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Original Study

Rapid Changes in the Provision of Rehabilitation Care in Post-Acute and Long-Term Care Settings During the COVID-19 Pandemic

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A B S T R A C T

Objectives: Little is known about how the COVID-19 pandemic has affected rehabilitation care in post-acute and long-term care. As part of a process to assess research priorities, we surveyed professionals in these settings to assess the impact of the pandemic and related research needs.
Design: Qualitative analysis of open-ended survey results.
Setting and Participants: 30 clinical and administrative staff working in post-acute and long-term care.
Methods: From June 24 through July 10, 2020, we used professional connections to disseminate an electronic survey to a convenience sample of clinical and administrative staff. We conducted an inductive thematic analysis of the data.
Results: We identified 4 themes, related to (1) rapid changes in care delivery, (2) negative impact on patients' motivation and physical function, (3) new access barriers and increased costs, and (4) uncertainty about sustaining changes in delivery and payment. Rapid changes: Respondents described how infection control policies and practices shifted rehabilitation from group sessions and communal gyms to the bedside and telehealth. Negative impact: Respondents felt that patients' isolation, particularly in residential care settings, affected their motivation for rehabilitation and their physical function. Access and costs: Respondents expressed concerns about increased costs (eg, for personal protective equipment) and decreased patient volume, as well as access issues. Uncertainty: At the same time, respondents described how telehealth and Medicare waivers enabled new ways to connect with patients and wondered whether waivers would be extended after the public health emergency.
Conclusions and Implications: Survey results highlight rapid changes to rehabilitation in post-acute and long-term care during the height of the COVID-19 pandemic. Because staff vaccine coverage remains low and patients vulnerable in residential care settings, changes such as infection precautions are likely to persist. Future research should evaluate the impact on care, outcomes, and costs.

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Despite strict social distancing and infection control precautions, post-acute and long-term care patients have been disproportionately affected by the COVID-19 pandemic. Nursing homes, for example, house 1% of the US population but, at times, accounted for about 4% of cases and 38% of all deaths.[1] Even patients not infected by SAS-CoV-2 were affected by the strict infection precautions, including restrictions that prevented family visits, eliminated many social activities, and restricted many residents to their rooms. Many infection precautions persist, including use of either source control masks for full personal protective equipment (PPE; ie, mask, gown, and gloves, with or without face shields) and the periodic need to quarantine after exposure.[2]

Throughout the pandemic, post-acute and long-term care providers have faced the challenge of providing vulnerable patients with daily close-contact care for everything from routine activities of daily living to physical rehabilitation.[3] Rehabilitation care is important in these settings—especially in residential care, where people may go when recovering from an acute event and where disabled and older patients need help maintaining physical function. The importance of rehabilitation was arguably heightened during the pandemic, as providers began caring both for patients whose physical activity was severely curtailed as a result of strict precautions and for those recovering from COVID-19.[4,5] Much has been published and reported specifically about the burden of COVID-19 disease borne by post-acute and long-term care patients, benefits of rehabilitation for patients recovering from COVID-19, and the policies providers implemented to prevent transmission. Although some rehabilitation care delivery shifted to telerehabilitation during the early waves of the pandemic,[6–8] little is known about how the provision of rehabilitation in post-acute and long-term care changed. To understand how the pandemic affected the provision of rehabilitation, we administered an electronic survey to a convenience sample of clinical and administrative staff. This brief report presents themes derived from respondents' responses to open-ended questions.

Methods

At the Learning Health Systems Rehabilitation Research Network (LeaRRn), a multi-institution initiative, we fund and support stakeholder-partnered research designed to improve the quality of rehabilitation care and services.[9] In late June 2020, two of the authors sent a link for the electronic survey to groups convened by their organization that include professionals with rehabilitation and nursing experience who work in post-acute and long-term care settings. The settings represented in these groups include different ownership (independent, corporate, and profit status) and sizes (small and large corporations). Some provide in-house rehabilitation and others use contract rehabilitation. We asked each group to share the survey with members using their usual communication vehicles (eg, email, newsletters, or blog posts). This was done as part of a LeaRRn process to assess research priorities. Our goal was to elicit perspectives from a convenience sample of stakeholders regarding rehabilitation care during the pandemic and related research needs, as a first step toward identifying and prioritizing these needs. The survey was open for responses from June 24 through July 10, 2020.

The survey instrument included 4 open-ended questions about rehabilitation care delivery and research needs during the pandemic, as well as 2 close-ended questions regarding respondents' primary role (ie, rehabilitation, nursing, administration, or other) and the population or populations with which they worked (ie, assisted living, home health, skilled nursing, long-term care, or other). Six members of the research team used a thematic analysis using an inductive approach to individually code the survey data and generate initial themes, which they noted in writing. The group then met 3 times to review and refine initial themes, define and name each, and identify illustrative quotes.

Because provider staff responded to the survey in a professional capacity and did not provide personal information, this analysis was not considered human subjects research or subject to Institutional Review Board approval.

Results

We received 30 responses. Most respondents were rehabilitation clinicians (eg, physical therapists, occupational therapists, or speech language pathologists) (n=11, 36.7%) or administrators (n=13, 43.3%); the remainder (n=6, 20.0%) were in nursing (n=3) or in another role (n=3). Respondents most frequently reported working with residents in assisted living communities (n=13, 43.3%) or nursing homes (skilled nursing: n=29, 93.3%; long-term care: n=25, 83.3%). A small percentage reported working with patients in their homes (n=7, 23.3%). We identified 4 themes (Table 1).

Theme 1: Rapid Changes in Care Delivery

Many respondents described how in-room quarantine for new admissions and COVID-positive patients (in residential care settings) and social distancing requirements shifted therapy from group sessions and communal gyms to the bedside, with limited access to both gyms and equipment. Some respondents felt that this shift was detrimental; others viewed it positively.

> Limitation of activities and confinement to the resident's room has been the biggest [issue]. This has reduced access to the therapy gym and the various types of equipment… modes of delivery including group and concurrent therapy which could be of benefit to the resident has been limited.
>
> (Administrator)

Table 1
Post-Acute and Long-Term Care Providers' Perspectives of the Impact of COVID-19 on Rehabilitation Care (N = 30)

Theme	Description
1. Rapid changes in care delivery	In-room quarantine for new admissions and COVID-positive patients and social distancing requirements shifted therapy from group sessions and communal gyms to the bedside and to telehealth
2. Negative impact on patients' motivation and physical function	Quarantine and visitation restrictions left patients isolated from family and other social networks, negatively affecting patients' motivation and overall physical function
3. New access barriers and increased costs	The use of personal protective equipment, shift to individual therapy, and use of telehealth resulted in decreased volume and added costs, causing concerns about patient access and business finances, but Medicare waivers helped by providing telehealth payments and other benefits
4. Uncertainty about sustaining changes in delivery and payment	Respondents expressed a desire to continue to use technology and telehealth platforms, but questioned whether Medicare waivers would extend beyond the public health emergency

The pandemic has forced care to be at bedside; and only on the unit—where it should be. This has improved rehab care. This has also improved the team approach.

(Other)

I think that outcomes as far as mobility will be better, due to not having 25% of patients [in] group sessions (which are solely for business advantage, not patient advantage in my opinion).

(Rehabilitation Clinician)

Respondents frequently noted that hand hygiene, cleaning, and donning and doffing PPE increased the amount of time associated with each in-person therapy session, adding to staff burden and constraining the number of patients that each rehabilitation provider could see.

Application of PPE has added to the time it takes to set up a resident for services. In addition, enhanced cleaning procedures have been an added burden to the therapy staff.

(Administrator)

Many respondents described how telehealth enabled therapy even when in-person sessions were not possible.

Telehealth is a great source to assist patient[s] in improving their function [while they are] sitting at home and reducing exposure to the virus.

(Rehabilitation Clinician)

Theme 2: Negative Impact on Patients' Motivation and Physical Function

Respondents discussed how quarantine and visitation restrictions in residential care isolated residents from family and other social supports.

Patients are less motivated, depressed, and missing loved ones … limited interaction with other patients really saddens the elderly population.

(Rehabilitation Clinician)

Many respondents felt that residents being confined to their rooms, particularly during the 14-day quarantine after admission, affected their mental health and motivation, and potentially limited their physical rehabilitation.

The new admissions being isolated for 14 days in their rooms has had a negative effect on these patients, especially mentally.

(Rehabilitation Clinician)

[The biggest issue is the] inability to be challenged to [a] higher level of function due to quarantine [for] 14 days when [residents] first come from the hospital.

(Rehabilitation Clinician)

Respondents also discussed how the shift from group sessions and communal gyms affected residents' motivation.

[The] inability to provide group/concurrent treatments [is] compromising both socialization and peer encouragement.

(Administrator)

Residents do not work in groups and cheer each other on.

(Administrator)

Some respondents mentioned challenges specific to those patients who had COVID-19.

[The biggest change is the] social isolation and declined mobility and ADL [activities of daily living] levels for [COVID] positive patients.

(Nurse)

For patients with COVID, the focus is not restorative therapy. It is supportive to the treatment strategies for COVID. Rehab staff were essential in re-positioning residents, including those who were able to maintain supine positions. Pulmonary rehab techniques were also valuable. But traditional type therapies, such as ambulation and exercise, can do more harm than good to a patient with COVID. Once the patient recovers, however, restorative rehab is essential.

(Administrator)

Theme 3: New Access Barriers and Increased Costs

Several respondents, primarily those with administrative roles, commented on the business implications of the pandemic, noting decreased patient volumes and decreased revenue, coupled with increased costs associated with PPE, the shift from group to one-on-one therapy, and the use of new technology platforms, such as telehealth.

[We] need higher reimbursement to cover additional costs associated with providing therapy during the pandemic.

(Administrator)

Systemic problems in how rehabilitation services are paid for have created chasms in access and outcomes and who/how providers are paid.

(Clinical Operations)

Respondents repeatedly expressed concern about limited access to rehabilitation services and equipment. At the same time, many respondents spoke favorably of the rapid expansion of telehealth and of Medicare waivers that provided telehealth payments, additional benefits, and eliminated mandatory 3-day hospital stays before post-acute rehabilitation care.

Utilization, outcomes, access to care were improved once telehealth was permitted… [yet] technology and staffing costs increased without a means to recoup the additional costs.

(Administrator)

The [emergency] waiver has been helpful to provide additional needed services to Medicare Part A beneficiaries.

(Administrator)

Infection control restrictions also limited therapists' flexibility moving between settings and between buildings.

Theme 4: Uncertainty About Sustaining Changes in Delivery and Payment

When asked what the biggest change was as a result of the pandemic, respondents expressed uncertainty whether the Medicare waivers would be extended after the public health emergency ends.

[The] question of extending waiver of regulations following the pandemic.

(Administrator)

Waivers that have favorable[y] impacted our ability to treat patients.

(Rehabilitation Clinician)

When describing how to improve rehabilitation care, most direct care respondents emphasized the need for technology and telehealth platforms.

I believe healthcare professionals are much more open to telemedicine as a result of the pandemic, and changes in practice,

like telehealth, would have taken much longer to occur without the need for it during the pandemic.

(Rehabilitation Clinician)

Tele-rehab is promising, but we've been living in a technology desert and suddenly having to stand up infrastructure, educate staff, and implement anything new during a pandemic exposed the terrible inadequacies of our existing system.

(Other)

Discussion

This is the first study, to our knowledge, to characterize providers' perceptions of the impact of the COVID-19 pandemic on rehabilitation care in post-acute and long-term care settings. Survey results captured in summer 2020 depict dramatic changes, with therapy shifting to the bedside and to telehealth and providers coping with increased expenses and reduced revenues. Moreover, respondents described how quarantine and social isolation worsened patients' physical function and motivation for habilitation. These findings provide insight for those seeking to prioritize and test interventions, policies, and other strategies to improve the delivery of rehabilitation care in these settings in the wake of the pandemic.

Changes in rehabilitation care are likely to persist even as COVID-19 vaccination increases and the pandemic wanes. Although vaccination coverage is high among residents in residential care settings, who were prioritized for vaccination beginning in December 2020, coverage lags among staff averaged only 56.7% as of July 2021.[10] Emerging evidence also suggests that immune-compromised patients may not mount a response to and be protected by the vaccine.[11] As a result, it is likely that the infection precautions in assisted living communities and nursing homes in place at the time of our survey are likely to continue indefinitely as SARS-CoV-2 becomes endemic, and that research will be needed to evaluate the impact of such practices on rehabilitation care.

Future research will also be needed to inform policy. Survey respondents expressed a desire that Medicare waivers, for example, extend beyond the pandemic, but whether or not such policy changes are made permanent remains to be seen. The Centers for Medicare & Medicaid Services did extend its telehealth coverage for physical therapy, occupational therapy, and speech-language pathology, but did so only until the end of the public health emergency.[12] And while respondents described increased expenses, there were no changes in reimbursement to compensate for the shift from group therapy to one-on-one rehabilitation, investments in telehealth platforms, or purchase of additional PPE and other supplies. In fact, the Centers for Medicare & Medicaid Services decreased Part B physical therapy, occupational therapy, and speech-language pathology rates in January 2021 and plans to do so again in January 2022.[13]

Of particular concern, survey respondents worried about assisted living and nursing home residents suffering from reduced support and habilitation when quarantined or separated from friends and family owing to visitation restrictions. The experiences they described are supported by prior research linking reduced mobility, for example, with loss of strength and muscle function.[14] Similarly, research links social isolation and loneliness with poor outcomes such as depression, cognitive impairment, motor decline, and functional disability,[15,16] all of which can negatively affect patients' participation in rehabilitation and related outcomes.

Although our findings highlight important changes in rehabilitation care in post-acute and long-term care during the pandemic, we note several limitations. This was a convenience sample. Although respondents were recruited via professional groups with membership reflecting multiple sizes, types of ownership, and methods of providing rehabilitation (in-house vs. contract), they may not be representative of a broader population. We were unable to calculate a response rate, because we disseminated the survey through means that preclude ascertaining the number of people who received the survey. We relied on survey respondents to self-report their profession and care setting. Finally, we were unable to ask follow-up questions to clarify responses, for example to better understand which setting a respondent was referencing. However, we used rigorous methods to generate the themes reported here: 6 investigators reviewed survey responses independently before meeting to compare coding and interpretations, and to reach consensus on themes.

Conclusions and Implications

We undertook this survey to elicit contextual information necessary to prioritize and inform research, because the process of engaging stakeholders to capture such information is vitally important to establish successful research partnerships. These findings demonstrate the importance of eliciting stakeholder perspectives to ensure research is grounded in and responsive to real-world considerations—context that, according to these findings, changed rapidly during the "acute" phase of the pandemic and continues to evolve. Respondents describe changes that they viewed both positively, such as the shift to bedside rehabilitation, and negatively, such as resident isolation. Because infection precautions and other policies, such as periodic quarantine, are likely to persist in residential care as the pandemic wanes elsewhere, future research will be needed to evaluate the impact of all such changes on rehabilitation care, outcomes, and costs.

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