EDITORIAL

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Postgraduate and Orthopedic Fellowship Training in Nepal

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Introduction

In the last few decades, Nepal has made significant leaps in medical education, but important disparities remain, necessitating a debate on the way forward. Having scaled its annual MBBS intake to 2635 seats across 29 Medical Education Commission (MEC)-accredited colleges—a near-50-fold increase since the 1990s[1]—the country confronts a "paradox of abundance and scarcity": abundant graduates and scarce specialists, especially where they are most needed!

As of January 2024, the Nepal Medical Council (NMC) had registered 45,498 doctors, including 30,027 medical graduates,[2] yet it is estimated that fewer than 15,000 remain actively engaged in Nepal's healthcare system, and only approximately 1,200 hold permanent government posts.[2] The NMC processes roughly 4 Good Standing Certificate requests daily to facilitate foreign employment, with USA- and UK-bound applications on a consistent upward trend since 2020.3 This editorial explores the current status of undergraduate (UG)-postgraduate (PG) training, urban-rural distribution, and orthopedic subspecialty fellowships in Nepal.

The UG–PG Pipeline: Production without Retention

With notable quantitative expansion in the preceding years, it is time to streamline the UG-PG pipeline in Nepal. In 2022, while 5,687 candidates sat undergraduate licensing examinations, only 1,673 attempted the postgraduate examination—a ratio of approximately 3.4 undergraduate graduates for every one PG entrant within Nepal.[3] Government scholarship MBBS seats—452 government-subsidized and 115 category-reserved—are designed to incentivize rural service through a bonding mechanism, but enforcement of bonding provisions under the National Medical Education Act 2075 has been a challenge.[4] Career

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intention studies consistently show that urban background, private secondary schooling, and high socioeconomic status are strong predictors of urban practice intention among Nepali graduates,[5] meaning the social composition of medical student intake is itself a structural driver of the rural deficit. A cross-sectional survey of Kathmandu Valley medical students found that 53% had at least contemplated emigration to the United States,[6] a culture of professional migration embedded long before graduation.

Postgraduate Seat Landscape: MECEE-PG Allocation 2082/83

For the academic year 2082/83 (2025–26), the MEC allocated approximately 795 MD/MS seats across public institutions through the MECEE-PG framework, with an estimated national total exceeding 1,000 across all programmes.[7] The five principal public training centres—Maharajgunj Medical Campus (IOM), BPKIHS, NAMS, NAIHS, and PAHS—distribute seats across more than 22 clinical and basic science disciplines. Internal Medicine, Anaesthesiology, General Surgery, and Obstetrics & Gynaecology command the largest allocations nationally at 38–45 seats each. Orthopedics & Trauma Surgery occupies an estimated 34–46 seats across the MECEE-PG framework,[7] a figure that is inadequate in both volume and geographic distribution for a country of 30 million with a heavy musculoskeletal disease burden.

Orthopedics in Focus: Seats, Surgeons, and Subspecialty Fellowships

MS Orthopedics seat allocation

Orthopedic postgraduate training began formally at IOM in 1997 and has expanded over the last three de-

cades. For 2082/83, MS Orthopedics seats totaled an estimated 44–46 nationally: NAMS leads with 11 seats, followed by BPKIHS (9), PAHS (6), IOM/Maharajgunj (6), NAIHS (4), Pokhara Academy of Health Sciences (3), and Rapti Academy (1), with Kathmandu University-affiliated colleges contributing a further 4–6 seats.[7,8] All seats are designated as 'Orthopedics & Trauma Surgery', at the end of which candidates earn a master's degree in orthopedics.[7,8]

The fellowship landscape

There is a growing demand and need for fellowship opportunities for the more than 500 orthopedic surgeons practicing in Nepal [9]. A 2021 cross-sectional survey of 93 Nepali orthopedic surgeons found that 45·7% had completed subspecialty fellowship training, with India as the most common destination at 53·5% of completers; arthroscopy was the most sought subspecialty, followed by spine surgery and arthroplasty.[10] Of the 53 respondents yet to complete a fellowship, 100% expressed intention to do so, and 94·6% advocated for a funded or sponsored model.[10] Internationally accredited fellowships, such as the ISAKOS-accredited Arthroscopy & Sports Injury fellowship at the AKB Center at B&B Hospital, and Grande International Hospital, are providing invaluable training opportunities to Nepalese arthroscopy surgeons. [11,12]. Fellowship opportunities in various orthopedic subspecialties are available at many government and private institutes across Nepal. Private and non-governmental hospital fellowships, such as the AKB Education Foundation fellowship, which offers a one-year-long fellowship across various orthopedic subspecialties, help fill the gap in local demand for subspecialty training. An editorial in the Nepal Orthopedic Association Journal (2023) emphasized that available fellowship programs require urgent formalisation,9 but as of the 2082/83 MECEE-PG cycle, the MEC has not formally accredited any standalone orthopedic subspecialty fellowship.[7] Such locally available fellowship opportunities may have the advantage of reducing logistical and financial challenges, as well as increasing the chances of retention of the candidate.

The Rural Orthopedic Desert

The vast majority of orthopedic surgeons in Nepal are concentrated in urban centres,[9] yielding a rural orthopedic surgeon-to-population ratio estimated at 1 per 300,000–500,000, against a national doctor-to-population ratio already below the SDG threshold at 0·9 per 1,000.[3,13]

Lack of appropriate infrastructure and equipment,[8,9,14] a surge of violence against healthcare professionals,[15] and an overall trend of medical migration to seek better opportunities abroad,[3,6] all seem to be drivers that deter orthopedic surgeons from settling into rural practice. Policies to address the aforementioned deterrents seem to be the urgent need of the hour!

The Way Forward

There is an urgent necessity for a structured national accreditation pathway for orthopedic subspecialty fellowships to be developed, with clear competency standards, defined surgical log requirements, and recognized credentialing processes to ensure uniformity in training. Rural retention strategies need strengthening through transparent and meaningful incentive packages. These may include competitive hardship allowances, reliable infrastructure and equipment support, protected continuing education time, legal protection against

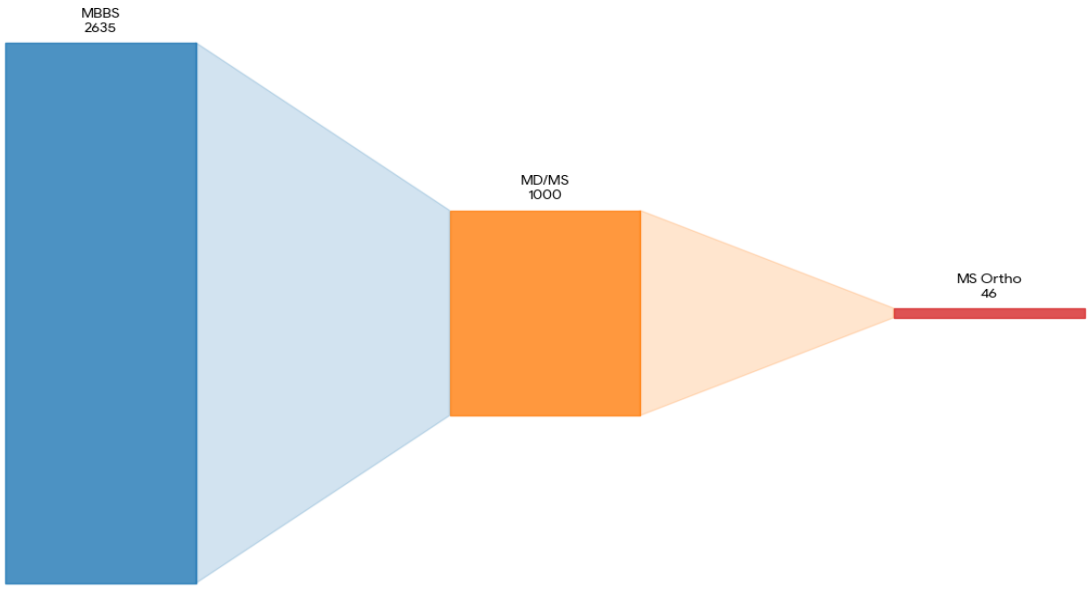

Figure 1 Medical Specialization Flow in Nepal (2082/2083 cycle)

violence, and career advancement opportunities linked to rural service. Admissions policies could be expanded to incorporate geographic representation in undergraduate and postgraduate medical scholarships, particularly for candidates from underserved provinces, combined with clearly defined service obligations to support long-term workforce distribution. Subspecialty training opportunities should be gradually decentralized to regional centers to broaden mentorship access and reduce the concentration of expertise in urban centers alone. Lastly, sustained financial commitment to specialist recruitment and retention is essential, including dedicated funding streams, education loan relief mechanisms, and policies that encourage return migration of trained professionals, which can aid in filling the current deficit and help restore the rural-urban balance. Together, these reforms offer a balanced and practical framework for strengthening orthopedic workforce capacity nationwide.

Conclusion

Nepal has successfully expanded orthopedic training capacity, but growth in numbers has not yet translated into equitable distribution or structured subspecialty development. The core challenge is no longer producing surgeons, but aligning training, incentives, and workforce planning with national needs. Urban concentration, outward migration, and limited rural infrastructure reflect systemic imbalances more than individual choices. Addressing these gaps requires coordinated reforms in accreditation, retention strategies, admission policies, decentralized training, and sustained funding. The foundations for progress are already in place. The priority now is to ensure that specialization strengthens national health equity, so that advances in expertise benefit communities across the country, not only those in major cities.

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