

# Therapy Outcomes in Post-Acute Care Settings: Study Summary

Jointly Commissioned by



A first-of-its-kind study shows that physical therapy and occupational therapy are connected to positive impacts on patients in post-acute care settings, including improving the functional ability of patients and reducing readmissions to acute-care hospitals. This study reviewed data from 1.4 million Medicare cases that the Centers for Medicare & Medicaid Services made available for the first time. The findings have implications for CMS' ongoing implementation of post-acute care payment system reforms, as well as the development of any future unified prospective payment system.

## Background and Objectives

The American Occupational Therapy Association and the American Physical Therapy Association jointly commissioned a study examining the benefits of occupational therapy and physical therapy services for patients who receive care in inpatient rehabilitation facilities, skilled nursing facilities, and home health agencies under the Medicare program. The purpose of this study, conducted by Dobson DaVanzo and Associates, was to examine the differences between patient populations who receive therapy services in each of the post-acute care, or PAC, settings and the resulting functional outcomes of therapy. The two associations urge policymakers to include this study data in their deliberations about future post-acute care payment policies.

For each PAC setting, the Therapy Outcomes in Post-Acute Care Settings — TOPS — examined patterns of therapy intensity, differences in therapy utilization, and relationships between therapy provision and the outcomes of functional status and readmission rates.

TOPS included Medicare fee-for-service beneficiaries discharged from an acute care hospital to their first PAC setting between Jan. 1, 2015, and Dec. 31, 2016. Using Medicare administrative claims and functional assessment data, including data on therapy minutes, the TOPS study measured therapy utilization, change in the reported need for assistance with core activities of daily living from the start to the end of a PAC stay, and readmission to an acute care hospital.

## Beneficiary Demographics

Over the study period, 1.4 million beneficiaries were discharged from the acute care hospital to PAC settings, including inpatient rehabilitation facilities (IRFs; 14%), skilled nursing facilities (SNFs; 48%), and home health agencies (HHAs; 38%). The study found that the patient populations across settings are complex, are distinct, and have different therapy needs.

Category	Measure	Overall	IRF	SNF	HHA
Control Total	Cases (n)	1,443,341	197,977	693,052	552,312
	Cases (%)	100%	14%	48%	38%
Gender	Male	38%	43%	35%	40%
	Female	62%	57%	65%	60%
Race/Ethnicity	White	85%	85%	85%	86%
	Black	10%	10%	10%	9%
	Asian	1%	1%	1%	1%
	Hispanic	2%	2%	2%	2%
	Native	0%	0%	0%	0%
	Others	2%	2%	1%	2%
	ESRD	3%	4%	3%	3%
Enrollment	Dual Medicare-Medicaid Enrolled	26%	22%	33%	20%
	Disabled	9%	11%	8%	10%
Age Category	Age <65	9%	11%	8%	10%
	Age 65–74	28%	30%	21%	35%
	Age 75–84	33%	35%	33%	33%
	Age 85+	30%	24%	38%	23%
	Beneficiary Resides in Rural Area	20%	21%	19%	20%
Depression Indicated	41%	44%	48%	31%	
Alzheimer's and/or Other Dementia Indicated	33%	31%	45%	20%	
ICU Used in Acute Care Hospitalization	29%	40%	29%	24%	
PAC Admissions Within 5 Days of Acute Discharge	95%	99%	99%	89%	
PAC Stay Interrupted	4%	5%	8%	0%	

*The beneficiary demographic data was derived from the Medicare Master Beneficiary Summary File.*

## Overview of Findings

**Physical therapy and occupational therapy are associated with greater increases in patient function and reductions in readmission. While the patient populations and optimal minutes of therapy vary across settings, the findings indicate that patients who receive the fewest minutes of occupational therapy and physical therapy have worse functional outcomes than do patients receiving more minutes of occupational therapy and physical therapy across all PAC settings.**

For example, the ability of patients to perform basic daily tasks, such as bathing, dressing, and walking, improved more for those who received more therapy minutes than for those who received the fewest therapy minutes. Patients who received occupational therapy and physical therapy during their initial PAC episode were also less likely to be readmitted to hospitals, suggesting that therapy provision during a PAC episode may be protective against 30-day readmission rates across all PAC settings.

PAC SETTING	FINDINGS
<b>Inpatient Rehabilitation Facilities</b>	<ul style="list-style-type: none"> <li>• Patients admitted to IRFs are highly impaired.</li> <li>• IRFs focus on high-intensity provision of rehabilitative care for populations that can tolerate such an approach.</li> <li>• Findings suggest that patients in IRFs benefit from substantial hours of therapy.</li> <li>• The findings demonstrate an overall positive relationship between therapy intensity and functional status score change.</li> </ul>
<b>Skilled Nursing Facilities</b>	<ul style="list-style-type: none"> <li>• Patients admitted to SNFs are relatively impaired and have varying needs and goals, such as maintenance of functional independence.</li> <li>• SNFs provide a broad range of therapy, and findings suggest that patients in SNFs improve across varying therapy intensities.</li> <li>• The findings demonstrate a positive relationship between therapy minutes and functional status score change. Also, some clinical conditions treated by SNFs demonstrate greater outcomes from increasing therapy minutes.</li> </ul>
<b>Home Health Agencies</b>	<ul style="list-style-type: none"> <li>• Patients admitted to HHAs are typically less impaired than those admitted to SNFs or IRFs.</li> <li>• Home health therapy generally aims to enable patients to regain their ability to perform ADLs and remain safely in their homes.</li> <li>• The findings suggest that HHA patients benefit from increases in therapy across varying lengths of stay.</li> <li>• The findings demonstrate that greater therapy intensity among patients admitted to the HHA could further improve functional status, as the benefit does not diminish as the minutes increase.</li> </ul>

## Policy Implications

The TOPS study provides clear evidence that occupational therapy and physical therapy services improve patient outcomes across all PAC settings. Findings consistently indicate that these services are associated with greater increases in function, suggesting a high potential for harm to patients who receive the fewest minutes of therapy. These findings highlight the importance of matching delivery of therapy services to patient needs.

The results of this report illustrate that the U.S. Centers for Medicare & Medicaid Services should approach the research and development of a unified PAC prospective payment system slowly and thoughtfully. These findings also indicate that CMS should monitor the level of therapy provided in PAC settings, in case new payment incentives inadvertently reduce the level of therapeutic benefit provided to Medicare beneficiaries. While TOPS was conducted on data compiled before the SNF Patient-Driven Payment Model and home health Patient-Driven Groupings Model began, initial reports from SNF and HHA practitioners demonstrate that levels of therapy provision may have been reduced by changing payment incentives.

There are unique aspects to therapy delivery in each PAC setting, including their approach to providing intensive occupational therapy and physical therapy services. Beneficial services and approaches could be lost if the PAC settings lose their distinctions by being “blended” together through major incentive and regulatory changes — leaving patients with unmet needs for rehabilitation and an elevated risk for disability and hospital readmissions.

**For additional information, review the AOTA and APTA Joint Statement and Chartbook at [www.aota.org/TOPS](http://www.aota.org/TOPS) and [www.apta.org](http://www.apta.org). You can also contact us at:**



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