

Academic Partnerships: The Future of Global Humanitarian Outreach

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As the global anesthesia crisis has been revealed, the role of academic partnerships has grown and become increasingly appreciated. Delivering safe anesthesia in low-income settings is challenging, and academic partnerships offer sustainable solutions through education, training and mentoring over time.

Many residents and medical students at U.S. institutions have interest in participating in these partnerships. For some students, it is the key reason that they choose one program over another. Several such programs in anesthesiology and surgery are currently under way at Duke, University of California at San Francisco (UCSF), Vanderbilt and Wake Forest.

Care must be taken when considering a partnership with a low-income country. The needs of the host county, as appreciated and expressed, must be considered primarily, and mutual respect between the local and visiting partners must be fostered. North American residents and fellows have an opportunity to both learn and teach in these environments, but it is important that the experience be beneficial primarily to the receiving community.

The Department of Anesthesiology at Duke is working collaboratively to improve the spectrum of factors that contribute to safe anesthesia, obstetrics and surgery in low-income settings.



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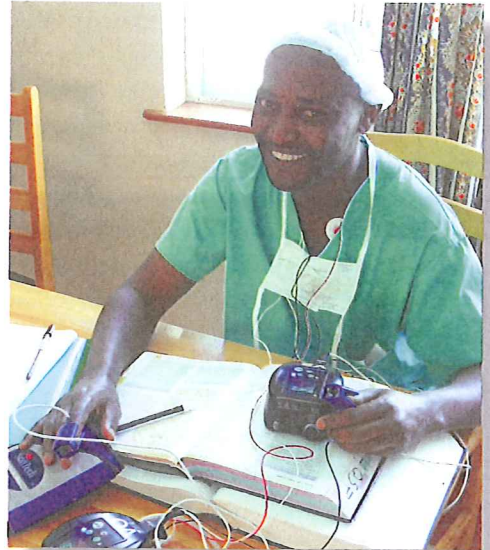
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At left: Vanderbilt anesthesiologist Michael Higgins, M.D. teaches Kenya registered nurse anesthetists at Kijabe Hospital on the use of a new patient monitoring system. Through the Vanderbilt International Anesthesia (VIA) program, Vanderbilt University School of Medicine residents and fellows, as well as Kenyan nurse anesthetist students, receive unique medical training.



Above: A Kenya registered nurse anesthetist (KRNA) student is trained on a wireless vital signs monitor in the classroom before the new equipment is added to the clinical setting. Vanderbilt University School of Medicine partners with the Kenyan government through the Vanderbilt International Anesthesia (VIA) program to provide training to nurse anesthetists at Kijabe Hospital. The newly trained KRNAs then practice in rural areas of Africa where skilled anesthetic care is often non-existent.



Vanderbilt anesthesiologists Michael Higgins, M.D., center, and Mark Newton, M.D., far right, train Kenya registered nurse anesthetists at Kijabe Hospital on the use of a new patient monitoring system. Dr. Newton directs the Vanderbilt International Anesthesia (VIA) program.

Duke's philosophy is to promote the four major pillars of global health of the Duke Global Health Institute: Service, Education, Research and Policy. These aspects of the department's work remain in close collaboration with a multitude of partners at institutions and non-governmental organizations (NGOs), such as UCSF, Global Partners in Anesthesia and Surgery, University of British Columbia, Harvard, Wake Forest, Kybele, University of Washington, the Alliance for Surgery and Anesthesia Presence, and ASA. Importantly, Duke's partnerships with the host country and institutions, and their government sponsors, are fostered through long-term collaboration with the

U.S.-based partners. The Duke program is currently working on these efforts in Uganda (Mulago Hospital, Kampala), Haiti (Partners in Health), and throughout Ghana, Republic of Georgia and Egypt in collaboration with Kybele.

The Duke program encourages anesthesiology staff and residents to participate in these programs and supports the work abroad by providing protected time and funding for these important efforts. In addition, the collaboration with the Duke Global Health Institute allows for intellectual stimulation,

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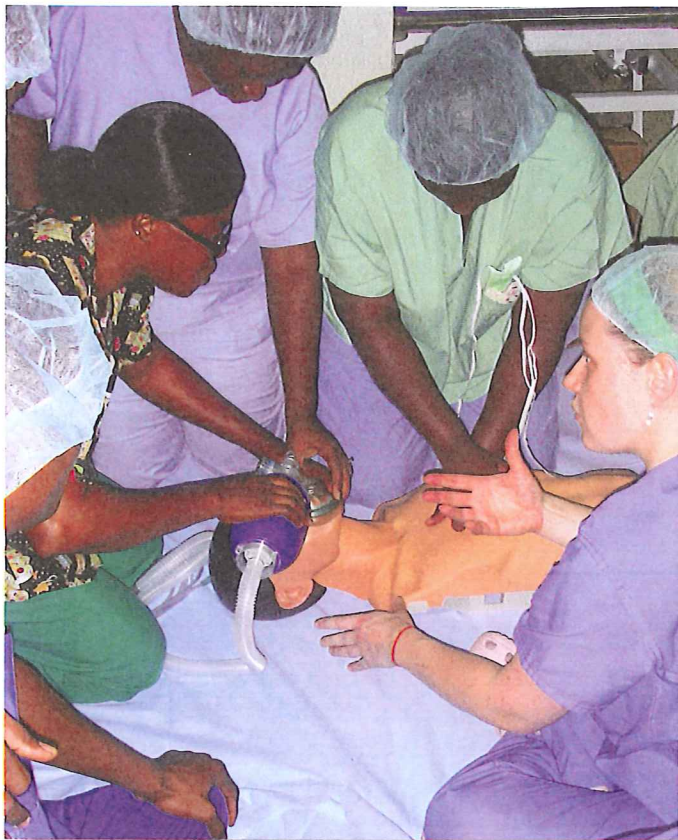
organizational support and, most critically, the availability of supplies and equipment through the global health donated equipment warehouse.

UCSF offers a collaborative partnership known as the **Global Partners in Anesthesia and Surgery (GPAS)** www.gpas.org. GPAS does not focus on volunteer clinical work or trainee/faculty exchange. Rather, it focuses on working directly with partners in low-income countries to help identify areas for sustainable interventions to expand the workforce and develop the capacity needed to address the crisis of unmet surgical need in resource-limited settings. Our current focus is on Uganda.

GPAS aims to utilize academic and philanthropic support to increase resources available for patient care, teaching, research and training, thereby enhancing local capacity and improving access to quality



Shane Volney, M.D., a resident at Vanderbilt University School of Medicine, instructs Kenyan anesthetists on how to perform an ultrasound-guided femoral nerve block in a patient undergoing a total knee replacement.



Stephanie McGuire, M.D., CA-3 Duke, teaches CPR to nurse anesthesia students in Ghana.

care in Uganda. By constantly evaluating our projects for sustainability, scalability and cost-effectiveness, in the long-term we hope to contribute to a reduction in the global burden of surgical disease.

Over the past four years, GPAS supported a scholarship and mentoring program in collaboration with the Association of Anaesthetists of Great Britain and Ireland and the Departments of Surgery and Anesthesia at Mulago Hospital, Kampala. This program has already helped to dramatically increase the number of trainees in anesthesiology and surgery.

GPAS currently has several ongoing research collaborations in Uganda, which aim to expand information on perioperative care in low-income settings. These projects focus on identifying the primary causes of morbidity and mortality in perioperative settings, and then using this data to design, introduce and evaluate specific practical and sustainable interventions to address areas of need. GPAS is also engaged in an ongoing evaluation of triage in emergency services, both in the emergency room setting as well as in obstetric care. Results from these programs will be used to further effect changes to better use the limited resources available to safely treat more individuals. In addition, GPAS is creating sustainable change by using the data to leverage funding for training and programs from within the Ministry of Health and internal sources in Uganda.

Wake Forest University has offered global health opportunities as part of the anesthesiology residency training program since 1987. Francis M. James III, M.D., department

chair 1983-1998, spearheaded a one-month rotation for senior residents to Umtata, South Africa (formerly the Republic of Transkei). A resident participating in the elective in 1996 wrote, "This was a journey in the development of cultural awareness, adaptation, independence and of personal and professional growth."¹ Over the years, numerous other Wake Forest faculty and residents have participated in global health opportunities to countries as diverse as Thailand, Turkey, China and Croatia, through organizations such as Operation Smile, Health Volunteers Overseas and Kybele www.kybeleworldwide.org.



Medge Owen, M.D., assists with spinal anesthesia administration for cesarean section at Ridge Regional Hospital in Accra, Ghana.

The global health legacy at Wake Forest continues under the leadership of current Chair Joseph R. Tobin, M.D., who supports residents financially, philosophically and educationally in global service opportunities. Recently, Wake Forest and Duke University medical centers have partnered with the Ghana Health Service to create a new rotation in Ghana, West Africa. Anesthesiology residents from both institutions have helped develop core learning and teaching objectives for the rotation through their collective experiences in Ghana in accordance with ACGME guidelines. At Wake Forest, an application process and a global health selection committee have been formed. Funding for the rotation is provided by the institution, and credit is received, in advance, by the American Board of Anesthesiology. One to two residents per year are selected from each institution. Residents are expected to provide teaching demonstrations, lectures and clinical care within the labor ward, operating and recovery rooms, and the intensive care units of participating Ghanaian hospitals.

Vanderbilt University Department of Anesthesiology faculty have been involved in global health activities for many years. In 2007, the department's leadership formulated a vision plan

that included global health as one of its tenets for a successful department. The global health vision involved service, education and research, and this template provided the foundation for **Vanderbilt International Anesthesia (VIA)**, an initiative to provide faculty, trainees and staff administrative support for global anesthesia involvement.

Working within the Vanderbilt Institute of Global Health (VIGH) as the international anesthesia arm, Vanderbilt anesthesiology faculty, residents and fellows have been involved in service and education projects in Ghana, Haiti, Jamaica, Vietnam, Nigeria and Kenya. Typically, the trips include cross-cultural anesthesia experiences in environments with poor institutional and anesthesia infrastructure and advanced surgical pathology. Locations in low-income countries (LIC) are chosen with the goal of establishing long-term relationships focused on the in-country education of anesthesia care providers, as well as clinical service. This approach creates a long-term impact while allowing trainees the opportunity to establish a multifaceted career path that includes international medical service.

Residents in their CA-3 year can participate in a VIA ACGME-approved, one-month, international anesthesia rotation. The majority of their travel funds are provided through the fundraising efforts of the department. Participation in clinical and educational experiences alongside a faculty member provides a unique learning environment that is unavailable in traditional anesthesia training programs. As VIA has strengthened, opportunities for global anesthesia research also have provided an exciting vision of future partnership with LIC academic institutions.

The potential benefits of academic partnerships cannot be overemphasized. For the host country, building a culture of patient safety, improving education and training, and accessing functional equipment are notable positive effects. For the visiting staff and residents, the opportunity for cross-cultural understanding, exposure to clinical challenges never experienced in North America, and a revisiting of skills appropriate for low-technology settings are important outcomes.

Academic partnerships in low-income countries are essential to promoting the critical role of anesthesiology in the health of a population. These partnerships must be part of the ASA Global Humanitarian Outreach agenda. Currently information on these partnerships can be found on the GHO website www.asahq/gho, and specifics on ABA/ACGME credentialing are also contained for the benefit of interested residents and programs seeking to create an international partnership.

Reference:

1. Owen MD, Ririe D. The role of international experience in residency training. *Am J Anesthesiol.* 2000; 27(1):45-47.