Economic and Clinical Value of Home Health Care Provided in the Commonwealth of Pennsylvania

Improving Health Care Quality and Efficiency

Dobson | DaVanzo

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Introduction

Given the premise of improved care coordination within value-based purchasing, understanding the role of post-acute care (PAC) for Medicare beneficiaries is key to achieving the overall goal of a better connected health care system. PAC encompasses a wide range of health care services that assist patients with transitioning from the hospital to the community and share a common goal of restoring patients to their prior level of functioning.

Home health care can be utilized to improve outcomes and achieve savings by: 1) managing patient transitions to and from facility-based care, 2) teaching patients to self-manage their conditions in order for them to remain at home, and 3) coordinating care across settings to ensure overall patient safety. Furthermore, home health has been identified as a cost-effective care setting with positive clinical outcomes [1, 2] .

Numerous studies have shown that patients who can safely remain in their homes and access the treatments they need are better able to maintain their independence in the community.[3] Emphasis on care that is provided in the home could move Medicare, Medicaid, and other payers toward incentivizing greater integration of care for chronically ill patients. The benefits of home health care can be amplified, especially when it is used in combination with community health teams, accountable care organizations (ACOs), and other new initiatives in the health care delivery system.

Purpose

Dobson DaVanzo & Associates, LLC was commissioned by the Pennsylvania Homecare Association to identify the diagnostic conditions that are best treated in home health care for Medicare beneficiaries in the Commonwealth of Pennsylvania.

The purpose of this analysis is to determine the clinical conditions (based on MS-DRGs) that have the following two qualities: 1) the lowest Medicare spending for a 90-day post-acute care episode, and 2) the fewest related acute care readmissions when home health care is the PAC setting of choice for beneficiaries in the Commonwealth. By understanding the value of home health care among Medicare beneficiaries, PHA, its membership, and health care providers and payers in the area can promote cost-effective and quality care for patients. Furthermore, in the development of new Medicare bundled payment and accountable care organization (ACO) networks, this information can be critical to demonstrating home health care's value.

[1] Buntin MB, Deb P, Escarce JJ, Hoverman C, Paddock SM, Sood N. (2005). Comparison of Medicare spending and outcomes for beneficiaries with lower extremity joint replacements. Working Paper. RAND Corporation (WR-271-MedPAC). Retrieved from: http://www.rand.org/pubs/working_papers/2005/RAND_WR271.pdf

[2] Clinically Appropraite and Cost-Effive Placement (CACEP) Project. Conducted by Dobson DaVanzo & Associates, LLC for the Alliance for Home Health Quality and Innovation. Available at: http://ahhqi.org/research/cacep

[3] Mattke S, Klautzer L, Mengistu T, Garnett J, Hu J, Wu H. (2010). Health and well-being in the home: A global analysis of needs, expectations, and priorities for home health care technology. Occasional Paper. RAND Health (OP-323-PIBV). Retrieved from: http://www.rand.org/content/dam/rand/pubs/occasional_papers/2010/RAND_OP323.pdf

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Methods

Dobson | DaVanzo conducted an analysis of all 2013 Medicare claims for the universe of Medicare beneficiaries residing in the Commonwealth of Pennsylvania. Episodes of care were developed, consistent with the structure and framework of CMS' Bundled Payment for Care Improvement (BPCI) Initiative Model 3 bundles. That is, episodes of care were created that begin with discharge from the acute care hospital, and follow the patient for 90 days. (Medicare spending in the acute care hospital is not included in the bundle.) CMS has identified 48 anchor MS-DRG families (representing 181 MS-DRGs) that could trigger a bundled payment episode. All post-acute care services, including home health, skilled nursing facilities, inpatient rehabilitation facilities, and long term care hospitals services are included in the bundle, without exception.

Hospital readmissions for conditions that are related to the anchor hospitalization are included in the episode of care (and bundled payment). BPCI specifies those MS-DRGs (for hospital readmissions) and principal diagnosis codes (for physician and hospital outpatient services) that are considered unrelated to the anchor MS-DRG, and are therefore excluded from the bundle. The list of excluded MS-DRGs and diagnosis codes is relatively comprehensive and CMS has intermittently reviewed and modified the list.

This analysis calculates the average Medicare episode spending and proportion of episodes with related rehospitalization for each MS-DRG family. The results are aggregated by the first post-acute care setting following the anchor acute care hospital discharge ("first setting"). Comparative PAC settings are skilled nursing facilities (SNFs) and inpatient rehabilitation facilities (IRFs). To more appropriately match the intensity of services provided in home health, we excluded long-term care hospitals from our analysis.

Results

Over a 90-day episode of care, patient pathways that start with home health care immediately following discharge from the acute care hospital often have lower Medicare spending (metric for economic value) and less frequent related rehospitalizations (metric for clinical value).

Exhibit 1 shows the Medicare episode spending and prevalence of 90-day related readmissions for 10 clinical groups where home health as the first setting provides superior economic and clinical value. In all of these conditions, home health care currently treats a large proportion (about one-half) of all beneficiaries in Pennsylvania as the first setting.

For example, for beneficiaries who are discharged from the acute care hospital for major joint replacement of the lower extremity (MS-DRGs 469 and 470), over forty percent enter home health care as the first setting. At the end of the 90-day episode, the total Medicare spending is 60.3 percent lower than the overall average spending for beneficiaries treated with post-acute care ($5,483 vs. $13,821). Furthermore, these joint replacement episodes with a home health first setting have about forty percent fewer related readmissions (6.0 percent vs. 10.1 percent) than those started in SNFs or IRFs.

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Exhibit 1: Select MS-DRG Families with Lower than Average Medicare Episode Payments and Readmission Rates when Treated in Home Health Care as a First Setting Compared to IRF or SNF Services

Clinical Group Families (MS-DRGs)	Number of HHA First Setting Episodes	Percent of Total Episodes	Medicare Episode Spending			90-Day Related Readmission (Percent of Episodes)		
			All Post-acute Care	HHA First Setting	Percent Difference	All Post-acute Care	HHA First Setting	Percent Difference
Major joint replacement of the lower extremity (469, 470)	4,292	41.2%	$13,821	$5,483	-60.3%	10.1%	6.0%	-40.3%
Simple pneumonia and respiratory infections (177-179, 193-195)	2,403	42.4%	$18,243	$9,395	-48.5%	26.0%	25.4%	-2.3%
Cardiac valve (216-221)	970	57.3%	$14,616	$7,853	-46.3%	24.9%	20.2%	-18.9%
Major bowel (329-331)	901	49.1%	$18,362	$11,205	-39.0%	29.2%	27.6%	-5.4%
Stroke (61 -66)	896	21.6%	$28,767	$8,633	-70.0%	23.2%	20.8%	-10.3%
Coronary artery bypass graft surgery (231-236)	825	63.4%	$12,237	$6,563	-46.4%	19.7%	15.4%	-21.8%
Spinal fusion (459, 460)	483	41.7%	$16.623	$6,619	-60.2%	16.1%	10.6%	-34.6%
Transient ischemia (69)	436	53.9%	$15,402	$7,936	-48.5%	19.7%	17.0%	-13.6%
Major cardiovascular procedure (237-238)	283	55.1%	$17,936	$10,315	-42.5%	30.2%	23.7%	-21.5%
Major joint upper extremity (483-484)	277	48.7%	$14,886	$6,138	-58.8%	10.2%	6.5%	-36.3%

Source: Dobson | DaVanzo analysis of 100 percent Limited Data Set (LDS) of all Part A and B 2013 Medicare Claims.

Conclusion

Use of home health care as a post-acute care setting can lead to reduced Medicare episode spending and lower rates of rehospitalization. Recognition of home health's value, both to the Medicare program and to the patient, is critical as the country transitions away from fee-for-service medicine toward value based purchasing. Not only does home health care treat patients with chronic conditions, it also integrates acute and community based services, bridging the gap between care settings and improving both the continuity and quality of care. An increased focus on home health care is the best strategy for supporting individuals' return to full functioning after illness and maximize their independence. [4]

The value of home health care goes beyond the Medicare program. As the Medicaid program in the Commonwealth is moving toward managed long-term services and supports (MLTSS), the lessons learned from Medicare value-based purchasing are important to consider. The cost-effectiveness and positive patient outcomes of home health care can mitigate provider risk of avoidable health care costs, and allow patients to remain in the community instead of in facility-based settings.

[4] Virginia Commonwealth University. State of Home Care and Hospice Services in Virginia: Care Where Older Virginians Want It. Virginia Commonwealth University, Department of Gerontology.