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CHALLENGES OF NEUROLOGICAL CARE IN A PUBLIC SECTOR HOSPITAL IN PAKISTAN

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INTRODUCTION

Neurological disorders are the leading cause of disability worldwide.¹ An increasing number of people with neurological disorders in low- and middle-income countries cannot access the care they need to prevent and treat these conditions due to inadequate funding and the high cost of treatment.²

RISING BURDEN, SHRINKING WORKFORCE

The burden of neurological diseases is very high in public sector hospitals of Pakistan, mainly due to a lack of availability of medications, preventive interventions, technical equipment, and the neurological workforce.³⁻⁵ The spectrum of diseases also differs compared to developed countries due to poverty, malnutrition, lack of healthcare resources, education, and lifestyle factors.

Lack of resources, ignorance, and overpopulation make it challenging to tackle this problem.

Despite the demand for neurological care, the availability of neurologists is woefully inadequate.⁶ Factors such as lower salaries, limited academic opportunities, and high levels of professional burnout deter specialists from joining or remaining in the public sector. The consequence is a reliance on general practitioners who often manage complex neurological cases without specialized training.

PRIMARY CARE SHORTCOMINGS AND DELAYED DIAGNOSIS

Most public sector hospitals have very few or no neurologists, so many patients initially visit general practitioners who have limited knowledge of neurological disorders. At the primary level, there is a greater need for neurological care, where the majority of patients suffer from epilepsy, stroke, and Central Nervous System (CNS) infections.

The unavailability of essential medicines for neurological disorders at the primary healthcare level is a significant problem.^{6,7} Other issues include the inability of many patients to reach a healthcare facility

on time, leading to delayed presentation, initial treatment by unqualified practitioners, and negligence due to lack of awareness and education in rural areas. Delayed diagnosis is also due to insufficient knowledge among general duty medical officers and a lack of basic diagnostic facilities.

ABSENCE OF PROPER DIAGNOSTIC FACILITIES

Diagnosis of neurological patients becomes difficult in the absence of neuroimaging facilities and preventive interventions at primary and secondary healthcare levels.⁸ Globally, the number of people living with, or dying from, neurological conditions such as stroke, Alzheimer's disease and other dementias, and meningitis has risen substantially over the past 30 years due to population growth, ageing, and increased exposure to environmental, metabolic, and lifestyle risk factors.

Many patients with CNS infections receive empirical treatment without proper diagnosis due to the absence of basic diagnostic facilities. Even in cases of viral encephalitis, management becomes extremely difficult in the absence of neuroimaging, viral studies, and electroencephalographic machines at primary and secondary healthcare levels. The availability of antivirals, anticonvulsants, tissue plasminogen activator (tPA) at appropriate dosages, at an affordable cost, and with assured quality is also limited. The majority of genetic disorders remain undiagnosed.

OVERBURDENED TERTIARY CENTERS

Overload at tertiary care centers results in dilution of the quality of patient care. The high national burden of neurological diseases is influenced by the quality and availability of hospitals with an adequate neurological workforce.⁹⁻¹⁰ A higher burden can impede the ability of specialists to provide detailed attention, which negatively affects patient outcomes.

LONG-TERM AND ICU CARE CHALLENGES

Neurological diseases require prolonged care and monitoring in intensive care units.¹¹ This is common in patients with severe Guillain-Barré syndrome, la

strokes, and conditions such as super-refractory status epilepticus. Such patients require prolonged ICU stays and ventilator support due to the disease and its complications.¹² This increases the burden of neurological diseases on public sector hospitals.

CALL FOR ACTION

Neurological disorders demand comprehensive strategies that go beyond treatment to include prevention, rehabilitation, and long-term care. There is an urgent need for investment in healthcare infrastructure to support these approaches, with particular emphasis on accessibility and affordability. Policy changes aimed at improving salaries, academic opportunities, and work-life balance could attract more neurologists to the public sector. Additionally, training general practitioners in basic neurology and expanding

diagnostic resources at primary and secondary levels would ensure earlier and more accurate diagnoses, ultimately reducing the burden on tertiary centers.

CONCLUSION

Addressing neurological disorders effectively requires a multifaceted approach that values brain health from an early stage. Failure to do so will exacerbate the projected increase in disability and deaths related to these conditions. For sustainable improvement, public health policies must prioritize prevention and strengthen the neurological workforce to ensure equitable access to care. The time to act is now, as the future burden of neurological disease will continue to grow without significant systemic reforms.

REFERENCES

1. Harris E. Neurological Conditions Are Leading Cause of Disability Worldwide. *JAMA*. 2024;331(17):1440. doi:10.1001/jama.2024.5160.
2. Mohammadi D. Neurology in resource-poor countries: fighting for funding. *Lancet Neurol*. 2011 Nov;10(11):953-4. doi: 10.1016/S1474-4422(11)70235-6.
3. Feigin VL, Vos T, Nichols E, Owolabi MO, Carroll WM, Dichgans M, ET AL. The global burden of neurological disorders: translating evidence into policy. *Lancet Neurol*. 2020 Mar;19(3):255-265. doi: 10.1016/S1474-4422(19)30411-9.
4. GBD 2021 Nervous System Disorders Collaborators. Global, regional, and national burden of disorders affecting the nervous system, 1990-2021: a systematic analysis for the Global Burden of Disease Study 2021. *Lancet Neurol*. 2024 Apr;23(4):344-381. doi: 10.1016/S1474-4422(24)00038-3.
5. Wasay M. Neurological disorders and disability in Pakistan: A cross-sectional multicenter study. *J Neurol Sci*. 2023 Sep 15;452:120754. doi: 10.1016/j.jns.2023.120754.
6. Usman U. International issues: neurology training in Pakistan: my experience as a neurology resident. *Neurology*. 2009 Mar 31;72(13):e58-60. doi: 10.1212/01.wnl.0000345358.02467.f2.
7. The Lancet Neurology. Improving access to medicines for neurological disorders. *Lancet Neurol*. 2024 Oct;23(10):951. doi: 10.1016/S1474-4422(24)00371-5.
8. Farokhfhar M, Almani MSP. Study on delay factors and time to hospital arrival after acute stroke in patients at Shahid Rajaei hospital, Tonekabon (2022-2023). *BMC Neurol*. 2025 Aug 13;25(1):340. doi: 10.1186/s12883-025-04361-8.
9. Ji X, Lin Y, Chen X, Jiang X, Wang Q, Cui X, Wang K. The burden of neurological diseases in G7 countries from 1990 to 2021 and projections for

the next 30 years: a Global Burden of Disease study. Front Public Health. 2026 Jan 29;13:1632773. doi: 10.3389/fpubh.2025.1632773.

10. Ney JP, Steinmetz JD, Anderson-Benge E, Gillespie CW, Becker A, Steele X, et al. US Burden of Disorders Affecting the Nervous System: From the Global Burden of Disease 2021 Study. JAMA Neurol. 2026 Jan 1;83(1):20-34. doi: 10.1001/jamaneurol.2025.4470.

11. Grant IS, Andrews PJ. ABC of intensive care:

neurological support. BMJ. 1999 Jul 10;319(7202):110-3. doi: 10.1136/bmj.319.7202.110.

12. Yeh A, Pietras C, Wallenstein D, Hu P. End of Life in the Neurological Intensive Care Unit: Is Extubating to Comfort Care Comfortable? J Pain Symptom Manage. 2019 Oct;58(4):e14-e16. doi: 10.1016/j.jpainsymman.2019.07.004.

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The author has approved the final version of the article, and agrees to be accountable for all aspects of the work.



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