

TITLE: Physical Therapy in the COVID-19 Pandemic: Forging a Paradigm Shift for Rehabilitation in Acute Care

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The emergence of SARS-CoV-2, the coronavirus that causes COVID-19, and its rapid transmission around the globe have confronted health care systems with unprecedented challenges and necessitated swift changes in the provision of health care across all settings. As the United States exceeds 1 million confirmed cases, it has become abundantly clear that patients hospitalized with moderate to severe illness will require significant rehabilitation at hospital discharge. This expected surge in rehabilitation needs has sparked national-level conversations around the importance of physical therapy for COVID-19 survivors in home and community-based settings¹⁻³ as well as in postacute care facilities.⁴ However, these discussions primarily focus on the designation of COVID-19–specific postacute care facilities to offload hospital capacity and delivery of high intensity home-based services to avoid the need for facility-based postacute care and rehospitalization.

Although delivery of rehabilitation in these settings is unquestionably a key component of COVID-19 care, the multifaceted contribution of rehabilitation in the acute care setting remains largely overlooked. This lack of focus on acute care rehabilitation is due, at least in part, to the

perceived role of inpatient physical therapists as discharge consultants. Discharge planning is an important component of physical therapist practice in hospitals, yet the role of rehabilitation is often myopically constrained to facilitation of efficient discharge planning. In recent years, pressure to decrease hospital length of stay and increase “through-put”—the rate at which patients are moved in and out of the system—has contributed to a culture in many acute care environments whereby physical therapy functions primarily as a consultation service for discharge recommendations. In this culture, physical therapists work rapidly to prioritize large caseloads of patients, often seeing patients late in their hospital stays and making decisions about postacute care based on a single visit. Although some hospitals have adequate rehabilitation staffing to provide services beyond discharge consultation and mobility recommendations, many lack the financial infrastructure needed to employ adequate staff to meet patient needs. In these cases, rehabilitative care becomes fragmented and increasingly difficult to deliver, particularly among the patients in those less abundantly funded areas of the hospital who need it the most—medically complex older adults admitted to general medicine units.

The ongoing surge of patients with COVID-19 within our health systems has presented enormous challenges in discharge planning, both for patients with and without the disease. Even prior to the pandemic, discharge planning was a disjointed, complex task⁵ that often lacked the evidence needed to systematically identify patient care needs and match them to the optimal postacute care setting for recovery.^{6,7} This is due to both the limited amount of time acute care physical therapists often have with each patient, as well as the paucity of research supporting appropriate discharge location selection. Now, as COVID-19 ravages many long-term care and rehabilitation centers, patients are increasingly denied acceptance to these facilities and decisions

about postacute care options have become exponentially more complex. Families are less available to provide additional support in the home environment because of social distancing; yet, are simultaneously hesitant to send their vulnerable loved ones to postacute care facilities that may pose a high risk of COVID-19 exposure. Anecdotally, these new challenges in discharge planning have led to extended acute care lengths of stay and highlighted the weakness in pre-existing acute care physical therapist practice. Although acute care physical therapists are key players in discharge planning, in order to meet the needs of our patients and the needs of the health care system during COVID-19 and beyond, we must provide early and consistent rehabilitation care throughout the hospital stay.

To be fair, some rehabilitation departments are working closely with hospital administration to develop protocols that recognize acute care therapists as essential members of the health care team and allow them to continue to provide skilled evaluation and treatment to patients with and without COVID-19. I am fortunate enough to work in such a setting, where the rehabilitation leadership has worked tirelessly to adhere to infection control protocols and ensure that we have the personal protective equipment needed to provide safe patient care. Additionally, workflows and staffing levels have been continuously restructured to meet the ebb and flow of demand while keeping staff safe. This commitment to the safety of physical therapists is key to ensuring patient access to the rehabilitation care required throughout their hospitalization. Historically, our hospital administration recognizes rehabilitation as an essential service to provide the best care possible for patients in our hospital system, thereby ensuring that services continue to be delivered throughout the pandemic. In settings where this recognition is not standard, physical therapists must advocate for their role.

Expanded rehabilitation services within the acute care setting is not a novel concept⁸⁻¹⁰—many acute care therapists can recount providing daily treatments to foster mobility gains and functional improvements, thus facilitating safe discharge home for patients who would otherwise not qualify for facility- or home-based care. To meet the rehabilitation needs of COVID-19 patients in the hospital where I practice, therapists are providing high frequency treatments to all appropriate patients throughout the hospital, across general medicine and intensive care unit settings. These changes are vital to improving strength and function not only in patients with post-intensive care syndrome but are also critical to meeting the needs of the large proportion of patients with COVID-19 who require prolonged hospitalization without mechanical ventilation.

Hospitalization is commonly associated with deconditioning and disability among older adults,^{11,12} but these effects are almost certainly exacerbated by the symptoms and clinical manifestations of COVID-19. Programs to promote mobility and deter deconditioning on hospital units have been stalled by recommended infection control policies that require patients to remain in their rooms to decrease transmission,^{13,14} thereby magnifying the usual deleterious effects of immobility during hospitalization in older adults. Therefore, safe and adequate rehabilitation staffing across units in the hospital during the pandemic serves a vital role in helping patients to maintain and re-establish their function throughout the course of their hospitalization. This acute care rehabilitation, in turn, establishes a trajectory of recovery that can then be continued following hospital discharge, both in home and facility-based postacute care. This early in-hospital recovery is particularly important in light of concerns regarding inadequate

personal protective equipment across a variety of postacute care settings,¹⁵ where providers are currently struggling to provide consistent care to patients during the pandemic.

The challenges we face as acute care physical therapists during this pandemic are not new—historically, as a profession we have struggled to establish our role and value within our health systems. The positive changes seen within those systems that are actively engaging their rehabilitation departments to meet the needs of patients with COVID-19 can set the stage for a sustained paradigm shift in the roles and value of acute care physical therapy. This evolution is two-fold and includes: (1) maintenance of staffing levels needed to increase frequency and intensity of rehabilitation treatments in the acute care setting, and (2) investment in research to maximize the value of acute care physical therapy.

Increased rehabilitation staffing in acute care ensures rehabilitative care is consistently delivered to patients with skilled therapy needs and may result in faster functional gains during hospitalization.¹⁶ Such gains can potentially deter the need for institution-based postacute care, particularly for certain patient subgroups.¹⁷ Optimal rehabilitation staffing can also benefit patients with functional limitations and disability who are otherwise unable to utilize these services following hospitalization due to limited access or inadequate insurance coverage. Increased staffing levels further allows for better longitudinal evaluation of functional recovery throughout a patient's hospitalization, thereby ensuring the most appropriate discharge recommendation as well.

Rehabilitation departments simultaneously need to partner with researchers to systematically collect data and evaluate outcomes in these patients, thereby further emphasizing the value of our services within our health systems. Unfortunately, researchers are not commonly embedded within rehabilitation departments, however these relationships are feasible and beneficial. As an example, research partnerships at Cleveland Clinic and Johns Hopkins have explored the potential of functional assessments to predict discharge disposition among hospitalized patients.¹⁸⁻²⁰ Despite these growing areas of research in acute care, considerable work remains to generate the evidence needed to optimize physical therapy delivery in the inpatient setting. We need to improve our ability to quantify patients' multidimensional care needs and identify actionable targets that may be achieved during hospitalization with appropriate allocation of skilled therapy services. It is also essential that we better predict patients' potential for recovery in a given postacute care setting and use this evidence to promote shared decision making with our patients, their families, and our interdisciplinary care partners.

The COVID-19 pandemic is a crucible for health care systems across the country. Although rehabilitation utilization in hospitals varies enormously based on institution size, financial resources, and geographic location, it is clear that even in settings where acute care physical therapy is well staffed and well-funded, expansion of our roles is essential. Acute care physical therapists have long provided skilled evaluation and treatment in frenetic and fast-paced environments to patients struggling with serious illness. However, it is only by reacting to these new and difficult circumstances with growth and self-advocacy that we can forge a future characterized by intensive skilled rehabilitation services in the inpatient setting, simultaneously benefiting our health care systems and the patient populations we serve.

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