

Exploring feasibility and Functionality of Rehabilitative ultrasound in Nepal.

A Narrative review

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Background: Diagnostic sonography employs ultrasound to visualize various body structures aiming to detect potential abnormalities (1). Rehabilitative ultrasound imaging (RUSI) is a method to assess the shape and function of muscles and related soft tissues while patients perform exercises and activities (2). Rehabilitative ultrasound also has the potential to be used clinically and in research. Specialized training for the use of ultrasound by the physical therapists (consistent with the World Health Organization recommendations) is recommended (3,4). However, its adoption and utilization in resource-limited settings such as Nepal remain relatively unexplored

Purpose: This narrative review aims to explore the feasibility of rehabilitative ultrasound in context of Nepal, its potential benefits and challenges.

Methodology: This review was conceptualized after an invitation to design curriculum for RUSI training in Nepal. Literature for RUSI was searched using search engines with standardized search strategy. In addition, review of policies and communication with other stakeholders of rehabilitation in Nepal was done before disseminating the results.

Results: The feasibility of implementing rehabilitative ultrasound (RUS) in Nepal is supported by several factors. With a growing recognition of rehabilitation needs and the availability of trained healthcare professionals, there is a conducive environment for integrating RUSI into clinical practice. Collaborations between government agencies, non-profit organizations, and academic institutions can facilitate procurement, training programs and research initiatives focused on RUSI. Challenges surrounding the implementation of rehabilitative ultrasound (RUSI) in Nepal encompass various factors, including limited availability of ultrasound machines, high costs associated with equipment procurement and maintenance, and a shortage of trained personnel proficient in performing and interpreting RUSI examinations. Additionally, navigating cultural and logistical barriers, ensuring equitable access to RUSI services across diverse geographic regions, and integrating RUSI into existing healthcare systems are essential considerations for sustainable and effective implementation.

Conclusion(s): Rehabilitative ultrasound holds significant promise as a valuable tool for enhancing musculoskeletal rehabilitation in Nepal. While challenges related to access, affordability, and expertise exist that has to be considered before implementation.

Keywords: Diagnosis, Imaging, Musculoskeletal

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Binaya Kandel is currently working as Co-Chief Physiotherapist (10th Level) at Ministry of Health and Population, Nepal. He is posted at National Academy of Medical sciences, Bir hospital as Chief of Physiotherapy Unit. He has an experience of working as lecturer at KUSMS for 5 years and as Physiotherapist at various other sectors like corporate hospital, INGO, rehabilitation center and clinics. He has special interest on Peri-operative physiotherapy management of musculoskeletal cases, hand therapy and research. He is always motivated towards homogenizing

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