

## Critical care

# The challenge of defining 'safe staffing' for physiotherapists in critical care

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Physiotherapy provision is integral to the intensive care unit (ICU) multi-professional team.<sup>1</sup> National guidance for the United Kingdom (UK) recommends physiotherapists play a key role in respiratory care and rehabilitation, seven days a week.<sup>2</sup> However, significant variation exists in patient populations and structure of ICU services across the UK. Therefore, determining recommendations for robust and responsive physiotherapy services remains a challenge.

### THERAPEUTIC NEED

Currently one whole-time (WTE) equivalent physiotherapist for every four Level 3 beds is recommended.<sup>2</sup> However, surveys of the UK therapy workforce report that ICUs fail to achieve this ratio.<sup>3</sup> This indicates the limited utility of this metric for determining physiotherapy service capacity-demand. Use of staffing-to-bed ratios with reference to levels of care does not account for the complexity of critically ill patients' physiotherapeutic needs. The speed and extent to which critical illness affects body structures and function has generated focus on delivery of therapeutic interventions as early as possible following ICU admission, particularly for mechanically ventilated patients.<sup>4,5</sup> Although these patients require Level 3 care, we recognise they do not always have the greatest physiotherapeutic need. Often, the severity and complexity of morbidity in patients requiring Level 2 care presents the greatest demand on physiotherapy services. Combined with the heterogeneity of both the ICU population and service structure across the National Health Service (NHS), this makes quantifying physiotherapy service-demand challenging.<sup>3</sup>

There is urgent need for accurate physiotherapy service-demand modelling using standardised measures of complexity, to develop national workforce recommendations that are meaningful to patients, clinicians, and funders. Although some measures, such as the Rehabilitation Complexity Scale-Acute exist, they do not assess all clinical needs requiring physiotherapy resource.<sup>6</sup> A combined assessment including rehabilitation complexity, frailty, comorbidity, and illness severity is a reasonable starting point.<sup>7</sup> For effective comparisons across services and time-points further measures that accurately and holistically capture physiotherapeutic needs of ICU patients are required. The UK and international Trauma Registries provide examples of how this is achievable at scale. Through innovation and investment, measures of complexity and out-

come are consistently and accurately collected, with responsibility for data collection removed from clinicians.<sup>8</sup> We welcome ongoing work to establish national data collection of rehabilitation outcomes in collaboration with the Intensive Care National Audit and Research Centre (IC-NARC).

### IMPACT

An overarching issue in developing meaningful recommendations is succinctly demonstrating the impact of physiotherapy services on outcomes for patients, staff, and the wider healthcare system. The challenge remains to identify 'safe' and 'effective' staffing levels, and by whom this is defined. The complexity of delivering ICU rehabilitation has been described, alongside the variety of metrics by which impact could be measured.<sup>7</sup> There is benefit in reporting measures that encompass multiple stages of recovery and aspects of service delivery. We recommend the reporting of service delivery and demand metrics alongside those relating to patient outcome. Without this, therapy services cannot robustly defend requests for increases in capacity through investment, identify areas of good practice, or areas for improvement.

It is recognised that a focus on survival is insufficient to describe outcomes from ICU.<sup>9</sup> However, outcome measures commonly used in physiotherapy interventional trials may not describe the quality of life (QoL) patients most value.<sup>10</sup> The complexity of patients' experiences of critical illness, and the value of integrating patient-reported measures to datasets has been described.<sup>11</sup> Future work to establish health-related QoL and patient perspectives will be valuable in informing wider adoption of such measures.<sup>12</sup>

Direct measures of patient outcomes are not the only drivers for optimising the ICU physiotherapy workforce. A recent survey demonstrated that improved staffing ratios were associated with increased staff satisfaction.<sup>13</sup> The link between staff satisfaction, retention, and the quality of care that is provided is well-established.<sup>14</sup> Additionally, the majority of physiotherapy activity is dedicated to direct clinical care, and variation in funding of roles exists.<sup>15</sup> This limits clinicians' ability to engage in essential non-clinical activity required to deliver effective and fulfilling ICU services, thereby reducing capacity for leadership, service development, and research. We would advocate for accurate representation of the non-clinical requirements of phys-

iotherapy roles through job-planning as recommended by NHS England.<sup>16</sup>

## EDUCATION

Variability exists in the Agenda for Change banding of ICU physiotherapists, and availability of ring-fenced funding for dedicated physiotherapy services.<sup>3</sup> Guidance specifies the level of postgraduate training and provision of clinical educators and supernumerary periods for nursing staff,<sup>2</sup> but not allied health professionals (AHPs). Workforce planning is required to ensure that clinicians with appropriate skills are available. This relies on the structured development of staff in the specialism of critical care. The Intensive Care Society Critical Care Professional Development Framework (CCPDF) provides this structure.<sup>17,18</sup> We recommend that physiotherapists utilise this to support development of staff and demonstrate the impact of the workforce through its integration into appraisals, strategy, and education.

Guidelines highlight the need for robust capacity-demand models to ensure physiotherapy capabilities are matched to the case-mix complexity.<sup>2</sup> Our profession needs innovation, beyond traditional methods of local competencies that remain isolated, and at risk of becoming out-of-date or irrelevant to practice. We advocate physiotherapists access critical care postgraduate education, and there are UK exemplars. The Capital AHP collaborative have developed competencies for novice physiotherapists, and Liverpool University in conjunction with Health Education England have developed an integrated postgraduate course for AHPs and nursing staff. We support building on these models to develop UK-wide integrated courses. However, workforce development requires support through appropriate infrastructure, investment, and prioritisation by clinicians and Trusts/Health Boards. Key advancements include establishment of physiotherapy clinical educator roles in ICU and ensuring access to appropriate qualifications across all CCPDF pillars of practice.

The optimisation of ICU physiotherapy workforce provision remains a complex issue. Meaningful capacity-demand models are essential to the provision of sustainable high-quality services. There are opportunities to make progress. We have an increasing understanding of workforce through research, and individual units have the capability to con-

sider how best to quantify demand, impact, and staffing requirement. With a focused and collaborative approach between all stakeholder groups, we can sustain an effective, valuable, and responsive workforce.

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### Key points

- Collaborative approaches are required to define and establish a safe and effective physiotherapy workforce
- Post-graduate education and/or training should be accessible for all critical care AHPs to achieve a minimum standard of practice
- Innovation is required to ensure consistent collection of measures of impact, relating to service delivery, staff capability, and meaningful patient outcomes
- Future workforce recommendations should move beyond sole use of staffing ratios to define minimum staffing standards

### DECLARATION OF INTEREST

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