

EDITORIAL VIEW

PERIOPERATIVE MEDICINE

Inequities in rheumatologic care: the impact of geography and socioeconomic status

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ABSTRACT

Geography and socioeconomic status profoundly shape access to rheumatologic care, particularly in resource-limited settings such as Pakistan. Specialist shortages, urban-centered services, financial barriers and limited health literacy contribute to delayed diagnoses and poorer outcomes, especially for rheumatologic conditions requiring early intervention. Rural and low-income communities face the greatest disadvantages, reflecting broader structural inequities in global health systems. Addressing these gaps requires workforce expansion, policy reform, equitable telemedicine implementation and community-engaged approaches. Embedding equity into rheumatology is essential to ensure that advances in diagnostics and therapeutics benefit all patients, regardless of where they live or what they earn.

Keywords: Inequity, Rheumatology, Geography, Socioeconomic Status, Rheumatologists, Pakistan.

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Diagnostics and therapeutics have advanced greatly, yet they continue to fall short in delivering equitable rheumatologic care. Access to timely and specialized treatment is often determined not by clinical urgency, but by geography and socioeconomic status especially in resource-limited countries such as Pakistan.^{1,2} Invisible lines separate those who receive early diagnosis and cutting-edge therapies from those whose diseases quietly progress while they wait, sometimes for months, sometimes indefinitely. Even in high-income countries, rheumatology services are disproportionately concentrated in urban academic centers. This leads to longer travel times, fewer available appointments and delayed diagnoses for patients in rural or remote

communities.^{3,4} The consequences are especially severe for conditions like rheumatoid arthritis and lupus, where early treatment is crucial to prevent irreversible damage. The longer treatment is delayed, the worse the long-term outcomes and the greater the risk of disability. Globally, these disparities are profound. Many low- and middle-income countries do not even recognize rheumatology as a formal medical specialty.^{5,6} In Pakistan, rheumatology is a relatively new specialty, with low awareness observed among patients and general population regarding rheumatic diseases and rheumatologic care.^{5,6} According to the World Health Organization, millions of people living with rheumatic diseases have little or no access to diagnostic services, let alone to disease-modifying therapies. This is not merely a gap in care; it is a global health inequity.

A country's wealth does not eliminate social stratification, and access to rheumatologic care remains

significantly influenced by income. Lower-income patients are less likely to have comprehensive insurance and more likely to encounter formulary restrictions, step therapy protocols and substantial out-of-pocket expenses.^{7,8} While advanced therapies such as biologics and JAK inhibitors may be available in the healthcare system, financial barriers render them inaccessible to large segments of the population especially in developing countries including Pakistan.^{7,8} Socioeconomic status also shapes an individual's ability to engage in health-promoting behaviors and manage chronic illness effectively. Delays in seeking care often stem from limited health literacy, competing life priorities and distrust of healthcare institutions, factors rooted in broader social determinants of health.^{9,10} Despite their significance, these determinants are rarely accounted for in biomedical research, limiting the real-world applicability of clinical findings. Geography further compounds these disparities. For instance, indigenous populations in developed countries such as Canada, Australia and the United States, many of whom live in rural or remote areas, face pronounced structural inequities. These communities experience higher rates of systemic lupus erythematosus and inflammatory arthritis, yet encounter substantial barriers to accessing care. Although a similar pattern emerges globally, it is especially marked in South Asia including Pakistan, where rheumatology services are typically concentrated in private urban clinics, leaving public-sector access severely constrained.^{11,12}

To address this persistent dilemma, a multi-faceted and equity-driven approach is essential. A critical first step is workforce expansion by training and incentivizing more rheumatologists to serve underserved populations.^{2,6} Capacity can also be built through medical education and task-shifting by equipping nurse practitioners and general practitioners to manage basic rheumatologic care.^{12,13} While telemedicine holds promise, its implementation must be equity-conscious. Without attention to internet access, digital literacy and patient privacy, telehealth risks widening, rather than bridging, the existing care gaps.^{3,7} Investment in digital and physical infrastructure is therefore necessary. Policy reform must also play a central role. Governments and healthcare systems should work to eliminate financial barriers by expanding coverage for prescription medications, streamlining or removing burdensome prior authorization processes and improving access to affordable biosimilars.^{9,10} Community engagement, particularly through partnerships with trusted local organizations and the development of culturally relevant care models, can improve health literacy and build trust especially within marginalized populations.^{1,8} Innovation in rheumatology is at an all-time high. But unless equity is embedded in how we deliver care, these

advances will remain out of reach for many. Geography and income should never determine a person's ability to live, work and move freely while managing chronic illness. Given its long-term relationships with patients and chronic conditions, rheumatology has a unique opportunity and responsibility to lead in redefining how equitable care is envisioned and delivered. The burden of inequity is real, often hidden in plain sight. It must be acknowledged, confronted and ultimately overcome.

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Conflict of interest

All authors declare that there was no conflict of interest.

Authors' contribution

All authors took equal part in literature search and manuscript preparation.

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