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Exploration of therapists' views of practice within critical care

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ABSTRACT

Introduction Therapists are increasing recognised as core members of the critical care multiprofessional team. Each therapy profession provides specialist assessments and interventions, but also work collaboratively across the rehabilitation pathway. Despite inclusion in several national guidance documents, there remains a lack of evidence regarding the perceived role of therapists working within critical care, the unique contributions of each profession and opinion on the day-to-day tasks and responsibilities of each therapy profession.

Method A descriptive qualitative methodology was used involving seven focus groups. Purposeful sampling was used to recruit therapists via professional specialist interest groups. All focus groups were uniprofessional and discussions based on a predesigned framework. Data were analysed thematically.

Results Participants (n=65) from across the UK were recruited to seven focus groups with an average of 18.3 years postgraduate clinical experience of which 11.6 years was within critical care. Three core themes were generated from 875 codes and 237 potential subthemes. The final themes were (1) professional characteristics; (2) multidisciplinary team and (3) staffing. An additional theme of 'COVID-19 pandemic' was also identified. Findings were similar across all profession groups particularly regarding the need for holistic, patient-centred care. Expected variation was observed for professional characteristics especially regarding specific assessments and interventions.

Discussion Therapy services are an essential component to the delivery of critical care especially regarding recovery and rehabilitation. Through three core themes, this qualitative study has provided new evidence of the perceptions and opinions of the role that therapists undertake within critical care.

Key messages

- What is therapists' perception of their role within critical care and what are the unique contributions of each therapy profession?
- Therapists are an essential component to the delivery of critical care especially regarding recovery and rehabilitation. Each therapy profession provides unique contributions, whilst collaboratively focusing on holistic, patient-centred care, as part of the wider therapies and multiprofessional critical care team.
- This study is the first to combine the opinions of the five core therapy professions working within critical care. It identifies core themes of clinical practice which are common across the professional groups but also identifies areas of differences especially within professional characteristics and provision of interventions.

INTRODUCTION

The value and expertise of therapists in supporting and caring for critically ill patients and their families/carers has increased in prominence over the past decade.[1] Recent publications have highlighted the role of therapists (dietitians [D], occupational therapists (OT), psychologists(Psy), physiotherapists (PT) and speech and language therapists (SLT)) in providing specialist intervention to those requiring critical care, while contributing to modernisation of services and continuous quality improvement.[2 3]

All therapy professions advocate patient-centred care in rehabilitation environments. This model of care locates the patient centrally in the professional relationship, and supports the notion that an understanding of the patient's perspective should underpin good practice in an equal therapeutic relationship.[4] To achieve this, therapists' input needs to be delivered in an integrated way, while still ensuring their unique contribution, specialisms and opportunities to further develop roles are retained.[5] Furthermore, therapists impact positively on patient flow, reducing the problems of moving patients through the system by the provision of continuity of care at all stages and levels.[1 6]

Each therapy profession offers a wide variety and diversity of unique and different experiences, knowledge, expertise and skills in the critical care setting. Previous research has attempted to identify the unique roles that therapists undertake within critical care,[7–13] with a focus on supporting physical and psychosocial recovery from critical illness.

Additionally, recent national guidelines have identified the role of each profession to critical care, making key standards and recommendations around the provision of services, contributions and recommended staffing levels, for example, therapist to patient ratio.[3] However, while these standards and recommendations have supported the development of therapy services and the roles of each profession are becoming more recognised, there remains a lack of evidence to support the recommended models and staffing ratios. Additionally, these recommendations also focus on each therapy profession in isolation, rather than considering the collaborative, patient centred model in which they deliver services.

The aim of this project was to explore the perceived role of therapists working within critical care, the unique contributions of each profession and gain opinion on the day-to-day tasks and responsibilities of each therapy profession in critical care. These results, in conjunction with the available literature and national documents, will then be used to further support the role of therapists in critical care and identify areas for further study.

METHODOLOGY

Study design

A descriptive qualitative methodology was used to allow comprehensive gathering of data with low level of interpretation, enabling findings to stay closer to the data provided by participants.

Participants

Purposeful sampling was utilised to recruit experienced critical care therapists (PT, OT, SLT, DT, Psy) with at least 5 years post-graduate experience of which at least 3 years were in a senior role within critical care.

The research team comprised of therapists from each of the professions involved in the study who were members of the relevant United Kingdom specialist interest group. Identification and recruitment of participants by the research team was via advertisements in the specialist interest groups' newsletters and social media outlets. Purposeful sampling was used to ensure appropriate UK geographical spread.

Methods

Seven focus group sessions were held virtually via MS TEAMS between June and August 2020. To reflect the presumed size of existing workforces, two focus groups were held for PT and DT, and one focus group for each of OT, SLT and Psy. Discussion was facilitated by the chief investigator asking predefined open-ended questions relating to the roles of each therapy profession in critical care, their unique contribution and the specific roles and responsibilities of each profession. Study notes were taken during the recorded focus group to reflect any non-verbal aspects or to clarify any discussions. Each focus group lasted no longer than 1 hour. All focus groups were uniprofessional, for example, only PT present. A schedule for the focus groups was developed in conjunction and piloted, with therapists working in the chief investigators host institution. Due to the timing of the focus groups during the COVID-19 pandemic, an additional question was added postpilot regarding the impact of COVID-19 on practice.

All audio recordings of the seven focus group sessions were transcribed and checked for accuracy by the co-researchers through listening back to the recordings while reading the transcribed notes.

Analysis

Thematic analysis of the transcribed data was used following the method of Braun and Clarke[9] using the following steps: transcription and reading of the data; generation of initial codes; creating potential themes; themes checked in relation to initial codes; naming of themes and generation of thematic map.[14] Thematic analysis was completed by PT and UJ, with themes reviewed by all authors. Explanatory quotes from the raw data were used to enhance understanding of participants viewpoints.

RESULTS

Baseline characteristics of participants

Sixty-five clinicians consented to participate across the seven focus groups. PT (n=20) and D (n=19) were represented in two focus groups per profession. The OT focus group involved 9 participants, with 10 and 7 recruited to the SLT and Psy groups respectively. Participants had an average of 18.3 years (±7.4) of postgraduate clinical experience, of which 11.6 (±6.7) years was in critical care. Table 1 shows the experience by professional background. The duration of all the focus groups lasted on average 1 hour. The chief investigator (PT) was the only person to be present in all focus groups. Geographical representation was achieved with therapists from each UK nation, and 42 health organisations represented. No focus group had more than one representative from any health organisation.

Table 1 Clinical experience of participants by professional background

Profession	Post graduate experience Years (SD)	Critical care experience Years (SD)
Dietetics (n=19)	18.7 (5.9)	13.5 (6.0)
Occupational Therapy (n=9)	13.7 (5.4)	4.78 (4.4)
Physiotherapy (n=20)	20.1 (8.5)	13.5 (7.0)
Psychology (n=7)	13.7 (6.4)	6.7 (5.9)
Speech and language therapy (n=10)	20.7 (7.5)	12.6 (5.3)

Table 2 Key themes of therapy practice within critical care

Theme	Subtheme
Professional characteristics	Professional development Evidence-based practice Governance Role specifics
Multidisciplinary team	Collaborative working Roles and responsibilities
Staffing	Funding Workforce Staff:patient ratios
COVID-19 pandemic	

Overarching themes

A total of 875 codes were created, which were then further categorised into 237 potential themes and subthemes. These potential themes were then referenced back to the original codes and consensus from the two researchers was reached for three core themes. These themes were (1) professional characteristics, (2) multidisciplinary team (MDT) and (3) staffing (see table 2). An additional subtheme of COVID-19 pandemic was also identified which encapsulated aspects of all the other themes. Patient-centred care was apparent across all themes, which included patient advocacy, holistic management, individualised care and consideration of care across the recovery pathway.

Professional characteristics

Professional development

Participants frequently discussed professional development as a key aspect of therapy services especially regarding the need for ensuring appropriate knowledge and skill sets. Both physiotherapy and occupational therapy referred to the rotational nature of their training, allowing for development of transferable skills from other clinical areas for example, mental health.

> OT7: we're trained in mental and physical health at university really, really helps, even if you've not worked in mental health after you've qualified

Professional development also encompassed subthemes on students (both undergraduate and postgraduate) in terms of clinical experience and succession planning. Innovation within professional roles was frequently reported especially with regards to expanded or extended therapy roles. This included diagnostics and interventions for example, D inserting nasogastric/jejunal feeding tubes. Extended roles also included becoming chief investigators for research projects, roles within clinical boards and directorates and independent prescribing.

> D12: …all those extra things, the audit, post ICU rehab work, all the education, teaching, guideline development, extended scope of practice

Evidence-based practice

All professional groups especially dietetics, frequently referred to the need to ensure high-quality evidence-based practice and implementation science (especially the interpretation and implementation of research into clinical practice).

> D10: research role comes in whether that's more of a research with a small 'r'- quality improvement maybe more, or actually being actively involved in research

Several comments referred to the need to be outcomes focused on service modelling to reflect the benefits of therapy input to the critical care.

> SLT3: demonstrate what our role would look like, or how our outcomes would be improved by a seven, six or seven day service…

All therapy professions reported a need to increase involvement in profession specific and therapy specific research, as well as involvement in audit, service evaluation and quality improvement. The development of national guidelines, particularly in response to the COVID-19 pandemic, was discussed and the benefits of national communication and sharing of information.

> D11: we got (national) guidelines out on how to manage these patients before anyone else

Governance

Many participants discussed key issues around governance, specifically autonomous practice within a highly medicalised environment. With autonomy, participants also felt the need to have robust methods to ensure patient safety, including the creation of national and local guidelines and procedure documents.

> D5: …asked to input into clinical governance and any standards or guidelines that are produced as a result of that

This was further discussed in the context of workforce planning and the need to have core membership within the critical care MDT to ensure an understanding of professional requirements and service delivery.

> D13: …a core member of the MDT team on a day to day basis not just once or twice a week…

Role specifics

Participants all discussed the specific roles that were associated with their own therapy profession. These discussions particularly focused on specific assessment processes and tools, interventions (see table 3).

> SLT4: advocating their right to as optimum recovery as possible through early rehabilitation

Table 3 Specific roles by professional background

Dietetics	Occupational therapy	Physiotherapy	Psychology	Speech and language therapy
▶ Individualised assessment for nutritional content, timing and amount ▶ Estimations of energy and protein requirements ▶ Advising / education for MDT ▶ Assessment of drugs impacting on nutrition ▶ Extended scopes—insertion of feeding tubes	▶ Assessment of function, mood and engagement ▶ Early discharge planning ▶ Rehabilitation ▶ Maintenance of joint range ▶ Seating assessments ▶ Sensory assessments ▶ Occupation ▶ Assessment and intervention for mental health needs ▶ Assessment of cognition ▶ Delirium management	▶ Respiratory assessment ▶ Secretion management ▶ Optimisation of oxygenation and ventilation ▶ Ventilator weaning ▶ Extubation assessment ▶ Lung ultrasound ▶ Tracheostomy care and weaning ▶ Rehabilitation	▶ Assessment and intervention for inpatients—during and after critical care ▶ Assessment and intervention for families ▶ Staff well-being ▶ Intervention for staff for work related well-being	▶ Restoration of communication ▶ Restoring airflow to upper airway ▶ Diagnostics with FEES and video fluoroscopy ▶ Assessment of mental capacity ▶ Use of one-way valves (tracheostomy) ▶ Above cuff vocalisation ▶ Secretion management

All participants also reflected the need for individualised care and patient advocacy within their specialist area.
FEES, fibre-optic endoscopic evaluation of swallow; MDT, multidisciplinary team.

Multidisciplinary team

Collaborative working

All professions commented on the need for integrated working both at a therapy level and wider critical care MDT. Participants felt that therapists are, and should continue to be, patient-centred and should work collaboratively to achieve the aims of the patient in a holistic way.

> OT6: work together and look at goals together and see who is appropriate for which discipline really

Participants felt that therapists support each other both at a clinical level but also in promoting each other's roles.

> PT6: educating others on their role as well so then they know when to use them effectively and that will just make for better MDT working

They also frequently reported the need for multidisciplinary training and education which is inclusive of all therapy professions.

> SLT2: …a big part of our role is around education and training. So, supporting other members of the MDT…

Participants also suggested that all therapists play a key role in communication across the MDT, often being the link between different teams, as well as having a clear focus on ensuring effective communication between patients and families.

> D1: …discussing and explaining that to family members, carers who can understand basic needs…

Roles and responsibilities

Professional roles and responsibilities were frequently discussed throughout all focus groups. All participants commented on the need for integrated working but with clear professional identity.

> PT1: blurred boundaries with physio and OT, and being able to sort of capture … you know, the bonuses of both therapists

This identity was based on undergraduate training and professional requirements, as well as service level agreements and ways of working.

> PT3: physio training kind of prepares you for being able to manage all of those things at once

All professions discussed the need to have core membership within the critical care multiprofessional team and have both a 'shared voice' and an 'individual voice'. This was also reflected in the need for therapists to be involved in aspects of strategic planning, especially those relating to patient outcome and service developments.

> Psy4: …but also there's something about being a bit more strategic about the pathways

Staffing

Funding

Throughout all focus groups, funding was a key discussion, particularly around the source of the funding, for example, roles supported directly by critical care or via other departments. Many participants suggested that the source of funding had a direct impact on the ability

to deliver services to patients admitted to critical care, but also the ability to be involved in other areas of practice including strategic planning, research and quality improvement.

> PT2: we are an ICU team so you're not being pulled back to other wards or other areas because of staffing issues and vacancies or sickness and things

Discussions included commissioning of therapy services to patients within critical care and across the critical care recovery pathway (including critical care follow-up). Participants also raised points regarding funding for 7-day services, on-call (physiotherapy specific) and other emergency duty requirements. This focused on national variability and differences in service delivery.

> SLT5: Because they are seven days, 24 hours, and actually being able to be there is really useful, but without the adequate staffing we're just not going to be able to provide or sustain that service, are we?

Several codes generated also related to funding to support non-direct roles such as staff support, team management and appraisal processes.

> D4: I think the other thing that is often overlooked as well is the management time that we have to put in

Workforce

Workforce discussions were focused on core themes of agenda for change banding, support workers and the balance of static and senior staff. Many participants also reflected that seniority of role was often not related to clinical practice within critical care but a reflection on additional roles and responsibilities required by the therapy service

> D4: Often the critical care dietitians in units are the more senior dietitians within the department, so personally I manage a team as well as the critical care dietitians and non-critical care dietitians

Workforce discussions also included support for both undergraduate and postgraduate students and the need to reflect this requirement within staff planning.

> PT9: Training and education of students as well, next generation

The final subtheme for workforce was succession planning with recognition from all professions for the need to future-proof services, recover after the COVID-19 pandemic and prepare for further potential critical care service expansion.

> SLT3: So, we need to make sure that we're moving onwards and upwards, which we are, within our profession and making sure that we are … providing an adequately staffed, skilled workforce

Staff : patient ratios

Existing and previous recommendations for staff to patient ratios was frequently mentioned. This included discussion of benchmarking and national guidelines, for example, Guidelines for the Provision of Intensive Care Services (GPICS V.2). Furthermore, the variability of staffing levels both at a regional and national level were highlighted.

> OT5: 'there's such variation across trusts of what service OT provides, how many OTs there are, what kind of things they do'

Participants also highlighted the need for further work to demonstrate the potential benefits of improved staff to patient ratios both in terms of patient and service level outcomes.

> Psy10: 'I really like that approach where we identify the outcome that we're trying to influence and then work back from there'

Workload was also frequently discussed which included both clinical and non-clinical requirements, and the need for staff to patient ratios to be reflective of the demands of the staff which is likely to be service dependent.

> D9: …ratio to allow all of those extra bits in there like audit, research, service evaluation, guideline development, teaching, training, education and proper reviews of the patient

COVID-19 pandemic

In addition to the above themes, participants frequently identified the COVID-19 pandemic within their responses. These encapsulated aspects of the core themes that were specifically affected by the pandemic.

Professional Identity

Participants frequently discussed the impact of the COVID-19 pandemic on the profile of therapists, both positive and negative. Dietetics and SLT), in particular, reported an improved profile.

> D15: 'it has highlighted the need for a dietitian because of COVID'

All professional groups suggested that visible presence and professional adaptability within the critical care unit throughout the pandemic was an essential factor. Those able to be more present, felt more involved in both clinical care and strategic planning, whereas those that had reduced presence felt that their role became less apparent.

> Psy3: …because I wasn't there it was out of sight, out of mind…

Working practices

All professional groups discussed the impact of the COVID-19 pandemic on working practices. This particularly referred to changes to 7-day working and alteration of shift patterns. However, participants also identified that while this was in response to the pandemic, it was directly associated with staff redeployment (eg, increasing the number of available staff to support the critical care therapy service) and financial support for increased weekend working, etc.

> PT17: just gave us the ability to maybe have the staffing levels that we've always dreamed of

The requirement for personal protective equipment (PPE) was reported as having both a positive and negative aspects. The negative aspects being around access to PPE during the first wave, challenges with patient communication and potential impact on patient delirium.

> SLT10: realised how hard it is to communicate wearing PPE

Workforce

Discussions of workforce regarding the COVID-19 pandemic were different to those previously discussed above, with the focus of comments being around the increase in staff sickness, requirements for staff to take annual leave and the resulting variability in staffing levels.

> PT17: …managing a service when you've obviously got sickness that's coming in, annual leave that's coming in, and all the services deem themselves a priority.

Several participants reported clear variation in changes in workforce during the pandemic with some units having large increases in the workforce, whereas others had no redeployment of staff despite significant increase in patient numbers (this was frequently reported within psychology focus group).

> Psy4: the expectations, the demands exceed capacity, especially at the moment

DISCUSSION

This study has highlighted both the unique contributions that each therapy profession makes within critical care, but also the overlap in the desire to be patient-centred and collaborative in day-to-day activities. While several studies have explored profession specific elements of critical care practice,[7 10 12 13 15] to our knowledge, this is the first study to explore the perceived roles, values and attitudes of all the main therapy services working within critical care, and to identify core themes across the professions.

National guidelines and recommendations have highlighted the need for therapy within critical care,[3 5 16] and within rehabilitation the overlap between these professions is not new knowledge,[17] however, this study has identified several key themes of practice that are essential to current practice, but also valuable for future service planning and therapy workforce modelling.

The aims of this study were to gain therapists' opinions and perceptions of their professional role in critical care, and to identify common themes across the professions.

Through the focus groups we identified three core themes which help to answer this research question. The themes were (1) professional characteristics, (2) MDT and (3) staffing. Due to the timing of the focus groups a fourth theme of 'COVID-19' also became apparent. This theme encapsulated aspects of the core themes but were as a direct result of the pandemic. Patient-centred care was evident across all themes.

Professional characteristics encapsulated professional development, evidence-based practice, governance and role specifics. Each professional group discussed key attributes, unique contributions, as well as perceptions of roles completed by other therapists. Furthermore, insight was provided as to day-to-day activities including both direct and non-direct aspects of patient care. This builds on the existing literature. The minimum standards for physiotherapy within critical care,[7–9] have highlighted the unique role that PT perform. Similarly, several papers have explored the role of D, OT, Psy and SLT.[10–13] Although the evidence is limited, the core roles and responsibilities are similar to those identified in the current study. Further work is required to explore the regularity in which these activities are undertaken in clinical practice, and the potential impact that both staffing and MDT working have on the completion of these activities.

As with all areas of healthcare, participants highlighted the need for therapists to work in an integrated fashion ensuring patient-centred and goal-orientated outcomes. Within this study, interactions and collaboration with the MDT were reported as having a clear impact on patient care and services delivered. There was a clear emphasis on collaborative working, while understanding the unique roles and responsibilities that each profession possesses. Additionally, the current study suggests that the presence and structure (eg, professional input) of the MDT can also impact on day-to-day activities and the roles undertaken. This is supported by national guidance documents[2 3] and further work is required to ensure this is implemented at a local level.

Therapist staffing and staffing structures has clear impact on the opinions and perceptions of therapy services in critical care, as well as the day-to-day activity that they undertake. The guidelines for the provision of intensive care services[3] contain recommendations of such ratios for each of the professional groups, however, previous audits and evaluations[18] have suggested that these recommendations are rarely met. This issue is not limited to the UK, with international studies reporting lower than anticipated therapy staffing levels.[19–22] Reasons for this include lack of evidence and recognition of the

roles,[23] lack of funding but also lack of available appropriately trained staff able to work within critical care.[24]

Participants in this study raised the source of funding for therapy posts, for example, critical care or therapy department funded, as having a direct impact on the ability for therapy staff to become fully integrated within the critical care MDT. Furthermore, this study identified grades of staffing and poststructures (eg, rotational vs static) as affecting the contributions made in terms of leadership, strategy and involvement in other non-direct aspects of patient care. These subthemes are reflected within the Allied Health Professions Critical care professional development framework,[25] and the dietetic and SLT profession-specific frameworks,[26] which highlighted four levels of practice (foundation to expert) reflecting the four core pillars of practice. However, the impact of these varying levels of experience on clinical and service outcomes is not known and hence needs further exploration.

This study was completed after the 'first-wave' of the COVID-19 pandemic and therefore it was felt necessary to discuss the impact of the pandemic on therapy services. As shown within the results, the COVID-19 theme comprised changes in working practices, workforce and modified professional roles/identities. For some therapy professions, especially psychology, the COVID-19 pandemic has also had a profound effect not only on patient services but heightened the already high demand on staff support services.[27] Interestingly, most participants, especially SLTs felt that the pandemic had a very positive impact on their profession and had allowed them to highlight their ability to be adaptable and take on different responsibilities, for example, support nurse roles, but also highlighted the importance of greater MDT working and interprofessional collaboration. Furthermore, the pandemic placed greater focus on rehabilitation and recovery, and the role that therapists fulfil. This has included the publication of national guidelines and literature focusing on rehabilitation.[28 29]

All participants met the inclusion criteria for clinical experience and geographical spread was achieved. Dietetics and physiotherapy both had two focus groups to reflect the perceived workforce levels, however, it is possible that we did not receive data saturation for each profession. By analysing the results collectively, the potential impact of this limitation should have been reduced. All professional groups had an average of over 13 years of postgraduate experience, of which an average of over 4 years was within critical care.

This study was planned prior to the COVID-19 pandemic, and while modifications were made to reflect the pandemic for example, questions around the impact of COVID-19, it is likely that some of the responses given by participants will have been biased by more recent clinical experiences. This may also have impacted on discussions of job roles especially where staff have been redeployed or working in modified roles to suit the needs of their local service.

Future research should now focus on exploring day-to-day activities completed by therapists within critical care and their overall contributions to patient and service outcomes. Through this research key questions around value, cost, efficiency and effectiveness may be answered, and used to provide further recommendations for future therapy services to critical care.

CONCLUSIONS

Therapists are an essential component to the delivery of critical care especially regarding recovery and rehabilitation. Through three core themes and a subtheme (COVID-19 pandemic), this qualitative study has provided new evidence of the perceptions and opinions of the role that therapists undertake within critical care. Furthermore, it has identified the unique contributions that therapists provide as well as the impact of collaboration between therapies and the rest of the MDT. The results of the study can be used in future national guidance documents and policies addressing the role of, and staffing requirements for, therapists in critical care.

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with an electronic version of Participant Information Sheet. Opportunity was provided to ask any questions prior to providing consent. Electronic written consent was gained prior to the start of the focus groups, including consent to audio record the focus groups.esearch Wales. Research Ethics Committee review was exempt as the research only involved staff as participants.

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