

Is it time for regional rehabilitation networks?

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The Chartered Society of Physiotherapy (CSP) campaigns for the 'Right to Rehab' as the professional body for physiotherapists in the UK¹. The campaign's ethos is that everyone should have equitable access to rehabilitation services, for as long as they need them. Yet, it is well established that access to rehabilitation is limited, particularly in community settings. Limited access extends to all patient populations, including those following major trauma. The formation of Regional Trauma Networks added additional complexity whereby therapy teams in acute specialist services have less information, and connection with, rehabilitation resources available in a wide geographic catchment.

The Regional Trauma Networks restructured services to a hub and spoke model facilitating direct patient access to acute specialist care. This was a considerable organisational change, supported by data from the Trauma Audit and Research Network (TARN). The change was well justified by a 19% increase in the risk adjusted odds of survival just five years after the Networks were formed². How the restructure has influenced access to rehabilitation services is poorly understood, in part due to an absence of data.

TARN's origin story in neurosurgery is relevant when exploring the evolution of the data collecting platform and its

impact on subsequent service guidance and commissioning. TARN analyses informed the NICE guidance for specialist neuroscience care. This enabled further commissioning of rehabilitation beds for patients with traumatic brain injury (TBI)³. Equivalent data is unfortunately not available to inform rehabilitation for patients with complex musculoskeletal or orthopaedic trauma. This is due to different rehabilitation needs as estimated by the Rehabilitation Complexity Scale - Extended (RCS-E). For TBI, rehabilitation needs are usually high – level 1 or 2. For patients with complex musculoskeletal or orthopaedic trauma, rehabilitation needs are often lower (level 3) when they do not additionally require ventilation, or present with cognitive deficits or

spinal cord injury. These lower RCS-E needs lead to recommendations for local or non-specialist community rehabilitation⁴. Patients are discharged from specialist care to community rehabilitation, which is where data collection stops.

RCS-E is completed as a key component of Rehabilitation Prescription (RP). The RP serves several purposes – patient information, care handover,

discharge planning, and data collection as part of the National Major Trauma Registry (NMTR). The RP requires a multidisciplinary team effort to complete including clear guidance from surgical colleagues. Any restrictions should follow the BOAST (BOA Standard) for mobilisation and weightbearing including clear

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'Rehab Legends' billboard campaign run out of University Hospitals Plymouth Trust, led by ICU nurse Kate Tantam and supported by the CSP Right to Rehab campaign.



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She is widely published and has secured major research funding from UKRI, NIHR, and charitable organisations. She also serves as Regional Research Delivery Network Specialty Lead for Orthopaedics and Musculoskeletal Health, chairs national and international scientific committees, and contributes to multiple research panels, including the NIHR and the Royal Osteoporosis Society.

terminology for weightbearing status, clinical justification, functional task quantification and duration to support follow-up plans^{5,6}. However, this effort can be impeded by the perception of some users who have expressed uncertainties about whether the RP is fit for purpose and achieves its goals⁷. The RP includes any recommendations for referral to community rehabilitation or guidance for general practitioners (GPs) to make relevant referrals. In 2016, data on recommended referral destination, actual destination, and reason for variation were introduced. Reasons for variation include 'service does not exist' highlighting the availability challenges between inpatient therapist and community teams out of catchment of acute specialist services. The NMTR collects data on the presence of rehabilitation needs and whether a rehabilitation referral has been completed but does not extend to outcomes or whether needs were met.

The National Clinical Audit for Specialist Rehabilitation following Major Injury (NCASRI) was commissioned in 2015 to address that "rehabilitation had been overlooked in the initial planning and development of the trauma networks..."⁸. They linked data from TARN with the UK Rehabilitation Outcomes Collaborative (UKROC) with a focus on care received at major trauma centres and level 1 or 2 specialist rehabilitation services. Poor integration of

rehabilitation across services was reported supporting the CSP position on a need for commissioning to address unwarranted variation. The findings likely underestimate the extent of access variation, given many patients will have level 3 needs and few level 3 rehabilitation services contributed to NCASRI. Ten years on, and research to build data collection in outpatient rehabilitation services for complex fracture patients is being developed. This will enable services to better understand the rehabilitation delivery gaps, how patients interact with services, and provide indications towards improvements.

Currently, when patients go home, there is a rehabilitation gap within the outpatient setting for patients with level 3 needs, particularly during their limited or non-weightbearing stages. Patients describe feeling particularly vulnerable at this phase which is exacerbated by a lack of follow-up from health professionals⁹. There is an absence of evidence to inform this care gap, highlighted by research priority setting including the James Lind Alliance priorities for major trauma, complex fractures^{10,11}, British Limb Reconstruction Society¹² and NICE¹³.

Trauma systems have significantly improved survival rates¹⁴, but recovery and rehabilitation are often compromised by psychological challenges¹⁵. The psychological impact of >>



trauma can be devastating with around 40% of those surviving major trauma developing a mental health condition¹⁶. Patients most commonly experience depression, anxiety or post-traumatic stress disorder (PTSD), with symptoms often persisting for years or even decades^{17,18}. Patients who experience musculoskeletal injuries are particularly vulnerable due to the dual burden of physical and psychological impact, which is closely linked with impaired functional recovery and reduced quality of life^{19,20}.

Long-term support needs are common as only one in three patients make a full recovery within 12 months of injury²¹. Despite clear evidence of need and national guidance²² recommending all patients have access to rehabilitation including psychological support, specialist teams frequently lack the capacity or training to deliver it, and clinical psychological services are overstretched, poorly aligned with trauma recovery pathways and often fragmented^{23,24}. As a result, many patients are left medically stable yet unsupported in their psychological rehabilitation²⁵. Individuals with untreated mental health conditions face longer rehabilitation, poorer outcomes and increased reliance on health and care

systems²⁶. This gap between clinical guideline recommendations and service delivery represents a significant and actionable gap in trauma care.

To really understand the extent of the problem, we need rehabilitation data on a national scale. Understanding when and where rehabilitation is delivered, what is included and how patients interact and access it will inform reduction in unwarranted variation and improved understanding of association with outcomes. Rehabilitation is a complex intervention made up of several components. Historically, rehabilitative care has been documented using free text. However, with theoretical advancements including the Rehabilitation Treatment Specification System²⁷ and the Behaviour Change Taxonomy²⁸ structuring these components into standardised clinical concepts within an electronic health record is more tangible than before. Technological advances also present opportunities for rich data through wearables, the integration of which has been identified as a key priority in the recent NHS 10-Year plan²⁹. These advances support the potential to collect routine rehabilitation data, quantify practice variation, and address inequities in access through new intervention. The return on investment

could be as high as £226 per £1 in societal productivity for a specialised intervention according to Public Health England's 2017 report³⁰. For the Regional Trauma Networks to extend their success, patients need this investment into specialist rehabilitation services which enable them to receive the treatment which has been recommended for them. ■

Take home messages

- Access to rehabilitation services (both physical and psychological) for patients with complex orthopaedic injuries is still subject to wide geographic variation.
- Rehabilitation for complex trauma in the outpatient or community setting would benefit from a structured, national approach to data collection to drive targeted improvements and intervention development.

References

References can be found online at www.boa.ac.uk/publications/JTO.