

Sri Lanka: The Current Landscape and Systemic Challenges of Orthopaedic Care

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Abstract

Over the past five decades, orthopaedic care in Sri Lanka has evolved from a system focused primarily on basic trauma management into one capable of delivering a broad range of subspecialty services. As a middle-income country with a well-established public healthcare system, Sri Lanka has achieved health outcomes that compare favourably with many regional counterparts. Contemporary orthopaedic practice encompasses trauma care, arthroplasty, spine surgery, paediatric orthopaedics, and emerging subspecialties such as oncology and microsurgery. This editorial, outlines the current landscape of orthopaedic care in Sri Lanka, highlighting both the progress achieved and the evolving challenges associated with an increasing trauma burden, demographic transition, and growing subspecialty demand. It further identifies opportunities for strengthening service delivery, enhancing training and research capacity, and improving equitable access. The Sri Lankan experience illustrates how a resource-conscious health system can progressively expand orthopaedic capabilities while maintaining broad population coverage, offering valuable insights for similar middle-income settings.

Burden of Trauma

Sri Lanka manages a substantial trauma burden, with road traffic accidents—particularly involving motorcycles—accounting for a significant proportion of orthopaedic injuries [1]. These cases frequently involve complex extremity fractures and polytrauma requiring timely surgical intervention. Occupational injuries, especially in agricultural and construction sectors, further contribute to case volume.

Modern fracture fixation techniques and implants are widely utilised across the country, reflecting the maturation of orthopaedic practice. Ongoing efforts to optimise operating theatre capacity and streamline resource allo-

cation are expected to enhance timely access to definitive care and improve functional outcomes.

Arthroplasty Care

Sri Lanka's ageing population has led to a rising demand for arthroplasty and fragility fracture care, with hip fractures now commonly managed in tertiary centres. Arthroplasty services are well established in major hospitals, with increasing expertise in both primary and complex procedures.

While access varies across regions, continued improvements in procurement systems and service organisation are expected to enhance equity and reduce waiting times [2]. The publicly funded healthcare model provides a strong foundation for expanding arthroplasty services while maintaining broad accessibility.

Spine Surgery and Neurological Trauma

Spinal surgery in Sri Lanka has advanced significantly, with the adoption of modern instrumentation techniques and minimally invasive approaches. A growing number of trained spine surgeons are now capable of performing complex procedures, including deformity correction, in both tertiary and selected regional centres.

Nevertheless, spinal cord injuries predominantly caused by road traffic accidents and falls, remain associated with high morbidity and long-term disability [3]. Ongoing improvements in trauma systems, referral pathways, and rehabilitation services provide opportunities to enhance long-term outcomes.

Oncology

Musculoskeletal oncology services have developed considerably, with limb salvage procedures and advanced reconstructive techniques now available in specialised centres. Increasing multidisciplinary collaboration and improved diagnostic pathways are expected to facilitate earlier detection and expand limb-preserving options.

Late presentation with advanced disease is not uncommon and may necessitate amputation where earlier diagnosis could have allowed limb preservation. Contributing factors include limited awareness among patients, preference for traditional treatments, absence of dedicated orthopaedic oncology training pathways, and lack of centralised multidisciplinary tumour boards.

Hand and Microsurgery

Microsurgical services have expanded steadily, with increasing availability of replantation and reconstructive procedures. While training programmes in microsurgery have increased, expertise remains unevenly distributed. Dedicated hand and wrist subspecialty services are still developing, with most care provided by general orthopaedic, plastic, or trauma surgeons rather than formally trained hand specialists.

Musculoskeletal Infections

Musculoskeletal infections continue to pose significant clinical challenges. Chronic osteomyelitis following open fractures is still encountered, although less frequently than in previous decades. Cases of neglected septic arthritis and osteoarticular tuberculosis, though reduced, remain present.

The rising prevalence of antimicrobial resistance, particularly methicillin-resistant *Staphylococcus aureus* (MRSA), has further complicated management strategies. In addition, diabetic foot infections are increasingly observed in urban hospitals, reflecting the growing burden of non-communicable diseases nationwide.

Paediatric Orthopaedics

Paediatric orthopaedic services address a range of conditions, including congenital deformities, cerebral palsy, and clubfoot. Implementation of the Ponseti method has reduced the incidence of untreated clubfoot; however, challenges persist in early detection and access, particularly in rural settings. Complex deformity correction is available in tertiary centres but remains inconsistently accessible. Long-term rehabilitation, orthotic services, and physiotherapy support are limited outside major hospitals.

Systemic and Structural Challenges

Several overarching factors influence orthopaedic care delivery:

Resource distribution: While Colombo and other major cities possess modern facilities, rural hospitals may lack certain specialised services, necessitate long-distance travel and contributing to increased demand at tertiary centres [2].

Workforce and training: Orthopaedic training through the Postgraduate Institute of Medicine has expanded significantly; however, subspecialty training opportunities remain limited and are often pursued abroad. Retention of trained specialists in the public sector is influenced by workload, infrastructure, and economic factors [4].

Infrastructure: Availability of operating theatres, implants,

and advanced imaging varies across regions. While basic imaging is widely available, access to CT and MRI is more concentrated in urban centres, which may delay diagnosis and surgical planning [1].

Rehabilitation: A shortage of trained physiotherapists and occupational therapists, particularly in provincial hospitals, limits structured rehabilitation for spinal cord injuries, amputees, and complex trauma [3].

Economics of care: Indirect costs related to travel, implants, and rehabilitation can impose financial strain on patients despite free public healthcare, affecting equitable access [2].

Research capacity: Orthopaedic research output is increasing but remains constrained by funding limitations, restricted database access, and limited protected research time. Collaborative regional research addressing locally relevant conditions is needed.

Opportunities for Progress

Sri Lanka is well positioned to further advance orthopaedic care through:

- A robust postgraduate training framework producing a consistent specialist workforce
- A comprehensive public health system enabling population-level access
- Established centres of excellence demonstrating high standards of care
- Expanding international collaborations supporting training and research

Conclusion

Orthopaedic care in Sri Lanka has undergone substantial transformation, evolving into a system capable of delivering comprehensive and increasingly specialised services within a publicly funded healthcare framework. While challenges related to service distribution, rising demand, and rehabilitation capacity remain, the overall trajectory is one of steady progress and system strengthening.

Continued expansion of subspecialty services, investment in training and infrastructure, and growing research engagement position Sri Lanka to further enhance the quality and equity of musculoskeletal care. The Sri Lankan model highlights how middle-income countries can achieve high standards of orthopaedic practice while maintaining broad accessibility, offering valuable lessons for comparable health systems globally.

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