Research Square

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Supporting rehabilitation practice for COVID-19 recovery: A descriptive qualitative analysis of healthcare worker perspectives.

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Research Article

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Abstract

Objective

The study aimed to explore the perspective of healthcare workers on the resources they need to provide quality rehabilitation for people recovering from COVID-19 infection.

Methods

A descriptive qualitative approach using reflexive thematic analysis was employed. Focus groups and interviews were performed with 9 healthcare workers (1 Intensive Care Unit Physiotherapist, 1 Respiratory Therapist and 7 Occupational Therapists) with experience treating patients recovering from COVID-19 infection within hospital and in the community. Verbatim transcripts were coded and analysed for themes.

Results

Healthcare workers perceive an urgent need for resources about recovery from COVID-19 infection to support quality care. They particularly want detailed guidance about potential trajectories of recovery, and what should be expected over time for people with Long COVID. Many observed that this group of patients required higher oxygen requirement and experienced slower recovery than others with serious respiratory conditions. Supports for quality care do exist but are not perceived as sufficient by participants. They want any new resources developed to be accessible, quick to access and targeted to specific healthcare worker roles and services settings. Participants identified several barriers to accessing practice supports, including the time poor nature of healthcare and financial costs to both patients and healthcare workers.

Conclusion

Healthcare workers perceive an urgent need for the development of resources to support quality rehabilitation for people recovering from COVID-19 infection, to support best outcomes for this group of patients. Any resources developed must consider identified barriers to their access and use to maximise their impact.

Online Short Summary

What is known about the topic? There is currently very little research about resources to support healthcare workers working with people recovering from COVID-19 infection, and available information focuses on defining Long COVID or describing models of care.

What does this paper add? This paper describes healthcare workers perceptions of the resources they need to provide quality rehabilitation for people recovering from COVID-19 infection.

What are the implications for practitioners? Resources to support healthcare workers practice with these patients are urgently needed and must be designed to meet their needs and preferences.

Introduction

Long COVID (also known as Post-Acute COVID-19 Condition) is a syndrome of diverse symptoms that occurs three months or more following infection with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2, known here as COVID-19) (1). Prevalence estimates for Long COVID vary significantly, but generally range from 5–30% (2–4). The Australian Guidelines for the clinical care of people with COVID-19 defines Long COVID as symptoms that develop after COVID-19 infection, which continue for 3 months or more and are not explained by a differential diagnosis (5). However, they also advise this syndrome may be considered prior to 3 months along with alternative underlying diagnoses.

The heterogeneity of its symptoms makes Long COVID extremely difficult to define. Patients with a history of COVID-19 infection may have increased healthcare needs at any point in time following their infection, resulting from either Long COVID symptoms (6, 7) or exacerbation of pre-existing conditions (8). There is also growing evidence that people ostensibly recovered from their COVID-19 symptoms experience an increased risk of cardiovascular conditions (9), neurological conditions including dementia (10) and psychiatric conditions (11). In all these circumstances, the healthcare system must prepare to provide responsive, effective, and evidence-based care for this rapidly growing group of patients.

Healthcare workers (HCWs) and other carers have had to make many changes to their practice in response to new workloads in this evolving pandemic. International research has described the impact of these changes on HCWs, many of whom feel underprepared and undertrained to deal with both acute and Long COVID (12). Several authors recommend the development of professional development education for HCWs to build capacity across the workforce (13–16), but there are not published studies describing the approach or content required in these programs. Qualitative research with consumers describes frustrating and distressing encounters with clinicians with little to no knowledge about Long COVID (17), which emphasises the negative impact under-development in this area has on both clinicians and patients alike.

The aim of this study was to explore the perspective of Australian HCWs on the resources they need to provide quality rehabilitation for people recovering from COVID-19 infection. Practice resources were defined as any supports or materials which assist the provision of quality healthcare, with a target audience of people with Long COVID and/or HCWs.

Methods

This study was approved by the [BLINDED] Low Risk Ethics Panel ([BLINDED]). It employed a descriptive qualitative approach based upon reflexive thematic analysis, to better understand the perceptions of participants. The first author ([BLINDED]) was a novice qualitative researcher working on this project as

part of his medical degree. The second author ([BLINDED]) is a very experienced qualitative researcher, who has completed and published many descriptive qualitative studies using reflexive thematic analysis. The research team met regularly for supervision and reflexive discussion, with the second author providing close supervision and mentorship throughout the study process.

The Australian healthcare workforce includes a wide range of disciplines, practice settings, geographical regions and specialties (18). The authors sought a diverse sample of experience, including multidisciplinary HCWs from any sector of the health system. For inclusion in this study, participants needed to be over 18 years, employed as a primary care or tertiary care provider in the state of Victoria, and be capable of participating in interviews or focus groups without assistance. Any participants not meeting the above requirements were excluded. Snowball recruitment occurred via social media advertisements and email invitations distributed through the professional networks of both authors.

At the time of data collection (November 2021-August 2022), there were relatively few Victorian HCWs with direct experience with people recovering COVID19, and recruitment was also challenged by the impact of successive waves of infection on the availability of HCW. A systematic review by Hennink and Kaiser (19) suggests the final sample (n = 9) of this study may be sufficient to identify major themes in the data, and no additional themes were identified in the final transcript. However, as an exploratory study, this data is not intended to be generalisable.

Potential participants contacted the second author directly to express their interest and were provided with a plain language statement. All provided explicit written consent for their participation in this study. Participants were able to choose either focus group or interview attendance, which was scheduled at a mutually convenient time. All data collection was completed via Zoom to comply with COVID restrictions, and these sessions lasted approximately 45 minutes. All recordings were transcribed verbatim and de-identified in preparation for analysis.

The authors began the process of reflexive thematic analysis (20) by thoroughly reading and familiarising themselves with each transcript as a whole. Following this, the first author coded the transcripts by identifying words of phrases they interpreted as meaningful. The second author independently coded three transcripts and a high degree of consistency between their interpretations was found on comparison. The authors then met to collaborative identify potential themes, which were then reviewed and refined to develop their definitions. Quotations from the transcripts were selected to illustrate each of them, before the findings were compiled into the following report.

Results

Nine HCWs participated in this study, with six choosing to be interviewed and four participating in one of two focus groups. As shown below in Table 1, all participants were allied health professionals and all were female.

Table 1
Participant Characteristics

Category	Demographic Characteristic	Participants (n)
Discipline	Occupational Therapist	7
	Physiotherapist	1
	Respiratory Therapist	1
Practice Setting	Acute	3
	Sub-Acute	5
	Primary Care	1

Three major themes were identified within the data: 1) Current practice with people recovering from COVID-19, 2) Experience with existing practice resources, 3) Perceived needs for additional practice resources.

Current practice with people recovering from COVID-19

Participants had various amounts of experience with COVID-19 patients, however they reported strikingly similar presentations and practice challenges (see Fig. 1). The recovery of these patients was perceived to be slower than expected for people with similar respiratory conditions such as pneumonia. The perceived difference between their current health status and pre-morbid function was particularly stark in younger patients with no pre-existing comorbidities.

Participants also described the mental health impact of COVID-19 infection on many of their patients, regardless of their pre-morbid mental health. This impact was often expressed as significant anxiety about their symptoms and an overall loss of self-confidence. Participants described how confidence building exercises and strategies were often part of their treatment approach to address this aspect of the patient experience. Some patients were also worried about their ability to return to previously valued roles and activities in the longer term.

Participants also observed their COVID-19 patients had significantly higher oxygen requirements, as evidenced by the need for oxygen therapy, reduced endurance, and increased fatigue. When given, oxygen therapy was required for much longer or at much higher doses than they had seen in other patient cohorts. If not well managed, the patients quickly fatigued and become desaturated very easily. Their lack of practice knowledge in this area provoked considerable uncertainty and concern for some participants.

Experience of existing practice resources:

All participants had accessed some form of practice resources to support their work with COVID-19 patients (see Fig. 2). These were often in the form of documents and guidelines released by public sources, including governments and health organisations such as the World Health Organisation. Internal

organisational resources and memoranda were also available. These resources were too generic to meet their needs for specialised or targeted information, but they were perceived to be a helpful starting point for their work with patients. The key barrier to accessing these resources were perceptions of being extremely time poor due to clinical demand.

Often, approaches to accessing existing practice resources were ad hoc and driven by their local context. Some participants proactively created their own patient information sheets to support treatment delivery. Many described using case discussions amongst their disciplinary colleagues or multidisciplinary teams as a resource for developing practice. However, these supports were not available consistently to all HCWs, suggesting potential disparity between the resources provided between services and/or practice settings.

Many tried to leverage existing professional networks as potential sources of shared care and opportunities for collaborative professional development. However, the extended Victorian lockdowns and redistribution of healthcare resources resulted in the loss of many of their pre-pandemic practice supports. Some participants also questioned how appropriate existing services were to the specific needs of people recovering from COVID-19. External networks supporting informal professional development were perceived as less relevant and were less accessible, which diminished their role as a practices support.

Perceived needs for additional practice resources.

All participants agreed that HCWs need more resources, supports and training to provide quality rehabilitation for people recovering from COVID-19 infection (see Fig. 3). They particularly wanted detailed information about what the course and progression of recovery. Without this foundation knowledge, HCWs felt constrained in setting and managing both the patients and their own expectations during treatment. To extend on existing practice supports, the participants wanted resources targeted to their practice area or their disciplinary role in supporting recovery for these patients. For example, focus resources and support regarding the greater oxygen requirements of this patient group.

Regarding resource format, multiple options were recommended including infographics, online workshops, webinars, forums, face to face workshops, social media posts or an interactive online platform. Infographics and flowcharts were cited as particularly good options due to their easy accessibility, as was consolidating and hosting resources online. Evidence-based support for clinical processes and decision making was also suggested, and perceived to potentially reassure HCWs about the quality of the care they were providing. The participants also wanted flexible resources that were suitable for HCW, patients and carers. However, the cost of resources was identified as an important potential barrier to their use, particularly for patients already under significant financial strain due to their illness.

Discussion

The findings of this study indicate HCWs drew on a mix of existing and newly developed resources to support their efforts to provide quality rehabilitation for people recovering from COVID-19 infection. Existing practice resources (even about COVID-19) do not provide enough specific guidance to meet the perceive needs of HCWs, who want supports tailored to their practice settings and disciplinary roles. The participants also emphasised that new resources should be accessible, succinct, and low cost to enable access alongside their busy clinical workloads.

While this patient cohort were like other groups in some ways, their clinical issues (particularly oxygen requirements and expectations around recovery trajectory) are distinctive enough to require the development of new knowledge and skills. The participants observations of co-morbid mental health issues for people recovering from COVID-19 agrees with previous findings (21, 22), which describe the impact their experience of severe disruptions in daily life, isolation, difficulties accessing care, uncertainty about their future and negative reactions from health providers, family and friends. While allied health clinicians are qualified to manage both physical and mental health conditions, they may not have the opportunity to practice their full range of skills in some service settings. The preservation of patient dignity is a key strategy to promote self-confidence following injury or disease exacerbation (23), along with explicitly addressing the interactions between physical and psychological health during recovery (24). HCW and patient resources should therefore support these aspects of care, by supporting active patient and family involvement, honest communication, collaborative goal setting and progress monitoring.

The need for both generic and Long COVID specific resources suggests a multi-dimensional approach to HCW capacity building. Best practice recommendations for developing online rehabilitation practice resources (25) emphasise these supports should be evidence-based, user-centred, adapted to online environments (i.e., make use of interactive components rather than rely solely on text), and evaluate the impact of the resources via downloads metrics and other measures. While previous calls for capacity building in the literature consistently identified professional development education as a key medium, the participants identified a range of other formats. A blended approach to professional development may therefore be more useful to HCWs including elements of face to face, online, collaborative and self-directed learning (26). This approach is an effective way of developing evidence-based competencies in HCWs (27), but the diversity of the Australian healthcare system would require collaboration between multiple services and agencies to meet the participants expressed need for both generic and targeted resources.

Access to COVID-19 recovery specific resources will take time, as the evidence base in this field is only now emerging. Guidance based on ‘emerging experience’(28) (like the case discussions described here) are an appropriate approach to professional development in the meantime but may contribute to inconsistencies in dissemination and implementation across healthcare services. The development of COVID-19 recovery resources will also require the use of rapid-cycle methods that apply updated data to real-life scenarios (29), which would require resourcing far beyond individual health services. The establishment of a freely accessible national platform with multi-media resources in multiple formats

(and languages for patients and families) would address most of the needs of the participants in this study. It would also support the recommendations of the recent Federal Parliament Inquiry into Long COVID (30) for resources for both HCWs and patients to support the diagnosis and management of COVID-19 recovery. Given the impact COVID-19 and Long COVID may have on the Australian economy (31), investment in the construction (and ideally co-design) of a national repository of high quality practice resources is urgently needed.

In conclusion, this study highlights a pressing need for resources tailored to the needs of HCWs who provide rehabilitation to people recovering from COVID-19 (including those living with Long COVID). The findings underscore the importance of accessible, targeted, and cost-effective resources designed for ready integration into the busy workloads of HCWs. The unique clinical needs of people recovering from COVID-19 necessitates the development of resources addressing the complex interactions between physical and psychological health during the recovery process, their oxygen requirements, and expectations around recovery trajectories. A blended, multidimensional approach to HCW capacity building is needed to engage the diverse healthcare workforce and provide multiple options for accessing professional development opportunities. A national platform providing quality resources is recommended, along with sufficient resourcing to support it ongoing development and rapid updating of content in this rapidly evolving field.

This study is a novel investigation that provides preliminary data about what should be included in professional development around COVID-19 recovery and HCW preferences for its delivery. However, the sample is relatively small and does not including representatives from all HCW groups. The sample is also exclusively drawn from the Australian state of Victoria and does not reflect geographical difference. There are numerous potential avenues for future research in this area, and establishing the needs of HCWs from a wider range of disciplines and service settings should be prioritised. The effectiveness of newly developed resources must also be evaluated, along with the repurposing of existing resources to support HCWs working with this patient cohort. Future research on this topic should also address the needs of patients and their families and support the development of tailored resources to directly support their recovery.

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Figures



Figure 1

Participant quotes about their current practice with people recovering from COVID-19 (I = Interview, FG = Focus Group).



Figure 2

Participant quotes about their experiences of current resource (I = Interview, FG = Focus Group).



Figure 3

Participant quotes about their perceived needs for additional practice resources (I = Interview, FG = Focus Group).