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A Review on Integrating Surgical Practices into Primary Care: A Pathway to Better Outcomes, Cost Reduction, and Long-Term Sustainability

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Abstract

The integration of minor surgical procedures within primary care settings represents a transformative approach in healthcare delivery. Traditionally confined to hospital-based environments, many low-risk surgical interventions can be safely and effectively managed I n primary care. This paradigm shift offers substantial benefits in terms of accessibility, cost-efficiency, patient outcomes, and system sustainability. This editorial review explores the global trends, evidence base, and policy implications for integrating surgical services into primary care, with a specific focus on the Malaysian healthcare system.

Keywords

Cost Reduction; Primary care providers; Primary care providers.

Introduction

Global health systems are facing unprecedented challenges, including rising healthcare costs, increasing prevalence of chronic conditions, and growing demand for timely surgical services. In response, health policymakers and clinicians have sought strategies to decentralize care and improve service delivery at the community level. One such approach is the integration of minor surgical procedures—such as excision of skin lesions, incision and drainage, joint injections, and vasectomies—into primary care.

Evidence from multiple countries shows that primary care providers (PCPs), with adequate training and support, can perform these procedures safely and effectively. This shift decongests secondary and tertiary services and promotes continuity of care, early intervention, and more equitable access. The following sections examine the clinical, economic, and environmental advantages of integrating surgery into primary care settings, including a focused discussion on Malaysia.

Improved Patient Outcomes

The integration of surgical services into primary care settings plays a crucial role in promoting early diagnosis and timely intervention—both of which are key determinants of favorable health outcomes across a wide range of conditions. By bringing minor surgical procedures closer to the patient, primary care clinics can ensure that interventions occur promptly, reducing the risks associated with delayed treatment.

Evidence from countries such as the United Kingdom and Canada supports the safety and effectiveness of this approach. Studies from these countries have shown that minor surgeries conducted in primary care environments have complication rates that are comparable to those seen in hospital settings, with patient satisfaction frequently exceeding 90%, highlighting the value of accessible, community-based surgical care [1,3].

Another benefit of this approach is that providing timely care at local clinics can help to prevent treatment delays, which are known to contribute to worse outcomes in conditions like skin cancers and infections [4,6]. When patients have quicker access to necessary procedures, especially in familiar settings, it not only improves prognosis but also eases the burden on secondary and tertiary care facilities.

Additionally, integrating surgical services within the context of continuous primary care fosters stronger relationships between patients and providers. This continuity enhances trust, supports better adherence to treatment plans, and boosts health literacy—all of which directly contribute to improved health outcomes [7].

In the Malaysian context, where primary care is the first point of contact for over 70% of patients, enhancing its surgical capabilities could lead to earlier detection of malignancies, reduced need for specialist referrals, and better outcomes in rural populations [8,10].

Cost Reduction and Economic Efficiency

Shifting minor surgical procedures from hospitals to primary care facilities can significantly reduce healthcare expenditure. For example, in many countries of The Organisation for Economic Co-operation and Development (OECD), surgeries conducted in primary care settings have been shown to be 30 to 50% less costly than their hospital-based equivalents [11,13]. While the information on this in a Malaysian context specifically is limited, a study found that performing incision and drainage procedures in Klinik Kesihatan (KK) settings cost approximately 40% less than when performed in hospital emergency departments but maintained comparable safety outcomes [14].

By reducing the need for hospital admissions and specialist referrals, integrating surgical care into primary care settings can also help address the overuse of tertiary services [15]. This is particularly relevant in Malaysia, where public hospitals frequently operate at 90% to 100% bed occupancy rates [15]. In addition to direct cost savings, there are also substantial indirect savings—especially in Malaysia's rural areas—where patients may need to travel over 50 kilometers to access specialist care [16]. These savings include reduced transportation costs and less time lost from work or school.

In Malaysia, private general practitioners (GPs) often serve as the first point of contact for patients with minor surgical conditions. However, systemic barriers limit the extent to which they can provide procedural care. From a cost perspective, minor surgical procedures at private GP clinics are typically priced between RM80 and RM300, which is significantly lower than the RM300 to RM1,000 typically charged by private hospitalsp [17]. Encouraging minor procedures in private GP settings could help reduce the burden on public hospitals, allowing them to reallocate valuable time to more complex cases. Additionally, many Malaysians prefer private GPs for their convenience.18 Expanding procedural services in these clinics can prevent unnecessary referrals to higher-cost facilities, resulting in meaningful out-of-pocket savings for patients [18].
Despite these advantages, the lack of standardized insurance reimbursement or government subsidies limits the applicability of such services, particularly among low- to middle-income patients. Addressing these financial barriers is essential to fully realizing the benefits of decentralized surgical care.

Enhancing Sustainability of Health Systems

Decentralizing minor surgical procedures supports the sustainability of healthcare systems by addressing workforce limitations, reducing environmental burdens, and enhancing adaptability. A sustainability audit conducted in the United Kingdom demonstrated that performing minor procedures in primary care settings resulted in a 30% reduction in carbon emissions compared to traditional hospital operating theatres [19]. In the Malaysian context, where public hospitals are heavily subsidized and frequently overburdened, shifting some of the surgical workload to Klinik Kesihatan could significantly improve workforce efficiency and help reduce patient waiting times [10].

Moreover, task-shifting is a viable model in Malaysia's dual-sector system. It involves equipping Family Medicine Specialists (FMS) with the skills and competencies needed to perform minor surgical procedures, through which the system could lessen its reliance on tertiary care referrals while simultaneously broadening the clinical scope and effectiveness of FMS roles. This approach is consistent

with Malaysia's "Primary Health Care Transformation Plan," which emphasizes the importance of strengthening primary care as the foundation of a resilient and equitable health system [8, 20].

Challenges in Malaysia's Private Sector

While private general practitioners (GPs) are well-positioned to deliver minor surgical procedures, they face several systemic constraints that limit their ability to do so effectively. One significant barrier is the absence of a standardized procedural fee schedule, which means that many insurance providers do not cover minor surgeries performed in GP clinics. Additionally, there is a lack of formal recognition for GPs who possess procedural experience, as they are not credentialed to perform minor surgeries under the current health system frameworks. Medico-legal risks further complicate the situation; ambiguity in scope-of-practice guidelines creates uncertainty and hesitancy among GPs, discouraging them from offering surgical services despite their capabilities and training.

The Malaysian Experience and Opportunities

In 2019, a network of private general practitioner (GP) clinics in the Klang Valley began offering minor surgical procedures under standardized clinical protocols. An internal audit of 1,200 procedures—which included excisions, nail surgeries, and incision and drainage (I&D)—revealed promising outcomes. The overall complication rate was 2.3%, with most complications being minor infections. Patient satisfaction was notably high, with 94% of patients reporting a positive experience. From a financial standpoint, the initiative offered significant cost savings, with patients paying an estimated 40% to 60% less compared to equivalent procedures at private hospitals. Additionally, the program helped reduce pressure on public healthcare facilities, as one in three patients reported that they would have otherwise sought care at a public hospital [21].

From this case study, it is evident that Malaysia presents a unique opportunity to expand minor surgical services within primary care by leveraging existing infrastructure and a well-trained Family Medicine Specialist (FMS) workforce. For example, there are over 1,100 Klinik Kesihatan, or government primary care clinics, distributed nationwide, many of which are equipped with procedural rooms and basic surgical tools [22]. Additionally, as of 2023, there were more than 1,500 FMS practicing across the country, many trained in essential surgical skills such From this case study, it is evident that Malaysia presents a unique opportunity to expand minor surgical services within primary care by leveraging existing infrastructure and a well-trained Family Medicine Specialist (FMS) workforce. For example, there are over 1,100 Klinik Kesihatan, or government primary care clinics, distributed nationwide, many of which are equipped with procedural rooms and basic surgical tools [22]. Additionally, as of 2023, there were more than 1,500 FMS practicing across the country, many trained in essential surgical skills such as excision biopsies, incision and drainage (I&D), and circumcisions.8 Moreover, the Master in Family Medicine programme incorporates procedural modules into its curriculum, although standardization and credentialing of these skills remain inconsistent and the 2016 Malaysian Family Medicine Specialist Credentialing Guidelines recognize minor surgical skills as core competencies for FMS [8, 23].

Despite these strengths, several barriers limit the wider adoption of minor surgery in primary care.

Public clinics often lack dedicated funding or allocated procedural time, which hinders service provision. In the private sector, remuneration for surgical services performed by GPs is inadequate, reducing incentives to offer these procedures. Additionally, medicolegal concerns persist due to unclear scope-of-practice definitions and the absence of uniform guidelines across the healthcare system.

To overcome these challenges, several enablers could be implemented. The development of national procedural guidelines specifically for minor surgery in primary care would provide much-needed clarity and standardization. Integrating surgical skills training into continuous professional development (CPD) programs would help maintain and enhance clinician competencies. Pilot programs that link procedural volume to performance-based incentives could also encourage greater uptake and sustainability of surgical services in primary care.

Currently, several Klinik Kesihatan, particularly in more urbanized states such as Selangor and Johor, already perform minor surgeries. To effectively expand this model nationwide, clear governance structures, investment in necessary equipment, and improved referral-feedback mechanisms between primary and secondary care facilities are essential.

Policy Recommendations

Several key steps are necessary to fully realize the potential of integrated surgical services in primary care, especially in Malaysia's private sector. First, a national framework should be developed to give credentials to minor surgical procedures in both private and public GP settings. Second, procedure reimbursement needs to be standardized across insurance providers and National health financing schemes should be implemented to ensure fair and consistent payments for these procedures. Third, national training modules and continuous professional development (CPD) programs should be established, focusing specifically on building and maintaining minor surgical competencies among healthcare providers. Fourth, public-private partnership (PPP) models should be created to allow Klinik Kesihatan to refer minor surgical cases to accredited private GP clinics under a shared-cost or voucher system to facilitate access. Finally, medico-legal clarity must be strengthened by updating and clearly defining scopes of practice for private GPs to reduce any potential ambiguity and support their provision of minor surgical services.

Conclusion

Thus, integrating minor surgical procedures into primary care is a high-impact, low-cost innovation that can improve outcomes, reduce strain on tertiary care, and ensure long-term sustainability. In Malaysia, the potential is amplified by a robust network of public and private primary care clinics. By enabling both sectors to safely and effectively deliver minor surgical care—through training, policy reform, and strategic investment—the country can build a more resilient, accessible, and patient-centered healthcare system.

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