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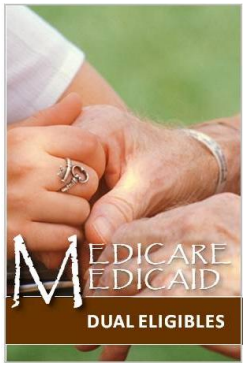


Patterns of Hospital Readmissions and Nursing Facility Utilization among Washington State Dual Eligibles: *Opportunities for Improved Outcomes and Cost Savings*

David Mancuso, PhD • Beverly Court, PhD • Barbara E.M. Felver, MES, MPA

In collaboration with the Washington State Department of Social and Health Services Aging and Disability Services Administration and Washington State Health Care Authority

DUAL ELIGIBLES—persons enrolled in both Medicare and Medicaid—are among the highest cost beneficiaries of publicly funded medical care. They are served through a fragmented delivery system in which health care providers have conflicting incentives and incomplete information, which may result in cost-shifting between payers and increased costs. This policy brief focuses on implications of care transitions between hospital and nursing facility settings, in the context of a nursing facility benefit currently fragmented between Medicare and Medicaid. We document the cost shifting from Medicaid to Medicare resulting from rehospitalization of dual eligible nursing facility residents, and the net increase in costs from these events. We also explore the feasibility of developing processes to identify: 1) dual eligibles who may be at high risk of hospital readmission, 2) nursing facilities with persistently low hospital readmission rates who may exemplify best practices, and 3) nursing facilities with persistently high hospital readmission rates that may be appropriate to engage in quality improvement efforts. We find that:

Medicare-paid nursing facility utilization has increased while Medicaid-paid nursing facility utilization has declined for dual eligibles in Washington State.

- The Medicare-paid dual eligible nursing facility caseload was 8 percent higher at the end of State Fiscal Year (SFY) 2010 (ending June 30, 2010) than it was at the beginning of SFY 2007, while the Medicaid-paid dual eligible nursing facility caseload *decreased* by 11 percent over the same time period.

Hospitalizations frequently restart Medicare payments for nursing facility stays.

- When a dual eligible on a Medicaid-paid nursing facility stay is hospitalized, a frequent outcome is a discharge back to a nursing facility paid for by Medicare at a much higher cost. In Washington State in 2010, the average net increased cost associated with a hospitalization of a dual eligible that shifted nursing facility payments from Medicaid to Medicare was $21,267.

Identifying dual beneficiaries at high risk of hospital readmission and nursing facilities with persistently low or high hospital readmission rates appears feasible.

- With investment in maintaining an integrated Medicare and Medicaid data infrastructure, it is likely feasible to develop a nursing facility hospital readmission monitoring system to identify best performers and inform quality improvement efforts. This system would account for differences in facility case mix, and could also help identify low acuity patients for whom transition to less restrictive community care might be appropriate. This approach potentially could be extended to support similar monitoring and feedback efforts with boarding homes and assisted living facilities.

However, without equitable gain-sharing between CMS and the states, there is limited incentive for states to invest in these strategies that reduce cost shifting from Medicaid to Medicare.

Fragmented coverage adds to the incentives for churning between hospitals and nursing facilities

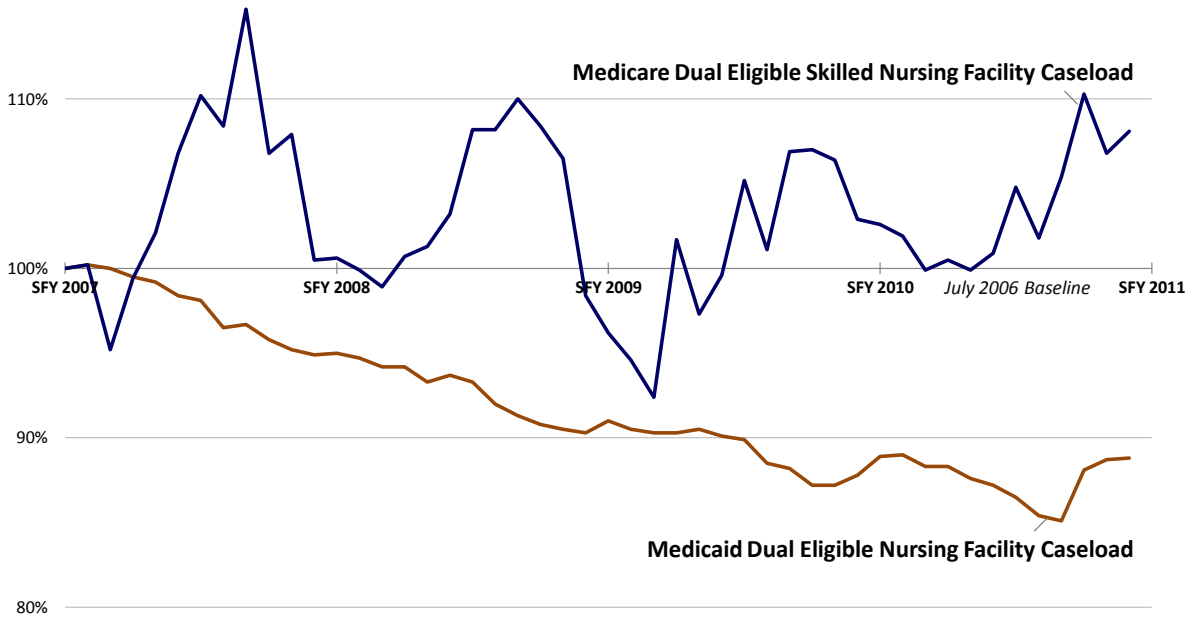
Persons dually eligible for Medicare and Medicaid currently receive health care through a fragmented delivery system. Medicare covers medical services (e.g., hospital, physician, and pharmacy), some behavioral health services, hospice, home health and skilled nursing facility care for up to 100 days following a qualifying inpatient stay. Medicaid primarily covers long-term nursing facility stays, home and community based long-term services and supports, services for the developmentally disabled, and behavioral health services. Integrated information is not generally available to providers or the agencies serving dual eligible beneficiaries, which creates a fertile environment for inefficient patterns of care to develop that result in increased costs.[1]

This risk is particularly pronounced in the area of care transitions between hospitals and nursing facilities. DRG payment methodologies create incentives for hospitals to move patients as expeditiously as possible from the hospital back to the community or a nursing facility setting. State Medicaid programs have an incentive to ensure that nursing facilities bill Medicare where appropriate. And nursing facilities have incentives to ensure that residents who require acute care are readmitted to the hospital. However, inpatient readmissions of dual eligibles receiving Medicaid-paid nursing facility services can trigger a subsequent nursing facility readmission associated with higher Medicare payment rates. Both the hospital readmission and the subsequent facility stay at higher Medicare rates add significantly to the overall cost of care.

The trend lines in Figure 1 below suggest that the structure of nursing facility, hospital and state incentives create potential for cost shifting from Medicaid to Medicare. In Washington State, the Medicare-paid dual eligible nursing facility caseload was 8 percent higher at the end of SFY 2010 than it was at the beginning of SFY 2007, while the Medicaid-paid dual eligible nursing facility caseload *decreased* by 11 percent over the same time period. This policy brief uses integrated Medicare and Medicaid data for Washington State dual eligibles to measure the extent of cost shifting associated with hospitalizations from nursing facility settings, and the increased overall costs associated with these events. We then explore the potential to develop tools to monitor and provide feedback on hospital readmission rates.

FIGURE 1

Washington State Medicare and Medicaid nursing facility monthly dual eligible caseload trends relative to July 2006 baseline



SOURCE: DSHS Research and Data Analysis Division, Integrated Client Database, May 2012

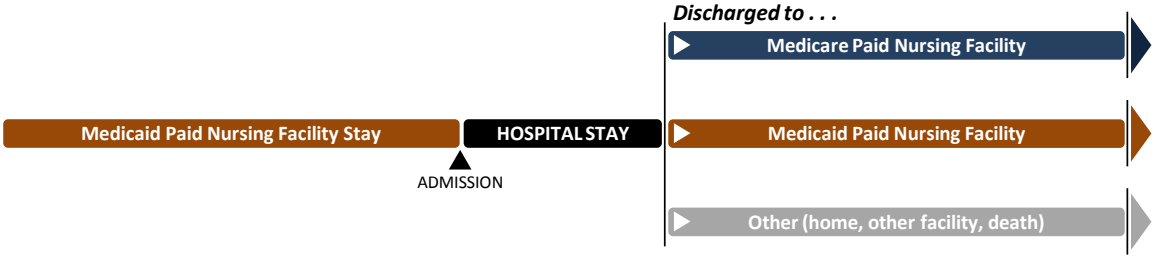
Hospitalizations frequently restart Medicare payments for nursing facility stays

To examine the degree to which hospital readmissions of nursing facility patients trigger a shift in costs from Medicaid to Medicare, we examined hospital discharges of Washington State dual eligibles in State Fiscal Year (SFY) 2010. In that year there were 3,135 hospital discharges of dual elders and 957 discharges of disabled duals who were admitted to the hospital directly from a Medicaid-paid nursing facility (see Figure 3). About three-fourths of each group were discharged directly from the hospital to a nursing facility, and a quarter were discharged to home, another facility or died. Among the patients discharged to a nursing facility; 56 percent of dual elders were discharged to a Medicare-paid nursing facility stay (43 of 77 percent), and 41 percent of disabled duals were discharged to Medicare-paid nursing facility stay (31 of 76 percent).

This finding confirms there can be significant cost shifting from Medicaid to Medicare associated with hospital readmissions that trigger a shift in payer. When we quantified the cost implications of these readmissions, we found that the average inpatient event reduces Medicaid-paid nursing facility expenditures by $6,522 through the length of stay of the inpatient admission and the first 100 days post-discharge, while increasing Medicare-paid inpatient costs by $12,750 and Medicare paid nursing facility costs by $15,039 over the same time period.[2] Combining the impact on both programs, we find average net increased costs of $21,267 per hospitalization event for admissions that result in a shift from Medicaid to Medicare payment for a nursing facility resident. Most of the increased costs are associated with the direct cost of the hospitalization and $8,517 is associated with increased net nursing facility costs associated with the higher average Medicare payment rates following the inpatient stay.

FIGURE 2

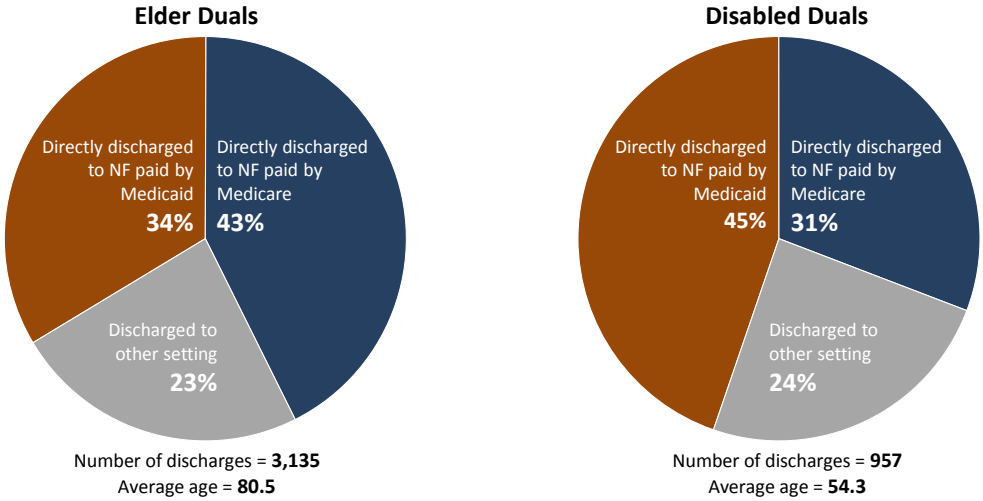
Hospital Discharge Status Analysis Timeline



Unit of observation: Hospital discharges that were preceded by a Medicaid-paid nursing facility stay.

FIGURE 3

Discharge status of dual eligibles admitted to a hospital from a Medicaid-paid nursing facility stay



SOURCE: DSHS Research and Data Analysis Division, Integrated Client Database, May 2012

Dual eligibles admitted to the hospital from nursing facility stays have relatively high rates of subsequent hospital readmissions

We examined hospital readmission rates for persons originally hospitalized from Medicaid- or Medicare-paid nursing facility stays, and found relatively high 90-day readmission rates (Figure 5). Among dual elders, 90-day hospital readmission rates were 38 percent for persons hospitalized from a Medicare-paid nursing facility stay and 26 percent for dual elders hospitalized from a Medicaid-paid stay. Among disabled duals, 90-day hospital readmission rates were 54 percent for persons hospitalized from a Medicare-paid nursing facility stay and 47 percent for those hospitalized from a Medicaid-paid stay. These differential readmission rates may be accounted for by systematic differences in acuity between patients receiving Medicare-paid *skilled* nursing facility services, relative to patients in Medicaid-paid nursing facility care. Overall, these readmission rates are high largely due to the extreme medical risk present in these populations. Significantly reducing these readmission rates will likely require greater coordinated efforts on the part of hospitals, nursing facilities and other providers.

These patterns also indicate that in addition to the potential to *shift* payment for nursing facility stays from Medicaid to Medicare, there is also the potential for inpatient admissions to *continue* Medicare payment for nursing facility care when the patient would have otherwise shifted to a Medicaid-paid stay. As shown in Table 1 on page 7, when dual eligibles are admitted to the hospital from a *Medicare-paid* nursing facility stay, they are usually discharged directly into another nursing facility stay, and the post-discharge nursing facility stay is usually paid for by Medicare. Because the rehospitalization "restarts" the Medicare clock, many of these patients will convert more slowly to a lower-cost Medicaid-paid nursing facility stay.

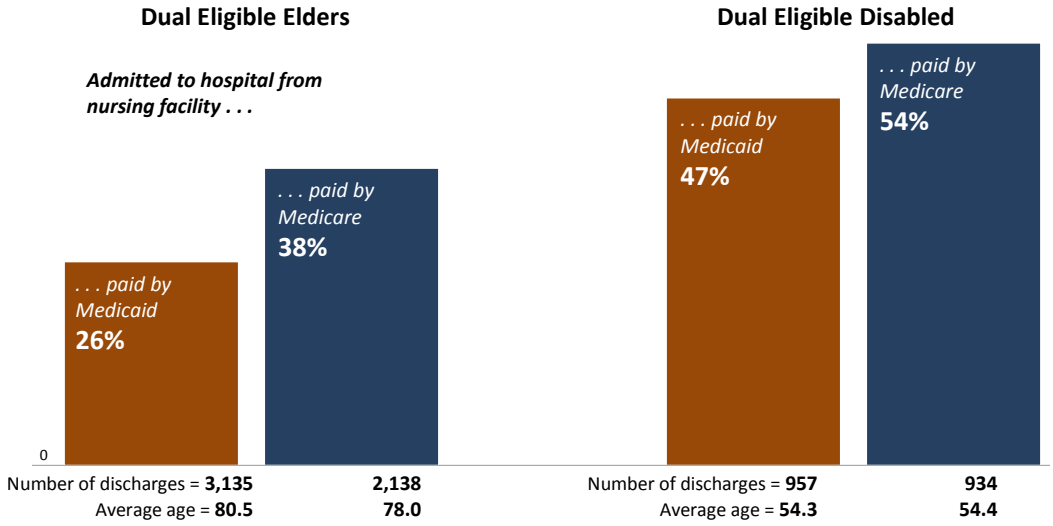
FIGURE 4

Readmission Analysis Timeline

Unit of observation: Hospital discharges that were preceded by a nursing facility stay.

FIGURE 5

Readmissions within 90 days of discharge



SOURCE: DSHS Research and Data Analysis Division, Integrated Client Database, May 2012

Case-mix adjusted measurement of rehospitalization risk appears feasible

We close by exploring whether it is feasible to develop analytical tools to identify (1) dual eligibles who may be at high risk of hospital readmission, (2) nursing facilities with persistently low hospital readmission rates who may exemplify best practices, and (3) nursing facilities with persistently high readmission rates that may be appropriate to engage in quality improvement efforts. Identification of patients at high risk of rehospitalization is feasible through algorithms used in predictive modeling applications like PRISM, a tool used in Washington State to manage high-risk Medicaid enrollees. Because patients will have widely varying levels of readmission risk, facility-level analyses require a case-mix adjustment process to account for variation in readmission rates attributable to differences in patient risk. A fully developed process to measure nursing facility hospital readmission rates would rely heavily on information available in the Minimum Data Set (MDS), which assesses many dimensions of a patient's function and nursing care needs. However, we can show the feasibility of developing a case-mix adjustment process using a well-calibrated claims-based medical risk model alone.

Figure 6 displays a scatter plot of the relationship between a nursing facility's 90-day hospital readmission rate and the average PRISM risk score of patients discharged from a medical hospital to the facility. The PRISM risk score is a measure of expected future medical costs based on the CDPS and Medicaid-Rx risk models (see the technical note for more detail). Risk weights are applied to risk factors derived from diagnosis and pharmacy data in a unified set of Medicare and Medicaid data, including:

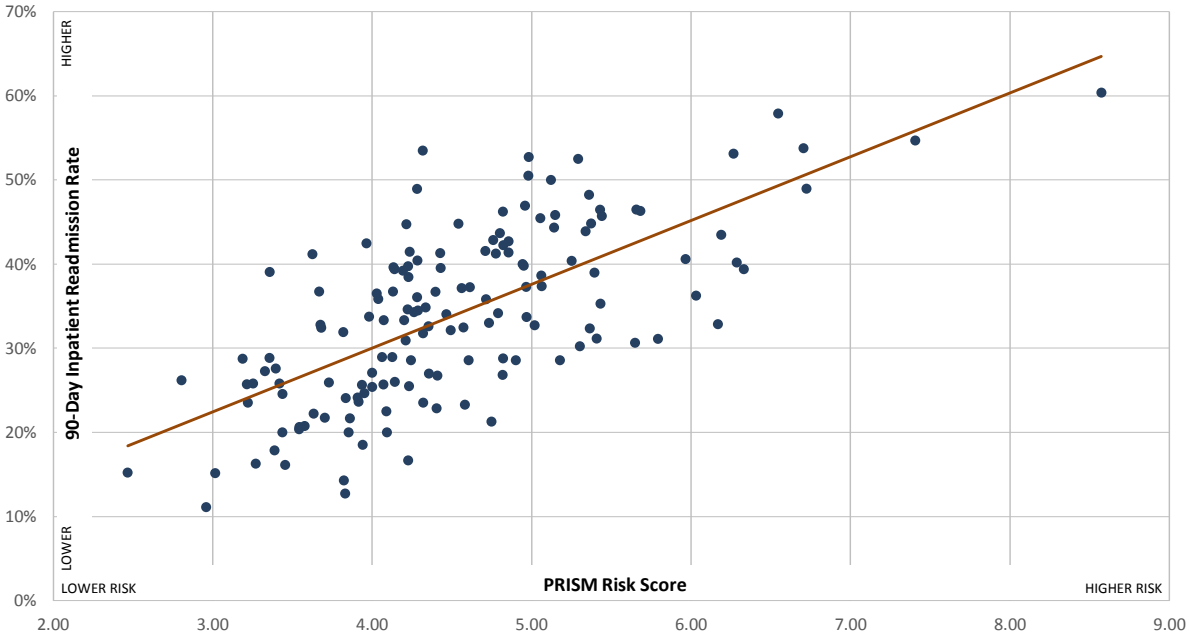
- Medicare Part A, B and D claims and encounters, and
- Medicaid medical, nursing facility, mental health, and chemical dependency service claims and encounters.

The scatter plot is limited to facilities with at least 25 Medicare or Medicaid patients discharged to the facility in SFY 2010. Each data point represents an individual facility.[3]

FIGURE 6

Facility average readmission rates by average patient PRISM risk score for dual eligible patients, by nursing facility receiving the patient following initial discharge

NOTE: Unit of observation is a nursing facility receiving at least 25 dual eligible hospital inpatient discharges in SFY 2010



SOURCE: DSHS Research and Data Analysis Division, Integrated Client Database, May 2012

The scatter plot shows that there is a strong relationship between a nursing facility's 90-day hospital readmission rate and the average PRISM risk score in its population. The overall correlation between these measures is about 64 percent (R-square = 41.4 percent).

Although much of the variation in nursing facility readmission rates is accounted for by the average PRISM risk score in the facility population, there remains significant variation in hospital readmission rates that is caused by other factors, likely including additional measurable patient risk factors contained in the MDS assessments of nursing facility residents. However, even with the integration of MDS data into the case mix adjustment process, there will be residual variation in hospital readmission rates due to other factors. Facilities that are persistently "below the line" may provide an opportunity for learning about best practices that may be producing consistently low readmission rates. Similarly, facilities that show a persistent tendency to be "above the line" may merit further attention to determine whether there are quality improvement opportunities that could reduce inpatient readmission risk and costs.

Developing and maintaining a case-mix adjusted feedback and monitoring system to measure inpatient readmission risk patterns does appear to be feasible. Implementing such a system would involve the following major activities:

- Ongoing integration of Medicare and Medicaid claims and encounter data into a unified analytical data infrastructure for dual eligibles;
- Integration of MDS and CARE[4] assessment data to augment claims-based measurement of readmission risk in the case-mix adjustment process;
- Sharing of patient risk factor and readmission outcome data with providers such as nursing facilities, hospitals and health home coordinators;
- Supporting provider collaboratives to identify and share best practices for reducing rehospitalization rates; and
- Creation of financial incentives and points of accountability for reducing rehospitalization rates.

In addition to supporting feedback and monitoring processes, these types of analytical tools could also help identify relatively low acuity patients for whom transition to less restrictive and lower cost community care might be appropriate. Furthermore, it might be possible to extend this approach to monitor readmission rates associated with boarding homes and assisted living facilities, although the smaller numbers of patients associated with these facilities will present additional measurement challenges.

However, without equitable gain-sharing between CMS and the states, there is less incentive for states to invest in tools and efforts that may reduce cost shifting from Medicaid to Medicare. Toward this end, CMS is currently supporting dual-integration efforts to reduce the incentive misalignment that results from the fragmented health care delivery system for duals. The most common approach is likely to be the integration of most Medicare and Medicaid health services under a single health plan.[5] However, these integrated models are likely to be implemented in a voluntary enrollment context that may result in modest take-up rates and highly selective enrollment. If this occurs, the likelihood that meaningful cost savings are achieved will be significantly reduced. This is a fundamental lesson of the experience of the Medicare Advantage program.[6]

CMS is also supporting an alternative "managed fee for service" approach to improving care for duals. However, it is not clear that this approach will provide timely recoupment of potentially increased Medicaid costs incurred by the state to implement strategies that reduce cost shifting from Medicaid to Medicare. This is unfortunate because these strategies have the potential to reduce inpatient hospitalization rates and reduce overall costs. CMS should consider gain-sharing approaches that provide effective support for state Medicaid program investments that reduce Medicare costs, especially those aimed at reducing rehospitalizations emanating from nursing facilities.

TABLE 1

Full Benefit Dual Eligibles in Washington State

Readmission and Nursing Facility Entry Rates by Eligibility at Time of Prior Hospital Admission

SFY 2010 Medical Hospital Discharges

NOTE: Unit of observation is a medical hospital discharge in SFY 2010. Many clients have multiple discharges in the fiscal year.

DUAL ELIGIBLE ELDERS	All Discharges	*Admitted to hospital . . .*		
		From NF paid by Medicaid	From NF paid by Medicare	Not from NF
Number of discharges	25,066	3,135	2,138	19,827
Average age	78.2	80.5	78.0	77.9
Percent . . .				
With psychotic disorder diagnosis	18%	28%	27%	15%
With any psychiatric diagnosis	59%	82%	77%	53%
With substance use disorder diagnosis	9%	7%	13%	9%
Directly discharged to NF paid by Medicaid	**6%**	**34%**	**4%**	**2%**
Directly discharged to NF paid by Medicare	**27%**	**43%**	**66%**	**21%**
Directly discharged to NF paid by either Medicaid or Medicare	**33%**	**76%**	**70%**	**22%**
With hospital readmit within 30 days of discharge	**16%**	**13%**	**23%**	**16%**
With hospital readmit within 60 days of discharge	**24%**	**20%**	**33%**	**24%**
With hospital readmit within 90 days of discharge	**30%**	**26%**	**38%**	**29%**
Admitted to NF within 30 days of discharge	37%	82%	73%	26%
Admitted to NF within 60 days of discharge	39%	83%	74%	28%
Admitted to NF within 90 days of discharge	40%	84%	75%	29%

DUAL ELIGIBLE DISABLED	All Discharges	*Admitted to hospital . . .*		
		From NF paid by Medicaid	From NF paid by Medicare	Not from NF
Number of discharges	18,479	957	934	16,611
Average age	49.4	54.3	54.4	48.8
Percent . . .				
With psychotic disorder diagnosis	26%	26%	31%	25%
With any psychiatric diagnosis	71%	85%	83%	69%
With substance use disorder diagnosis	33%	21%	33%	34%
Directly discharged to NF paid by Medicaid	**3%**	**45%**	**4%**	**1%**
Directly discharged to NF paid by Medicare	**12%**	**31%**	**60%**	**8%**
Directly discharged to NF paid by either Medicaid or Medicare	**15%**	**76%**	**63%**	**9%**
With hospital readmit within 30 days of discharge	**22%**	**29%**	**34%**	**21%**
With hospital readmit within 60 days of discharge	**32%**	**39%**	**46%**	**31%**
With hospital readmit within 90 days of discharge	**39%**	**47%**	**54%**	**37%**
Admitted to NF within 30 days of discharge	17%	81%	67%	10%
Admitted to NF within 60 days of discharge	18%	82%	69%	12%
Admitted to NF within 90 days of discharge	19%	83%	70%	12%

SOURCE: DSHS Research and Data Analysis Division, Integrated Client Database, May 2012

TECHNICAL NOTES

Integrated Medicare and Medicaid claims and encounter data. This study uses fully integrated Medicare National Claims History data and Medicaid claims and encounter data. Medicare covers medical services (e.g., hospital, physician, and pharmacy), some behavioral health services, hospice, home health and skilled nursing facility care for up to 100 days following a qualifying inpatient stay. Medicaid primarily covers long-term nursing facility stays, home and community based long-term services and supports, services for the developmentally disabled, and behavioral health services. The PRISM risk scores used in this study are derived from the risk factors derived from this fully integrated health services data.

PRISM risk scores. PRISM risk scores are derived from the diagnosis-based Chronic Illness and Disability Payment System[7] (CDPS) and pharmacy-based Medicaid-Rx[8] risk models developed by Rick Kronick and Todd Gilmer at the University of California at San Diego. These risk models were developed specifically for Medicaid populations. PRISM uses a prospective hybrid risk model that combines the risk categories that comprise the CDPS and Medicaid-Rx models. The prospective risk score is a measure of expected future medical costs on a per-member-per-month (PMPM) basis, relative to the average for the population used for calibration. Prior service data are used to forecast the client's relative PMPM expenditures over the following 12-month period. A score of 1.5 indicates the client is expected to have medical expenditures over the following 12 months that are 50 percent higher than the calibration population average on a per member per month basis. Although in the future PRISM will include risk weights developed specifically for dual eligibles from integrated Medicaid data and Medicare National Claims History data, this study uses risk weights calibrated to the non-dual Medicaid-only SSI population.

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[1] For a broader discussion of the challenges in coordinating care for dual eligibles in nursing facilities, see Verdier, J, "Coordinating and improving care for dual eligibles in nursing facilities: current obstacles and pathways to improvement." Mathematica Policy Research, March 2010.

[2] Note that we do not account for Medicare Part D costs that are in addition to the Medicaid nursing facility costs incurred during a Medicaid-paid nursing facility stay, but are part of Medicare-paid nursing facility costs.

[3] In some cases the unit of observation may be a facility group with common ownership.

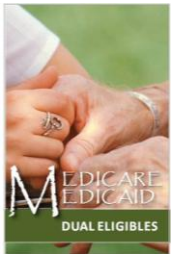
[4] CARE is an assessment tool used to assess eligibility for home- and community-based long-term services and support.

[5] These options are described in the Letter to State Medicaid Directors from CMS Medicare-Medicaid Coordination Office Regarding Financial Models to Support State Efforts to Integrate Care for Medicare-Medicaid Enrollees, July 8, 2011.

[6] See Brown, J et al, "How does risk selection respond to risk adjustment? Evidence from the Medicare Advantage program." *NBER Working Paper number 16977*, April 2011.

[7] For more information about the CDPS, see Kronick R, Gilmer T, Dreyfus T, et al, "Improving health-based payment for Medicaid beneficiaries: CDPS." *Health Care Fin Rev* 2000; 21:29-64.

[8] For more information about the Medicaid-Rx system, see Gilmer T, Kronick R, Fishman P, et al, "The Medicaid Rx Model: Pharmacy-based risk adjustment for public programs." *Med Care* 2001; 39:1188-1202.



RDA CONTACT: David Mancuso, PhD, 360.902.7557

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