). A score of 0 indicates total independence and a score of 28 means total dependence. **Cognitive impairment** was measured by the Cognitive Performance Scale (CPS) ranging from 0 to 6 (11). The CPS was categorized into 3 groups: 0-1 (intact), 2-4 (impaired), and 5-6 (severely impaired). Identification of severe behavioral problems was based on the presence of one or more problem behaviors (resists care, verbally abusive, physically abusive, or socially inappropriate) occurring daily during the past 7 days. Measures of community discharge preference were taken from MDS item Q0500B (Return to Community) – "Do you want to talk to someone about the possibility of leaving this facility and returning to live and receive services in the community?"

### STUDY DATA

**Long-Term Care Minimum Data Set (MDS) 3.0:** The MDS is a standardized screening and assessment tool for all residents in Medicare- and Medicaid-certified long-term care facilities. The MDS contains more than 500 items measuring nursing home residents' physical, psychological, and psychosocial functioning. The MDS identifies many health and functional conditions that are related to the probability of community discharge.

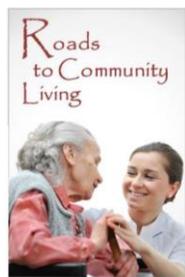
**DSHS Integrated Client Databases:** Residents' long-term services and supports costs and mortality data were identified using DSHS Integrated Client Databases.

**Medicaid and Medicare claims:** We used both Medicaid and Medicare claims to identify nursing home stays and inpatient hospitalizations.

**Comprehensive Assessment Reporting Evaluation (CARE) assessment:** CARE is a tool used by case managers to document a client's functional ability, to determine eligibility for long-term care services, to evaluate what type and how much assistance a client will receive, and to develop a plan of care. Information on referrals to HCS for community placement was obtained from CARE assessment records.

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