

Addressing Disparities in Access to Expert Physical Therapy Care and Diagnosis for Lumbar Radiculopathy

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Introduction

I am writing this letter to express my sincere concern regarding the disparities observed in the healthcare services of lumbar radiculopathy in Pakistan. It is our privilege to bring attention to this significant issue of Lumbar radiculopathy, its high economic burden in accessing medical diagnosis, expert physical therapy care and advanced electrotherapy modalities. Lumbar radiculopathy, commonly referred to as sciatica, manifested by inflammation of the nerve roots in the lower back, resulting in pain that radiates down the leg. The etiology of this condition is multifactorial, with potential causes including intervertebral disc herniation, spinal stenosis, degenerative conditions, autoimmune diseases, neoplasm, trauma, congenital deformities and vascular diseases (Diabetes), affecting general population with an estimate lifetime prevalence rate of 40-90%.¹

Recent studies reported the role of socioeconomic status in acquiring facilities of healthcare services, including physical therapy.^{1, 2} The individuals from low socioeconomic backgrounds are unlikely to receive timely referrals and prompt and sufficient physical therapy intervention.³ Moreover, financial burden of intervention can interfere with individual's attitude of seeking physiotherapy care, as many of them may prioritize their financial needs over a long-term health-care benefits. This condition is further worsened by the truth that lumbar radiculopathy is one of the leading cause of work absenteeism which eventually further affects the monetary necessities of the suffering individual.⁴ Geographic disparities is another hurdle in access to healthcare services, especially in rural areas where

healthcare resources are not sufficient.⁵ Insurance coverage is another crucial factor. Elevated costs of healthcare services can deter individual from having necessary care. According to American Physical Therapy Association (APTA), patients with inadequate insurance coverage are less likely to pursue physical therapy, leading to prolonged pain and increased healthcare costs due to complications.⁶

In addition to the direct expenditures of medical care, lumbar radiculopathy pain comes with indirect costs for absences from work, disability benefits, and decreased productivity.⁸ When conservative treatment options fail, elective surgery should be considered for individuals who have functional limitations or chronic pain that does not respond to conservative therapy. Despite the availability of these treatment options, many people continue to suffer from chronic sciatic pain, are unable to work, and have persistent symptoms.⁴

To address these challenges, non-pharmacological pain management therapies include various types of electrical stimulation. Transcutaneous electrical stimulation (TENS) is widely used technique for management of pain, but still remains controversial, especially in the context of chronic low back pain. A newer technique known as High tone external muscle stimulation (HTEMS) has recently been employed for the management of radiculopathy symptoms. Unlike traditional TENS, HTEMS modulates both frequency and amplitude simultaneously and delivers higher energy to tissues to alleviate pain.⁷

One study reflects the role of effective evidence-based treatment options.⁸ The fewer the number of effective treatments available, the more expensive public health

systems are there. Thus, it is essential to get the proper treatment as soon as possible in order to avoid chronic pain and surgery.³ Addressing these disparities, we must consider comprehensive changes in the healthcare system. Additionally, policymakers should escalate the funding for community health services that focus on physical therapy access, specifically for low-income individuals.⁸

In conclusion, the medical diagnosis of lumbar radiculopathy, particularly through MRI, poses a significant financial burden for low-income patients. Consequently, these individuals often rely solely on physical therapy for diagnosis and treatment. However, expert physical therapy can also incur substantial costs due to the necessity of multiple clinic visits, even from remote areas. To address these challenges, it is essential to prioritize continued professional development for physical therapists working in clinical settings to ensure accurate PT diagnosis. Extending the tele health services can fulfill the needs of those in remote areas, allowing them to access expert care without the burden of travel. Additionally, the integration of evidence-based effective and innovative electrotherapy modalities in healthcare is crucial. High Tone External Muscle Stimulation (HTEMS), now recognized globally, should be considered for implementation in healthcare settings to enhance the care provided to patients suffering from lumbar radiculopathy.

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