

Specialized Workforce Development in Rehabilitation the Prerequisite of Future Health Care Need

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The bionetwork of healthcare in Pakistan is foreseeing a storm of noncommunicable diseases in the coming future loaded especially diabetes, stroke and cardiovascular which will be leading to further rise in mental health disorders across the life and expediting the disability adjusted life years of the population. This threat will not only collapse the health care system but also social economical block of Pakistan demographic. The scarcity of specialized rehabilitation and lack of infrastructure of service integration in health care system is one of the major challenges.

The Rehabilitation Work force at Allied health profession is composed of Physical therapist in larger number and well-integrated in the healthcare system but Occupational therapist, speech therapist are like drop in ocean because of few academia's offerings educational program, lack of awareness of profession and brain drain which is emptying the bucket and we are losing the talent and professionals from the surface. Thus, the absence of specialized rehab in stroke, diabetes, cardiac, sensory, podiatry, lymphedema, community based and visual domains for quality service, functional recovery and preventive measurement of the population and their health and wellbeing is creating a major gap in health care service. This structural breach will bring catastrophic health expenditure burdening the public-health gains.

Worldwide, the rehabilitation workforce is revolving around lifelong learning and getting accredited with credentials to bring expertise in their skills which is a year or six months diploma in Neurorehabilitation, lymphedema management, sensory integration, diabetes associated sensory loss and numerous opportunities of specializing the skills and developing the niche in professional and personal growth. Though the training is expensive but several innovative modes of learning such as online learning, Hybrid learning, combining flipped classrooms, simulation, and short-term international placements which has also reduce the expenses while amplifying skill retention. Countries such as Malaysia and Jordan have leveraged twinning partnerships with Australian and German universities to deliver joint master's tracks in vision rehabilitation and cardiac rehab, complete with stackable micro-credentials that count

toward eventual degrees. Pakistan, regrettably, remains on the sidelines.

The economic argument is equally urgent. Specialized rehabilitation reduces repeated hospital admissions and cuts long-term disability costs significantly. Academic inertia is not due to lack of demand but to financial fragility and resource scarcity. Public-sector universities operate on shoestring budgets; faculty development is sporadic; and access to high-fidelity simulators, vision-rehab tech, or lymphedema bandaging supplies is virtually non-existent. The Higher Education Commission allocates negligible proportion of its health-education budget to allied health sciences, let alone post-professional specialization.

National competency frameworks must be co-created by the Allied health Professional Council with input from Rehabilitation Professionals which should specify contact hours, clinical encounters, and simulation-based assessments for each niche mirroring the Canadian National Occupational Therapy Competency Profile or the UK Sensory Integration Network's Practitioner Pathway.

Secondly, hybrid, stackable certification should replace one-size-fits-all degrees. A six-month blended diploma 40 percent online theory, 60 percent hands-on mentorship can be delivered through existing rehabilitation departments partnered with international universities or digital learning platform such as Physiopedia's clinical skill tool embedded in International Rehabilitation Education Training Toolkit.

Third, the "Rehabilitation without Borders" model recently piloted between Jordan University of Science and Technology and University of Toronto could be replicated by pairing Pakistan's major academic institutes with international competent institutes. Faculty exchange sabbaticals (three-month) and joint supervision of MSc students can seed local expertise while accredited short courses (two-week) provide immediate upskilling.

The obliviousness to the gravity of this structural breach and dearth of specialized rehabilitation workforce will stimulate the serious consequences to various domains of public health and socioeconomic stability. The rehabilitation professionals with specialized skill will add value to the health care services by reducing the preventable disability and enhancing functional living years, ultimately improving societal productivity and contributing indirectly to socioeconomic health of the country too.

Particularly considering the future amplifying effect of diabetes by 2030, the absence of trained Sensory integration specialist for the peripheral neuropathic complication will significantly increase the risk of progression in complication that may lead to Asymptomatic ulcerative pathology and potential major limb amputation which may otherwise be treated at community-based rehabilitation domain through

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Received: December 30, 2025

Accepted: January 02, 2026

Publication Date: January, 30th 2026

DOI: <https://doi.org/10.36283/pjr.zu.15.1/001>

advocacy, sustainable lifestyle modification. The bigger picture of such complication is extravagant medical expenses, family burden, DALYs increment, ultimately the country economy is under pressure creating burden on public financing mechanism.

Stroke is the second leading cause of disability globally, functional dependence among the survivors is high even then the reliance on informal caregiving and general rehabilitation is the only mode of therapies. Structured discharge disposition sites are unavailable and so as the stroke rehabilitation multidisciplinary team. Eventually the whole burden is moved on the familial unit leading to psychosocial morbidity of all the members along with the patients.

The rise neurodiverse population among the pediatric section is quite alarming, the therapies are provided on very nonspecific terms and in silos which does make a difference in managing the client at home but integrating them in mainstream remains a challenge, the environment as well as the community is excruciating towards them that is why these individuals are not seen in the universities or colleges for higher education. They ultimately are sent to shelter homes or neglected by their own families at home.

Vocational therapist, Nature therapist and Sensory integration specialist are the most wanted skilled therapists at this domain.

Fortunately, Pakistan health care has reformed the Allied health Professional council which is in the teething stage of development but can integrate rehabilitation in the health care system starting from Primary health care where the community-based rehabilitation specialist will instigate the health and wellness model on a massive scale through advocacy, one health projects and sustainable life style framework. The AHPC may develop synergy with international certifying boards and local academia for workforce development programs that instill lifelong learning among the rehabilitation professionals.

Specialized rehabilitation is not a luxury it is a lifeline. Pakistan must move beyond the generic therapist model and embrace precision rehabilitation, powered by hybrid learning, global partnerships, and innovative financing. The next decade will determine whether we transform our demographic dividend into a healthy, productive citizenry or surrender to a tsunami of preventable disability. The time to act is now; the tools are within reach; the world is ready to partner. Let us seize the moment and rehabilitate our future.