1 Academic Department of Rehabilitation Medicine, University of Leeds, Leeds, UK

2 Leeds Teaching Hospitals NHS Trust and Leeds Community Healthcare NHS Trust, Leeds, UK

3 Department of Biomedical, Surgical and Dental Sciences, University "La Statale," Milan, Italy

4 IRCCS Istituto Ortopedico Galeazzi, Milan, Italy

Correspondence to: M Sivan
M.Sivan@leeds.ac.uk

Cite this as: *BMJ* 2024;384:q60
http://dx.doi.org/10.1136/bmj.q60
Published: 11 January 2024

An expanded workforce is needed to strengthen rehabilitation in health systems

Rehabilitation services must be prioritised within health systems and accompanied by investment in growing the rehabilitation workforce to meet increasing global demand, argue Manoj Sivan and Stefano Negrini

Manoj Sivan, [1,2] Stefano Negrini[3,4]

In May 2023, all the member countries of the 76th World Health Assembly (WHA) adopted the first ever global resolution on the urgent need to strengthen rehabilitation in health systems.[1] The resolution states that disability is not just a social issue and can result from a lack of timely and long term rehabilitation. By prioritising rehabilitation, health systems can substantially reduce disability and its societal costs. A prerequisite and proxy indicator for the level of provision of rehabilitation services is the lack of rehabilitation staff.[2] The WHA resolution will only work if changes are implemented in the next decade to prioritise expanding the rehabilitation workforce in healthcare.

The scale of the problem is huge. The Global Burden of Disease study, and the World Health Organization, showed that 2.4 billion people worldwide have health conditions that could benefit from rehabilitation.[3] But in most countries, more than 50% of people do not receive the necessary rehabilitation services.[4] Longer life expectancies, increased survival rates for people with severe disabilities, and rising rates of chronic diseases make meeting rehabilitation needs challenging in most countries. The lack of rehabilitation is worse in low and middle income countries (LMICs) because of limitations on workforce and financial resources.[3 5] The number of rehabilitation staff in LMICs is less than one 10th of those in high income countries (HICs).[2]

Providing rehabilitation requires specific training and a full team of professionals. Rehabilitation involves multiple interventions adapted to patients' needs and goals in a dynamic and interactive way to optimise their functioning in daily life.[6] For example, a person who has had a stroke not only needs to survive and become medically stable, but also needs to recover as much physical, cognitive, and psychological function as possible to integrate back into their lives and society. A coordinated team of professionals of diverse healthcare backgrounds usually provide these interventions. The disciplines include physical and rehabilitation medicine physicians, physiotherapists, occupational therapists, rehabilitation nurses, speech and language therapists, and psychologists, among others.[2] Rehabilitation technology, such as robotics and virtual reality, can be used to augment therapy but cannot replace professional input. Patient and clinician reported outcome measures can be used to capture functional outcomes and estimate the workforce numbers required to provide rehabilitation services.

The number of rehabilitation health professionals globally is currently far below the recommended threshold for providing suitable services. The World Health Report estimated that countries with fewer than 2300 health professionals per million population generally fail to achieve adequate coverage for primary healthcare interventions and are not in a position to provide rehabilitation services.[7] The World Federation of Occupational Therapists recommends at least 750 occupational therapists per million people,[8] but the current figures are 420 per million in high income countries and fewer than 75 per million in LMICs.[2] The disparity in LMICs is worse in certain disciplines. The US and Australia have more than 300 speech and language therapists per million population, whereas some countries in the African region have no speech and language therapists for the entire population.[2]

Workforce and rehabilitation needs traverse all areas of medicine, including musculoskeletal, neurological, mental, sensory, respiratory, cardiovascular, and cancer related disorders. Clinical rehabilitation services are frequently fragmented among many specialties—comprising a minor area of interest within each of them. The concepts and goals of rehabilitation programmes are oriented towards functioning and require specialist skills that are different from acute care, and therefore require specific training and experience. For example, the physical and rehabilitation medicine specialty provides cross-cutting general medical skills and focuses on managing the person as a whole rather than organ specific problems managed by acute medical specialists.[9]

Every country, particularly LMICs, needs to ringfence budgets for developing health related rehabilitation at all levels of healthcare, and growing the workforce.[10] This should be regarded as an investment in population health and in reducing the burden of disability on people and society.[11] An efficient way of providing seamless rehabilitation is investing in integrated care pathways where a coordinated rehabilitation team provides ongoing, regular care, with other medical specialists available for specific input when needed.[12] Increasing these pathways will bring rehabilitation to the forefront and emphasise that regaining function is as important as survival and acute management in health systems. Salaries for staff working in rehabilitation need to match those paid in other specialties to make the discipline attractive for those interested in training in the area.

All WHA countries have pledged in the resolution to take specific actions in their health policy to make rehabilitation a mandatory part of universal health coverage.[13] The ultimate goal of this international initiative is that every person, irrespective of where they live and their health condition, is given every opportunity to lead a life of optimal functioning, which WHO proposes as the third health indicator together with mortality and morbidity. This goal can only be achieved by expanding the rehabilitation workforce and by committing funding to do so.

Competing interests: None.

Provenance and peer review: Not commissioned; not externally peer reviewed.

1 World Health Organization. Resolution on strengthening rehabilitation in health systems, 2023. https://apps.who.int/gb/ebwha/pdf_files/EB152/B152%2810%29-en.pdf.

2 World Health Organization. The need to scale up rehabilitation. 2017 https://apps.who.int/iris/bitstream/handle/10665/331210/WHO-NMH-NVI-17.1-eng.pdf.

3 Cieza A, Causey K, Kamenov K, Hanson SW, Chatterji S, Vos T. Global estimates of the need for rehabilitation based on the Global Burden of Disease study 2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet* 2021;396:-17. doi: 10.1016/S0140-6736(20)32340-0 pmid: 33275908

4 Kamenov K, Mills JA, Chatterji S, Cieza A. Needs and unmet needs for rehabilitation services: a scoping review. *Disabil Rehabil* 2019;41:-37. doi: 10.1080/09638288.2017.1422036 pmid: 29303004

5 Bright T, Wallace S, Kuper H. A systematic review of access to rehabilitation for people with disabilities in low- and middle-income countries. *Int J Environ Res Public Health* 2018;15:. doi: 10.3390/ijerph15102165 pmid: 30279358

6 Negrini S, Selb M, Kiekens C, etal3 Cochrane Rehabilitation Methodology Meeting participants. Rehabilitation definition for research purposes: a global stakeholders' initiative by Cochrane Rehabilitation. *Am J Phys Med Rehabil* 2022;101:-7. doi: 10.1097/PHM.0000000000002031 pmid: 35583514

7 World Health Organization. The world health report 2006: working together for health. 2006. https://www.who.int/publications/i/item/9241563176.

8 Bo W, Hong D, Xuezong L, Zhongxin X. The demand for rehabilitation therapists in Beijing health organizations over the next five years. *Disabil Rehabil* 2008;30:-80. doi: 10.1080/09638280701336496 pmid: 17852203

9 European PEuropean Physical and Rehabilitation Medicine Bodies Alliance. White Book on Physical and Rehabilitation Medicine in Europe. Introductions, Executive Summary, and Methodology. *Eur J Phys Rehabil Med* 2018;54:-55.pmid: 29565101

10 World Health Organization. Rehabilitation 2030 initiative. 2017. https://www.who.int/initiatives/rehabilitation-2030.

11 World Health Organization. World report on disability.2011. https://www.who.int/publications/i/item/9789241564182.

12 Kluge HHP, Muscat NA, Mishra S, etalContribution from -. Call for action: Health services in the European region must adopt integrated care models to manage Post-Covid-19 Condition. *Lancet Reg Health Eur* 2022;18:100435. doi: 10.1016/j.lanepe.2022.100435 pmid: 35756854

13 United Nations. United Nations (UN) sustainable development goals 2023. https://sdgs.un.org/goals.