

Interprofessional collaboration between anesthesiology and ophthalmology: the experiences of clinician-educator-researcher-administrators

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Introduction

Interprofessional collaboration is the working together of different health professional cadres to positively impact health care and advance knowledge. The complexities of modern healthcare demand a collaborative approach, where specialists from different disciplines have a combined action to achieve a goal. It has been argued that efficient interprofessional collaboration can increase job satisfaction among health professionals, help overcome fragmented service delivery, and improve safety, quality, and continuity of care¹. According to the World Health Organization's Framework for Action on Interprofessional Education & Collaborative Practice, such collaboration can play an important role in mitigating the global health workforce crisis².

This perspective paper shares our experiences with anesthesiologist-ophthalmologist collaboration while working together at the Kenya Medical Training College (KMTc), in the clinician-educator-researcher-administrator role. We focus on the synergistic benefits of our collaboration in research, education, and clinical practice. We aim to inspire other health professionals to embrace interdisciplinary partnerships and highlight the potential for positive impact in our context. The Kenya National Guidelines for Screening and Management of Diabetic Retinopathy in Kenya emphasize the collaboration between ophthalmologists and physicians, among other professionals attending to patients with diabetes³. Similarly, the Kenya National Guidelines for Screening and Management of Retinopathy of Prematurity, emphasize the collaboration between ophthalmologists and pediatricians, nurses and other health workers⁴. What do we know about collaboration between ophthalmologists and anesthesiologists?

Our collaboration has spanned several key areas which include:

- **Research on Trends in the training of Ophthalmic Clinical Officers (OCOs) at the KMTc:** We collaborated on a study examining trends in the training of OCOs in Kenya. This research explored the structure of the training programs over a 60-year period, engaged alumni, faculty, administrators, and stakeholders, and proposed recommendations for strengthening the training. Prompted by this project, we reflected on the value of combining perspectives from both ophthalmology and anesthesiology to address systemic challenges in eye care workforce development. It was an opportunity for reflection on what ophthalmology can learn from anesthesiology. This includes the use of simulation (e.g. simulation for cataract surgery), team teaching and a focus on patient safety. The anesthesiologist's experience in health professions education within anesthesiology complemented the ophthalmologist's understanding of the specific training needs in eye care. We also reflected on the critical concern of resource management, particularly equipment and consumables in ophthalmology. Exploring cost-effective alternatives for these supplies, without compromising quality, is necessary for both anesthesiology and ophthalmology. Ophthalmology can learn additional best practices in equipment maintenance, supply-chain management, and efficient scheduling of procedures from anesthesiology.
- **Teaching and Learning:** Together we have provided training for various cadres and in various modules, including research and perioperative care. A team teaching approach is adopted with content delivery done using educational technology such as the

learning management system at KMTC, online webinars on Zoom and other platforms. Individual training programs share lessons learnt in academic forums that allow for knowledge exchange. The anesthesia faculty developed skills of online teaching and learning through partnership with the ophthalmology department while the experience of the use of e-logbook and simulation in anaesthesia has been shared with ophthalmology for adoption. These initiatives have helped to strengthen training programs and build capacity in health professions education.

- **Research on Anesthesia for Cataract Surgery:** Together with the team at City Eye Hospital, led by the late Dr Amos Kibata, an ophthalmologist, Retina specialist and CEO/Founder of City Eye Hospital, we developed a protocol for a clinical trial comparing different anesthetic techniques for cataract surgery, focusing on patient outcomes and cost-effectiveness within the Kenyan context. This research highlights a critical need for evidence-based guidelines for anesthesia in ophthalmology, particularly in resource-limited settings. This collaboration allowed us to combine our specialized knowledge to design a robust study. The anesthesiologist's expertise in anesthetic protocols, pain management and patient monitoring complemented the ophthalmologist's understanding of the specific requirements of ocular surgery. Hospital adopted the proposed protocol as a standard of care thus preempting the research.
- **Grant Application for a Kenya-Rwanda Link Project:** We collaboratively prepared a grant application to the Tropical Health and Education Trust (THET) whose aim was to establish a collaborative link between KMTC and a University of Rwanda ophthalmology programs. This project aimed to enhance capacity building in eye care through joint training programs, exchange visits, and collaborative research. Our joint application brought together complementary expertise in grant writing in order to address the broader challenges of eye care service delivery, including surgical capacity, training, and infrastructure. Team members' capacity for grant writing was enhanced by this collaborative effort therefore increasing institutional competitiveness for future applications.

Our experience has highlighted several key benefits of interprofessional collaboration: (1) Combining expertise in research leads to more robust research (2) Integrated educational approaches provide a more holistic understanding of the needs of training programs (3) Increased capacity to competitively bid for funding

opportunities (4) Collaboration provides opportunities for learning from each other and expanding our professional networks. We also identified several key areas of the professional intersection between ophthalmology and anesthesiology which included:

- **Perioperative Care.** Anesthesia plays a crucial role in ensuring safe and effective ocular surgery.
- **Pain Management:** Both specialties are involved in managing pain related to eye conditions and surgical procedures.
- **Patient Safety:** Collaboration is essential for minimizing risks and ensuring patient safety during ophthalmic procedures.
- **Health Professions Education:** Both specialties contribute to the training of students and other healthcare professionals, including developing participation in developing continuous professional development programs.

The collaboration is not without challenges. Balancing clinical duties with research, educational and administrative activities is quite demanding. Some of the projects, including grant applications and research projects are time-sensitive, and skills in project management are required. Funding for the projects and initiatives is limited. However, our experience has demonstrated the significant benefits of interprofessional partnerships between ophthalmology and anesthesiology, but also importantly, between clinician-educator-researcher-administrators. By sharing our expertise and working together, we can achieve more than we could alone.

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