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Lessons Learned From the COVID-19 Pandemic: Occupational Therapy on the Front Line

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The pandemic caused by coronavirus disease 2019 (COVID-19) highlighted the insufficient public health policies and lack of a national pandemic response strategy. Rehabilitation departments faced barriers to providing care in the traditional manner and needed to consider protection of patients and staff, staffing and personal protective equipment shortages, and uncertainty about best practices to address a novel health condition. This article highlights the strategies implemented by acute care occupational therapy leaders to support their staff; facilitate efficient care provision; and pivot with constantly changing policies, procedures, and research during the COVID-19 crisis. Occupational therapy's distinct value in caring for this population and role in responding to the pandemic are shared to provide a guidepost for future health care crises.

Between December 31, 2019, and December 18, 2020, the outbreak of coronavirus disease 2019 (severe acute respiratory syndrome [SARS]-CoV-2; COVID-19) in 214 countries resulted in more than 72 million confirmed cases and caused more than 1.6 million deaths globally (World Health Organization [WHO], 2020). In the United States, the patchwork of health care and public health systems was inadequate in this time of crisis (King, 2020), resulting in more than 16 million confirmed cases and more than 300,000 deaths (WHO, 2020). Although the United States accounts for 4% of the world's population, it has experienced 25% of all COVID-19 cases and 22% of deaths as of August 2020 (Andrew, 2020). Federal legislation such as the Coronavirus Aid, Relief, and Economic Security Act of 2020 (CARES Act; Pub. L. 116-136) was passed to provide needed aid to hospitals, states, businesses, and workers; however, the insufficient public health policies and lack of a national pandemic response strategy led to initial shortages of COVID-19 tests, health care personnel, and personal protective equipment (PPE; Haffajee & Mello, 2020). This situation caused extreme challenges for health care providers, including occupational therapy leaders and practitioners, as they attempted to quickly pivot to meet the needs of the rapidly growing population of patients with COVID-19.

The U.S. health care system's vulnerabilities and inequities have been exposed during the pandemic. Data indicate that people of color are experiencing a disproportionate burden of COVID-19 cases and deaths (Artiga et al., 2020). As of August 4, 2020, the COVID-19-related death rate among Black people was more than twice as high as the rate for White people. People from racial and ethnic minority groups were hospitalized at roughly 5 times the rate of White people from March through July 18, 2020 (Artiga et al., 2020). Analyses also have shown that people of color make up a disproportionate share of COVID-19 hospitalizations relative to their share of the population of total hospital visits. These disparities in COVID-19 hospitalizations and death rates reflect longstanding underlying social, economic, and health

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inequities that stem from long-standing barriers to sustaining good health (Artiga et al., 2020). Occupational therapy practitioners have a role in addressing these disparities through providing COVID-19–related acute and postacute care (PAC) services to enhance patients' recovery and return to life roles. Pandemic-related policy changes that temporarily established Medicare, Medicaid, and insurance payment for occupational therapy delivered via telehealth have been essential to expanding occupational therapy's role during the COVID-19 crisis (American Occupational Therapy Association [AOTA], 2020b).

With record numbers of people filing for unemployment, the loss of employer health care coverage will put an increasing strain on health care providers (King, 2020). The drop in people covered by employer insurance will result in fewer people seeking rehabilitation and other health care services, which will affect all employers of occupational therapy personnel. Although federal legislation provided funding to cover the cost of testing for COVID-19, it did not cover the cost-sharing expenses associated with treatment (King, 2020), which could result in limited rehabilitation services in the postacute settings for those with long-lasting effects of the virus who cannot afford to pay for their share of the costs.

Role of Acute Care Hospitals During the Pandemic

Data from New York City, one of the early epicenters of the virus in the United States, suggest that approximately 25% of those diagnosed with COVID-19 were admitted to a hospital in March and April 2020 (New York State Department of Health, April 28, 2020, as cited in Cummings et al., 2020). Of the 5,700 people hospitalized in New York State in March and early April 2020 with a COVID-19 diagnosis, 14% were treated in the intensive care unit (ICU), and 94% had one or more comorbidities, such as hypertension (57%), obesity (42%), and diabetes (34%; Richardson et al., 2020). Although the proportion of hospital admissions and ICU patients with COVID-19 decreased in New York City after the first few months, surges in COVID-19 cases across the United States have continued to occur.

Hospitalized patients require both usual critical care, including intravenous fluid strategies, invasive ventilation, and prone positioning, as well as specialized considerations to limit the spread of the virus within a facility, including private rooms, limits on the number of staff interacting with patients, limited visitation, and use of PPE to protect health care professionals (Murthy et al., 2020). In addition, as scientific understanding of the novel virus continues to develop, critical care procedures evolve, requiring hospitals to be flexible for daily changes in policies and intervention strategies.

Throughout the pandemic, hospitals have prepared and implemented emergency plans to open isolated COVID-19 units, reduce nonessential hospital care, and use empty facilities, such as convention centers, as overflow facilities (Keeley et al., 2020). Although measures such as social distancing, stay-at-home orders, quarantine requirements, and widespread masking have slowed the spread of the virus and have avoided overwhelming the U.S. health care

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system, hospitals have had to take drastic measures to meet the demand for care across the country. Hospitals have suffered huge economic losses during the pandemic, primarily because of a dramatic decrease in nonessential surgeries and appointments for patients without COVID-19, affecting budgets and causing a wave of furloughs of medical staff (American Hospital Association, 2020). Although as of December 31, 2020, the U.S. health care system has weathered the pandemic without becoming overwhelmed, the impact of the virus is still visible in all aspects of care in the hospital setting.

Rehabilitation departments faced many of the same barriers to care encountered by hospitals in general: protection of patients and staff, staffing and PPE shortages, and uncertainty about best practices to address a novel health condition. Drawing from emergency plans, AOTA resources (e.g., AOTA, 2020d), the leadership of department leaders, and constant feedback from practitioners on the front line, occupational therapy practitioners in urban academic hospitals rose to the occasion to demonstrate the value of occupational therapy both in the ICU and specifically for patients experiencing severe illness related to COVID-19. Describing their experiences will assist future efforts of occupational therapy practitioners and leaders who are faced with pandemics and natural disasters.

Managing Daily Operations

Rehabilitation departments rapidly adapted to the new COVID-era environment. In addition to traditional occupational therapy services, staff were often redeployed to assist in operations of the facility and overall care of patients. Acute care leaders quickly transformed roles of frontline staff to meet the needs of the patient population while attempting to decrease the need to furlough staff. Acute care occupational therapy practitioners continued to provide services to hospitalized patients while outpatient therapy departments had a necessary, but drastic, decrease in traditional appointments as they worked toward operationalizing telehealth using remote video or phone communication. Some outpatient occupational therapy personnel were redeployed into labor pools and worked as temperature screeners, PPE observers, blood bank runners, scrub distribution center helpers, and care support providers on COVID-19 cohort units. Others were quickly trained to work in acute care, which allowed more experienced acute care occupational therapy practitioners the opportunity to be redeployed to assist with care of critically ill patients.

Social or physical distancing among staff, requiring 6 ft (1.8 m) of separation between people, was implemented early in the pandemic to reduce the risk of transmission of COVID-19 (Centers for Disease Control and Prevention [CDC], 2020b). For teams who traditionally worked closely with one another, this change was significant in how interprofessional collaboration occurred on a daily basis. In some health systems, strict criteria allowed only primary medical teams (i.e., physicians, physician assistants, advanced practice nurses, and bedside nurses) to interface directly with patients, limiting in-person therapy. Creating work spaces to optimize real-time completion of work while maintaining social distancing required creative utilization of physical work space and scheduling. Strategies were implemented to facilitate social distancing and to promote staff preservation. To reduce the number of people in facilities, many centers placed student fieldwork education on hold. In some facilities, staff schedules were modified and included 7 days on and 7 days off, with work from home days during the off week; three 12-hr days plus one 8-hr day every other week; or 13.5-hr days to limit the number of staff present and interacting with one another. As volumes of patients with

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COVID-19 decreased and universal masking, wearing of eye protection, and daily assessment of staff and visitor symptoms were implemented, typical scheduling of staff to meet the increased need for therapy was resumed.

As the numbers of patients positive for COVID-19 increased in the initial phases of the pandemic, determining essential therapy needs was imperative to ensure that staff had adequate PPE and to prevent cross-contamination when providing care for patients who had COVID-19 and those who did not. Initially, many decisions were made on the basis of PPE conservation, as the drastic increase in isolation patients caused a significant PPE shortage in the United States (CDC, 2020a). Screening processes were implemented to reduce the number of health care providers entering and exiting the rooms and to ensure that proper donning and doffing of PPE occurred. To ensure that occupational therapy leaders were good stewards of resources, PPE conservation led to the delivery of care using nontraditional methods and highlighted the importance of interprofessional communication.

At some facilities, a patient who was close to their prehospital functional level would receive an occupational therapy assessment over the phone while the nurse was present in the room performing other care. An in-person evaluation was performed if a decline in function was noted, with the occupational therapy practitioner working in conjunction with the physical therapist to determine which discipline would best be able to address the needs of the patient while minimizing PPE use and exposure to the virus. In the early stages of the pandemic, because of lack of understanding of how the virus spread and the potential risk of spread between patient rooms, some facilities allocated therapists to see all patients with or without COVID-19 within a day to facilitate care and to limit exposure. As more research became available about the virus, it was discovered that if PPE is being worn, donned, and doffed appropriately, the risk of spread is minimal (CDC, 2020a).

Unique Challenges in Care Provision

The surge in intensive care and ventilator-dependent patients required physical and occupational therapy personnel to initiate treatment as soon as possible to prevent the potential negative impact of critical illness and prolonged hospitalization. Occupational therapy in the ICU has previously been shown to improve outcomes and to decrease length of stay through measures such as early mobilization and optimal positioning (Weinreich et al., 2017). *Early mobilization*, or *early rehabilitation*, typically refers to the early initiation of functional mobility, out-of-bed ambulation and activity, and engagement in activities of daily living, requiring the patient's active participation in rehabilitation (Davis et al., 2013). Occupational therapy's efficacy to improve outcomes in patients with other respiratory diseases, such as pneumonia, has also been previously demonstrated (Freburger et al., 2020; Weinreich et al., 2017), indicating that occupational therapy could play a crucial role in successful outcomes for patients with severe illness related to COVID-19.

In hospitals where providing early occupational therapy interventions is the standard of care, interruption in care provision was limited. For hospitals where occupational therapy has not had a strong role in the ICUs, this deficiency presented the opportunity to demonstrate the value of occupational therapy in this setting. In many institutions, therapists took on the role of participating in and leading teams facilitating prone positioning. Traditionally, prone

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positioning is completed with ventilated patients as a treatment intervention for acute respiratory distress; however, with the pressure of the pandemic, many institutions adjusted and implemented these protocols simultaneously with awake, nonintubated patients, drastically increasing the volume of patients receiving this intervention. The ability to mobilize a wide variety of patients provided the opportunity for occupational therapy teams to be the leaders of these initiatives and highlighted the value of occupational therapy in a demanding time.

Although the long-term effects of patients recovering from COVID-19 are unknown, several functional deficit areas have been identified, including psychological, neurological, cardiac, and cognitive capacities (Iannaccone et al., 2020; Sheehy, 2020). Occupational therapy's scope of practice allowed practitioners to immediately provide an array of interventions to help the patients maximize their functional abilities across the continuum of care in the initial and ongoing stages of this pandemic. Initial treatment interventions incorporated early mobilization concepts used with previous intensive care patient populations. However, occupational therapy practitioners quickly assessed other functional deficits that made these patient treatment approaches unique. Social isolation was one area that affected patients' psychosocial function, and several hospital departments began developing materials to address this issue.

The CDC has stated that a pandemic can induce fear, anxiety, and stress; moreover, social distancing can increase feelings of isolation. Occupational therapy can play a role in identifying and implementing healthy habits, rituals, and routines to support wellness (Champagne & Gray, 2011). As patients are admitted to the hospital with a COVID-19 diagnosis, they are substantially more isolated, with no visitors and limited health care provider contact. One tool that was developed at the third authors' institution was a "Social Distancing Wellness Program" that incorporated community health resources as well as ways to maintain routine, and free, online leisure activities in the community while maintaining social distance. This program created a safe way for patients to engage in meaningful occupations, support their psychosocial well-being, and maintain connection with their communities.

The role of occupational therapy in determining safe discharge recommendations became more complex as patients who were positive for COVID-19 had fewer PAC options. Transfers to PAC settings were difficult because many PAC units were not accepting patients because of their medical complexity and risk of spread of the disease; therefore, many patients chose to return to their homes out of fear. As a result, acute care patient visit volumes increased to higher than before the pandemic average to optimize functional outcomes to facilitate discharge to home. At the same time, non-patient-care requirements also increased as a result of providing caregiver training in video formats and through additional phone calls to communicate because of visitor restrictions.

Self-Care for the Practitioner

Early in the pandemic, as the volume of patients positive for COVID-19 increased, some occupational therapy staff contracted COVID-19. Occupational therapy practitioners had fear of the unknown, and social distancing measures resulted in isolation, anxiety, and changes in social behavior. Occupational therapy practitioners have a unique lens to identify behavioral health concerns and to provide support to peers as well as patients. Creative interventions for self-care for practitioners were developed by therapy staff at the first author's institution; these interventions included weekly newsletters that provided information on podcasts, physical

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activities (e.g., meditation, websites offering exercise classes), quarantine recipes, and inspirational words of support. In daily staff huddles, practitioners were encouraged to share questions and concerns, and updates were provided for changes in procedures. Staff were reminded of resources such as the employee assistance program, and resources were pushed out to staff. Opportunities to meet with ethicists and infection control practitioners in a town hall format were offered to provide information and to allow for dialogue with the experts to work through novel challenges and concerns related to the pandemic.

Policy Changes

Because occupational therapy leaders in acute care settings oversee recommendations for appropriate PAC settings for the patient's next level of care, awareness of the policy and payment changes that affect each PAC setting during the pandemic has been needed. During the COVID-19 pandemic, the Centers for Medicare & Medicaid Services (CMS) issued waivers during the public health emergency that affected service provision across the acute care and PAC settings (AOTA, 2020b). For example, waivers gave permission to provide and charge for telehealth occupational therapy in outpatient and institutional settings (AOTA, 2020a), allowed occupational therapy practitioners to open home health cases and conduct the start of care for home health agencies, and granted occupational therapy assistants the ability to perform maintenance therapy in outpatient settings (AOTA, 2020b). The expansion of payment for telehealth created opportunities in many settings, particularly outpatient care. The CARES Act loosened the requirements that must typically be met as a condition of admission to inpatient rehabilitation settings, such as the 3-hr minimum for therapy and the rule that specifies that 60% of rehabilitation patients must have specified diagnoses. CMS also waived the 3-day hospitalization requirement for Medicare coverage of admission to a skilled nursing facility (AOTA, 2020b).

AOTA (2020b) supported clinicians by providing extensive guidance on the implications of payment and regulatory changes for occupational therapy practitioners, practice owners, and directors. AOTA (2020d) also provided practice guidelines, decision trees, webinars, and ethical guidance to support the role of occupational therapy during the pandemic. Staying current on the Medicare waivers and the expansion of telehealth options permitted greater flexibility in decision making regarding discharge planning, allowing the patients and their families to choose the setting and type of service delivery that worked best for them. However, the occupational therapy profession must be vigilant and work to maintain the opportunities that were temporarily granted during the emergency order.

Advocacy

Even before the pandemic, AOTA (2020c) was advocating with CMS for occupational therapy to be included in the list of eligible telehealth providers under federal statute. When CMS ruled that telehealth rehabilitation was a covered service under Medicare, AOTA immediately initiated an advocacy campaign to petition CMS and the U.S. Congress to make the Medicare telehealth benefit permanent. AOTA (2020a) is also working to promote permanent telehealth coverage for other payers, such as commercial insurance, large employers with self-administered insurance plans, and targeted state Medicaid plans. Efforts are also underway to continue the waivers described earlier that allow occupational therapy personnel to have more flexibility across different settings.

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Lessons Learned

The COVID-19 pandemic required occupational therapy leaders to create new processes to support occupational therapy staff and to ensure that service delivery and care for patients were optimized. Because of the rapidly changing COVID-19 research and public health guidelines, occupational therapy leaders provided quick, accurate training for PPE compliance; created education on practice changes; and developed treatment frameworks for this new patient population and care delivery system. The many lessons leaders learned along the way include the following:

- Remain fluid and flexible
- Communicate frequently with updates and changes in policy and procedure to ensure that staff are well informed
- Think broadly and be creative to establish new roles for occupational therapy practitioners
- Support staff and help develop strategies to build their resiliency
- Provide support to staff through creative staffing models to help them balance work and personal life, because many are supporting children doing virtual learning from home and providing support to elderly family members to keep them in home environments
- Rely on and use the occupational therapy practice foundations and theories to guide evaluation and treatment of new and unknown diagnoses.

Although COVID-19 is the current public health crisis, others will occur in the future. Occupational therapy leaders are poised to support clinicians in the care of patients through the continuum of care and to meet the challenges in the future.

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