

Executive Summary: CACEP Working Paper #4

The Alliance for Home Health Quality and Innovation commissioned Dobson DaVanzo & Associates, LLC to conduct a study, entitled the Clinically Appropriate and Cost-Effective Placement (CACEP) Project, to determine how the Medicare home health benefit can better meet beneficiary needs and improve the quality and efficiency of care provided within the U.S. healthcare system. As a part of the CACEP Project, the Alliance is issuing a series of Working Papers examining patient-level Medicare claims data to determine how clinically appropriate changes in the use of care settings across Medicare providers can result in greater efficiency and reduced healthcare costs at the same or better quality.

Why study hospital admissions and readmissions? Policy-makers have identified the objective of controlling unnecessary readmissions as a means to improve quality of care and reduce health care costs. Hospitals will be subject to penalties linked to readmissions beginning in October 2012. Studying hospital admissions and readmissions will improve our understanding of how home health care providers and other health care stakeholders could work together to provide appropriate care to patients and avoid unplanned and unnecessary admissions and readmissions.

KEY FINDINGS

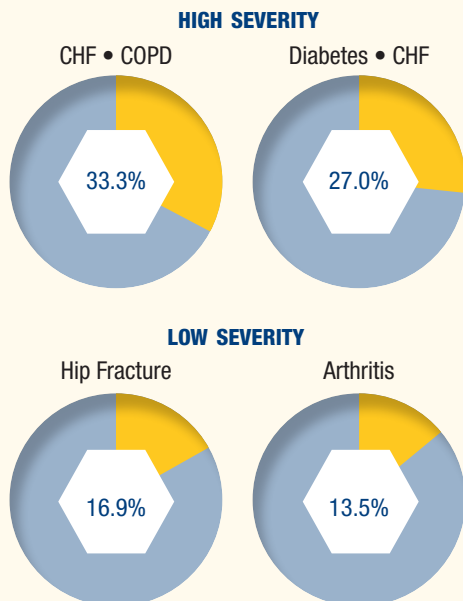
POST-ACUTE CARE EPISODES

Among post-acute care episodes, almost one-quarter of episodes for Medicare patients discharged from the hospital contain a readmission within 60 days. On average, a 60-day episode following the index hospitalization with a readmission is more than twice as costly (2.21) for Medicare as episodes without readmissions (Exhibit 1).

Exhibit 1: How Hospital Readmissions Impact Medicare Expenditures

Post-Acute Care Episodes

Patients with more severe primary chronic conditions tend to have more readmissions

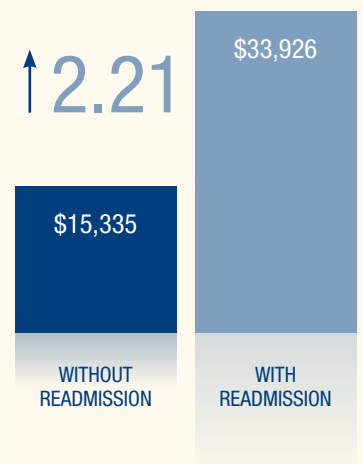


Percentage of episodes with readmission

22.4%

Percentage of episodes across all setting that contain at least one hospital readmission

Medicare episode payments more than **DOUBLE** when an episode contains at least one readmission



WITHOUT READMISSION

WITH READMISSION

How Hospital Readmissions Impact Medicare Expenditures

While the majority of 60-day post-acute care episodes do not contain any readmissions, 22 percent of patient episodes contain at least one readmission. Medicare expenditures significantly increase with each added readmission (Exhibit 2 & 3).

Further, the data show that patients discharged from the hospital after surgery (surgical MS-DRG admission) have a lower readmission rate than those discharged after treatment for medical conditions (medical MS-DRG admission). This indicates that improved care management for medical patients could potentially prevent avoidable readmissions to the hospital.

17.6% Percentage of surgical admissions that contain a readmission among post-acute care episodes

25.6% Percentage of medical admissions that contain a readmission among post-acute care episodes

How Chronic Conditions Impact Hospital Readmissions

Patients with more chronic conditions are more likely to be readmitted within 60-days. As the primary chronic conditions increase in severity, the proportions of episodes that contain a readmission increase as well (Exhibit 4).

Initial Care Setting & Hospital Readmissions

Of all post-acute care readmissions, nearly two-thirds (62 percent) of episodes are readmitted directly (antecedent) from the community, while only 13.7 percent are readmitted from home health care and 12.8 percent from skilled nursing facilities (SNF) (data not shown).

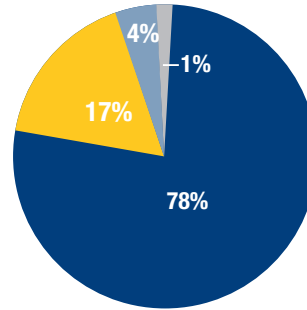


Exhibit 2: Percentage of 60-Day Post-Acute Care Episodes by Number of Readmissions

- 0 Readmissions
- 1 Readmissions
- 2 Readmissions
- 3+ Readmissions

Exhibit 3: Average Medicare Episode Payments by Number of Readmissions

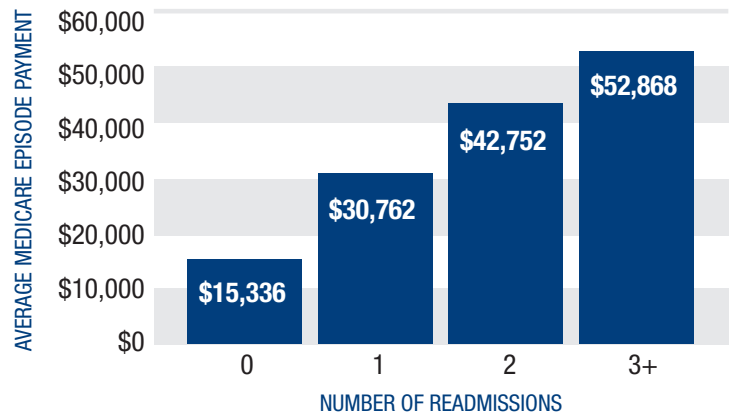


Exhibit 4: Readmission Rates by Primary Chronic Condition

PRIMARY CHRONIC CONDITIONS	PERCENTAGE OF EPISODES WITH READMISSION
CHF* COPD	33.3%
DIABETES* CHF	27.0%
CHF* RENAL	27.9%
Lung Cancer	27.7%
Osteoporosis	15.4%
COPD	19.4%
Rheumatoid Arthritis/Osteoarthritis	13.5%
Hip/Pelvic Fracture	16.9%
Heart Failure	17.2%
Alzheimer's Disease	15.3%
Alzheimer's Disease & Related Disorders	18.3%
Stroke/Transient Ischemic Attack	16.1%
Colorectal Cancer	22.8%
Depression	17.8%
Acute Myocardial Infarction	13.0%
Ischemic Heart Disease	12.1%
Other	12.0%
None	12.9%
Overall Average	22.4%

Exhibit 5: Distribution of 60-Day Episodes with Post-Acute Direct Readmissions by Antecedent Setting

ANTECEDENT SETTING	PERCENTAGE OF EPISODES DIRECTLY READMITTED BY SETTING
HHA	12.5%
SNF	14.2%
IRF	8.3%
LTCH	9.0%
Community*	16.9%
ER	10.8%
OP Therapy	4.8%
Hospice	2.5%
Other IP	6.9%

* Community setting includes physician & outpatient visits while residing in the home.

However, when examining all episodes that contain home health care, 12.5 percent of episodes are readmitted to the hospital directly from home health. Similarly, in the SNF setting, 14.2 percent of patients who receive SNF care are readmitted directly from the skilled nursing facility (Exhibit 5).

Geography & Hospital Readmissions

Geographic regions with high rates of hospital admissions have disproportionately high rates of readmissions. This trend suggests that focusing on reducing avoidable admissions may reduce avoidable readmissions even more dramatically.

KEY FINDINGS

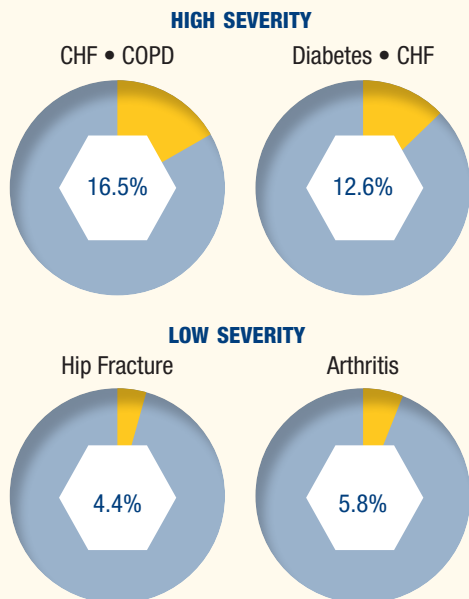
PRE-ACUTE CARE EPISODES

Among pre-acute care episodes, more than 10 percent of episodes contain at least one hospital admission within 60-days prior to the index hospitalization. On average, the Medicare episode payment for these patients is more than twice (2.13 times) that of a patient episode without prior admissions (including the index hospitalization).

Exhibit 6: Exhibit 6: How Prior Hospital Admissions Impact Medicare Expenditures

Pre-Acute Care Episodes

Patients with more severe primary chronic conditions have higher rates of prior hospital admissions

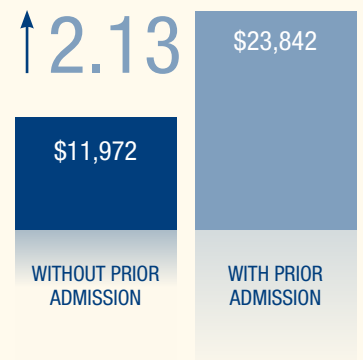


Percentage of episodes with prior admission

10.6%

Percentage of episodes that contain at least one hospital admission prior to the index acute care hospitalization across all chronic conditions

Medicare episode payments more than **DOUBLE** when an episode contains at least one prior admission



Like post-acute care patients, pre-acute care patients with more severe primary chronic conditions have higher rates of hospital admissions prior to being admitted for an index hospitalization (Exhibit 7).

Prior Admissions and Patient Demographic Characteristics

Among pre-acute care episodes, prior hospital admissions are concentrated among beneficiaries who died during the index hospitalization, those who are dual eligible, and those who are non-white (Exhibit 8).

Exhibit 8: Average Medicare Episode Payment by Demographic Characteristics for 60-day Pre-Acute Care Episodes with Prior Admission

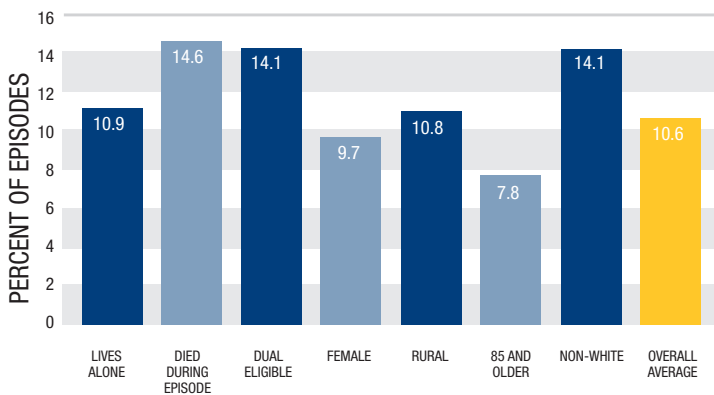


Exhibit 7: Admission Rates by Primary Chronic Condition

PRIMARY CHRONIC CONDITIONS	PERCENT OF EPISODES WITH PRIOR ADMISSION
CHF*COPD	16.5%
DIABETES*CHF	12.6%
CHF*RENAL	11.7%
Lung Cancer	13.9%
Osteoporosis	6.6%
COPD	10.1%
Rheumatoid Arthritis/ Osteoarthritis	5.8%
Hip/Pelvic Fracture	4.4%
Heart Failure	8.0%
Alzheimer's Disease	5.3%
Alzheimer's Disease & Related Disorders	7.5%
Stroke/Transient Ischemic Attack	7.7%
Colorectal Cancer	11.4%
Depression	10.4%
Acute Myocardial Infarction	7.1%
Ischemic Heart Disease	6.6%
Other	6.2%
None	6.9%
Overall Average	10.6%

KEY FINDINGS

NON-POST-ACUTE CARE COMMUNITY-BASED EPISODES

For patients discharged from a community-based home health episode, 43.2 percent of episodes contain a hospital admission within 9 months. Moreover, the cost implications among non-post-acute care patients are much more dramatic than seen in the post- and pre-acute care episodes in that non-post-acute care episodes with a hospital admission are almost four times (3.75) as costly to the Medicare program as those episodes without prior admissions (Exhibit 9).

Chronic Conditions Increase Hospitalization Risk

As seen in the other two episode types, patients who have more severe primary chronic conditions are at higher risk for experiencing at least one hospital admission (Exhibit 10).

Hospital Admissions and Patient Demographic Characteristics

Among non-post-acute care patients, hospital admissions are more frequent among beneficiaries who died during the episode (63.5 percent). Non-white beneficiaries have a below average admission rate (Exhibit 11).

Exhibit 10: Admission Rates by Primary Chronic Condition

PRIMARY CHRONIC CONDITIONS	PERCENTAGE OF EPISODES WITH ADMISSION
CHF* COPD	61.4%
DIABETES* CHF	49.9%
CHF* RENAL	59.5%
Lung Cancer	54.6%
Osteoporosis	34.4%
COPD	37.3%
Rheumatoid Arthritis/Osteoarthritis	29.6%
Hip/Pelvic Fracture	54.1%
Heart Failure	34.2%
Alzheimer's Disease	32.3%
Alzheimer's Disease & Related Disorders	30.9%
Stroke/ Transient Ischemic Attack	34.4%
Colorectal Cancer	40.3%
Depression	26.2%
Acute Myocardial Infarction	52.5%
Ischemic Heart Disease	20.0%
Other	16.1%
None	13.0%
Overall Average	43.2%

Exhibit 9: How Hospital Admissions Impact Medicare Expenditures

Non-Post-Acute Care Episodes

43.2%

Percentage of episodes containing at least one hospital admission across all chronic conditions over a nine-month period

Episodes with at least one admission have a Medicare episode payment that is almost **FOUR** times that of episodes with none

↑ 3.75

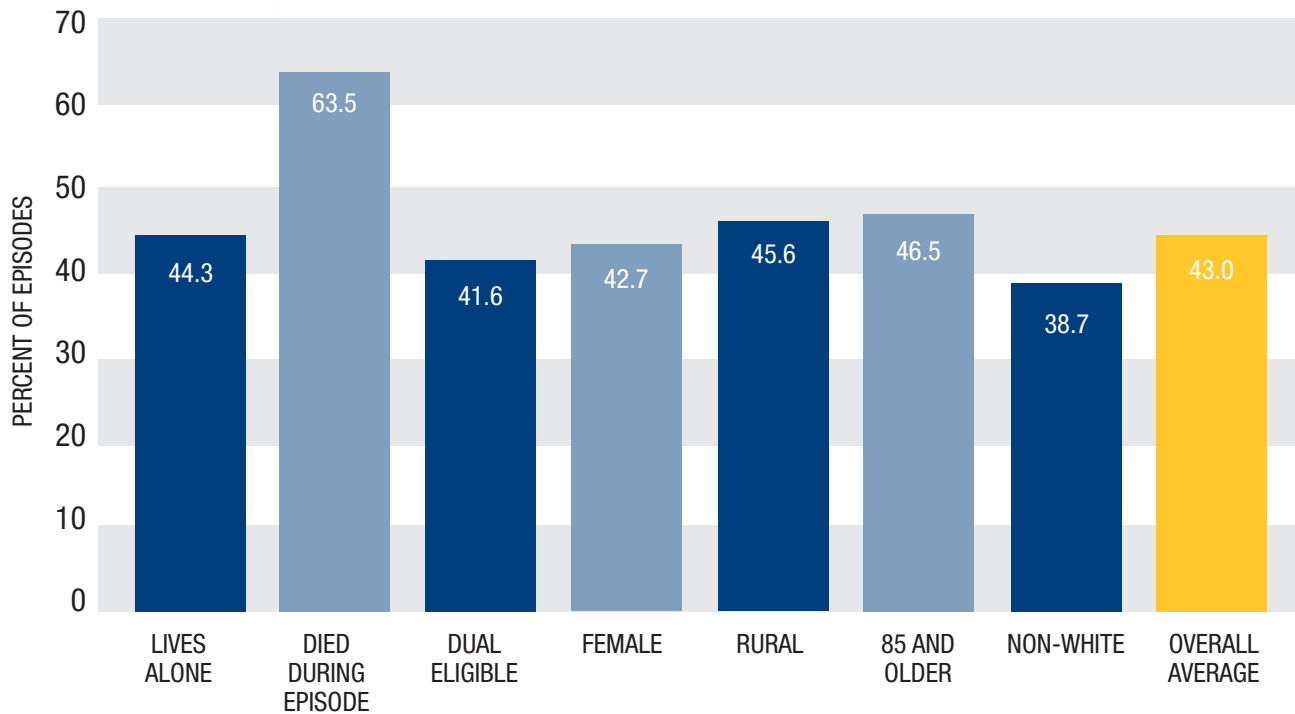
\$11,162

WITHOUT HOSPITAL ADMISSION

\$41,933

WITH HOSPITAL ADMISSION

Exhibit 11: Percent of Episodes with Admissions by Demographic Characteristic



CONCLUSION AND IMPLICATIONS FOR HOME HEALTH

The fact that almost two-thirds of all post-acute care readmissions come directly from the community suggests that there may be great potential for improvements in care and ongoing management of patient conditions. Investing in efforts to improve coordination of care and chronic care management, provided by home health providers and other health care providers, is necessary to reduce avoidable readmissions and admissions from this category.

- There is great opportunity for home health to provide clinically appropriate care management that enhances continuity of care to patients in order to reduce avoidable admissions and readmissions across all episode types.
- Some pre-acute and post-acute care patients who reside in the community and are at high risk of hospitalization may benefit from better ongoing care management, including home health care services.
- Among non-post-acute care (community-based) patients living with low-severity primary chronic conditions, Medicare could achieve significant savings by preventing avoidable hospitalizations.
- If home health providers can treat patients longer and provide chronic disease management services, there may be opportunities to keep non-post-acute care patients from ever entering the hospital.