Opinion Piece: The Challenge of Rehabilitation following Critical Illness in Low Income Countries

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World Health Organization's (WHO) Rehabilitation 2030 Initiative was designed to elevate rehabilitation as an essential health service and a core component of Universal Health Coverage (UHC), and in consequence advocates for, "strong leadership and political support for rehabilitation at sub-national, national and global levels" (WHO, 2023a). In doing this WHO (2023b) identifies rehabilitation as a crucial element of the patient care and not an optional extra that is provided when problems become apparent. However, it remains a cause for concern that in low-income countries (LIC) the rehabilitation needs of patients is largely unmet (WHO, 2023b). In these countries the concept of critical care has been widely debated (Wall et al., 2018. Bock & Cox, 2017) even, in some cases, described as a 'luxury' (Dart et al., 2017). Critics argue that critical care may not significantly decrease overall mortality and that the development of such services is unrealistic. The inference traditionally has been that with limited resources, the focus should be on prevention and investment in programmes such as mass-immunisation projects and primary healthcare services (Basnet et al., 2011). This concept is in contradiction to the World Health Assembly's direction that emergency and critical care is an essential component of universal health coverage (WHA, 2019), their perspective was reinforced by the highly infectious disease outbreaks such as Ebola in West Africa (Leligdowicz et al., 2016), and the Covid-19 pandemic (Kwizera et al., 2022). Nevertheless, the need for funding focused on critical care has remained limited in particular for ICU survivors, with evidence demonstrating that rehabilitation for critical care patients remains inequitable, limiting quality of life and increasing disability in many LICs (WHO, 2023b. Neill et al., 2023).

It is accepted that rehabilitation following critical illness is complex in any setting. However, with advances in healthcare, increasing access to healthcare services, the changing burden of disease, complications of long-term chronic diseases and increased life expectancy, all having implications for critical care and rehabilitation services. In LICs with relatively young populations and many patients admitted to critical care due to trauma, limited rehabilitation is a major cause for concern, resulting in complications, prolonged recovery, preventable disability, loss of wages and improve their productivity for their community and society as a whole. As Gehlot et al (2023) point out, it is not only the patients

that is adversely affected, but for the families too, there are also financial implications. This includes costs of medicines, investigations, and lost wages due to time spent caring for patients in both hospitals and once discharged home. These factors exacerbate poverty and can increase social inequalities (Neill et al., 2023).

Rehabilitation following critical illness needs to start in the critical care unit and requires multi-disciplinary recognition. However, specialist education programmes (which includes rehabilitation) for critical care nurses remain limited (Macey et al., 2022). In addition, the paucity of allied health professionals such as physiotherapists, dieticians / nutritionists and the lack roles for other professional groups such as speech and language therapists also limits rehabilitation and multi-disciplinary working (World Physiotherapists, 2020). Nurses, often the largest group of the healthcare workforce in both critical care and general wards are required to try and rehabilitate patients without having specialist training. However, for an already overstretched workforce, to take on additional roles and responsibilities can also have negative effects also due to the complexity of patient's needs.

In recognition of this problem our health partnership in Zambia has developed a follow up service post critical care discharge. The initial plan was to assess the need and focus for rehabilitation services. However, it quickly became apparent that there were several areas which need to be addressed, and a fine balance between supporting and not replacing staff emerged. Education of critical care nurses completing the Bachelor of Science and Master of Science programmes in critical care has helped to introduce the concept of rehabilitation. However, with few ward nurses and rehabilitation staff there was a need to work with and strengthen the systems in place, this included sharing of knowledge and skills, however, this does not compensate for limited staffing. There is also a challenge as there an apparent misconception that bed rest is the best treatment for managing in-hospitalised patients, in particular those who have been critically ill (Sprague, 2004. Parry et al., 2015). While it is accepted that in certain conditions e.g. fractures, bed rest is required, it is a cause for concern that the 'advice' to remain on bed rest is based on limited knowledge, not the patient's best medical interest. There was also a need to recognise that critical care education programmes for doctors and nurses needed to include a greater emphasis on rehabilitation with interventions designed for implementation early in the patient's critical care stay, as this impacts on ward recovery.

In summary, our experiences reveal just how important universal access to rehabilitation is and that for it to be effective. While our health partnership focuses on nursing it recognises that a unique partnership including input from allied health professionals is the best way to maximise the use of each individuals' professional skills and create effective and efficient rehabilitation services. Critical care nurses are in a key position to initiate and sustain rehabilitation from the point of admission to

discharge from the critical care unit. However, to do this, rehabilitation needs to be included in specialist practice programmes and be higher on the service provision agenda, across the patient pathway to make sure that on step down from critical care, rehabilitation continues.

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