Task Shifting or Systemic Short Cut? Revisiting the Role of Clinical Officers in a Globalized Surgical Landscape

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In the previous issue's editorial, Chalwe and Kigera spoke about the need to strengthen surgical systems in Africa with the aim to achieve various Sustainable Developmental Goals and other global development goals (1). For this issue, we read from Temesgen and Moges how systemic challenges lead to high postoperative mortality rates among pediatric patients in low- and middle-income countries (LMICs) (2). In light of this, let us delve into one of the World Health Organization's (WHO's) six building blocks of a health system—human workforce. With the globalization and digitization of the surgical care, is there a role for the clinical officer (CO) in surgery? If yes, where? If no, how do we handle the existing arrangement?

The cadre of CO was introduced in pre-independence Africa when the colonial administrators faced difficulties in supplying physicians, especially in rural areas. After independence, countries continued the practice, even introducing specific training colleges for COs. In the recent past, specialist associations in Kenya have found fault with the increasing surgical responsibilities left in the hands of unsupervised COs, citing risks to quality and safety (3). The integration of COs into surgical care represents a response to systemic healthcare disparities, particularly in LMICs, where physician shortages have long hindered access to care. The success of COs hinges on a balance: leveraging their ability to manage straightforward procedures while ensuring robust oversight mechanisms to mitigate risks in complex cases. This model, born of necessity, has demonstrated both promise and limitations, prompting urgent debates about the future of surgical workforce development in a globalized space.

COs have proven effective in bridging workforce shortages, particularly in primary and emergency surgical care. In countries such as Kenya and Malawi, they perform routine procedures such as circumcisions, abscess drainages, and uncomplicated cesarean sections, with outcomes comparable to general practitioners (GPs) when operating under structured protocols (4, 5). Their training—often a blend of classroom education and apprenticeship—equips them with task-specific skills, enabling rapid deployment to rural areas where physicians are scarce (6). For instance, Malawi's surgical CO program, which includes 3 years of postbasic training, has reduced maternal mortality by ensuring timely access to emergency obstetric care in remote districts (7). Similarly, Zambia's orthopedic COs independently manage fractures and clubfoot corrections, alleviating pressure on overburdened specialists (8). These successes underscore the value of COs as cost-effective, geographically accessible providers, particularly in regions with less than one surgeon per 100,000 people (9).

However, the CO model falters when extended beyond its designed scope. Complex, high-risk cases-such as eclampsia management, bowel resections. or polytrauma-expose the limits of their training. Studies in Tanzania and Sierra Leone reveal higher maternal mortality rates and post-operative infections when COs manage severe obstetric complications or perform appendectomies without specialist backup (10, 11). Orthopedic outcomes similarly suffer: CO-managed fractures in Malawi exhibited malunion rates nearly double those of surgeon-led cases, attributable to inadequate imaging and follow-up systems (12). Njongo et al. describe how some orthopedic fractures are prone to malunion even in the hands of specialists (13). These challenges are not inherent to CO competence but reflect systemic issues: task shifting without commensurate investment in supervision, referral networks, or infrastructure. The non-inferiority observed in controlled trials of CO-led care often dissolves in realworld settings where resource constraints amplify risks (14).

The popularity of COs in LMICs is rooted in their affordability, availability, and adaptability. Training a CO costs a fraction of educating a GP or specialist, making them a fiscally sustainable solution for governments grappling with tight budgets and donordependent health systems (15). In Uganda, for example, COs earn 30-40% less than GPs while handling 60% of minor surgical caseloads in district hospitals (16). Their proliferation also reflects the stark reality of "brain drain": sub-Saharan Africa loses an estimated 20,000 healthcare professionals annually to migration, leaving COs to fill the void (17). Yet their utility depends on functioning ecosystems: specialists to supervise complex cases, referral pathways for emergencies, and continuous professional development. Where these elements are absent, COs risk becoming overstretched substitutes rather than complementary providers (18).

The future of surgical care in LMICs now confronts a pivotal question: Should governments prioritize training more GPs and specialists, or double down on scaling CO programs? This dilemma is intensified by competing pressures. On one hand, the WHO advocates task shifting as a cornerstone of Universal Health Coverage, with donors such as the Gates Foundation funding CO training to meet surgical volume targets (19). On the other, physician groups warn against "lowering standards," arguing that LMICs deserve the same specialist-led care as high-income countries (HICs) (20). The West's role is paradoxical: HICs resist adopting CO-like roles domestically-relying instead on physician assistants with narrow procedural scopeswhile championing task shifting abroad (21). This dissonance reflects deeper inequities: globalization enables physician migration from LMICs to HICs, exacerbating workforce gaps that COs are then mobilized to fill (22).

Amid these debates, one principle remains nonnegotiable: COs must operate within clear scopes of practice, backed by specialist supervision and clear care escalation mechanisms. Autonomy without safeguards jeopardizes quality, as seen in rural Mozambique, where unsupervised COs attempting laparotomies faced complication rates exceeding 25% (23). Successful models, such as Rwanda's partnership with the College of Surgeons of East, Central, and Southern Africa to integrate COs into specialist-led teams, demonstrate that supervision need not be restrictive—it can enhance skills through mentorship while preserving COs' frontline role (24).

Ultimately, the CO experiment illuminates a broader truth: global health equity cannot be achieved through workforce half-measures. COs are a stopgap, not a panacea. Their continued relevance depends on parallel investments in physician training, infrastructure, and retention policies. Ministries of Health must navigate this terrain with nuance: expanding CO programs where they complement specialists while resisting the temptation to replace systemic reform with task shifting alone. As surgery evolves in a globalized world, the goal must be to have systems where COs thrive not as substitutes, but as partners in a workforce ecosystem that

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values both access and excellence. It is the case of the strength of a chain being determined by its weakest link. Kenya only boasts of 2.35 surgical/anaesthesia care providers per 100,000 population against the recommended 20/100,000 set by the Lancet Commission (25). A practical approach to this would be to increase training of GPs (from whom surgeons will be trained) and enhance physician retention in order to meet global targets. Increasing the scope of practice of the clinical officers without adequate specialist supervision will not work.

Other studies in this issue highlight the peculiarity of family caregivers for surgical patients in Nigeria (26). In the same country, high prevalence of visual impairment has been established among university students, most of whom do not use corrective spectacles, calling upon all to take the opportunity for random checks where possible (27).

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