The first Global Surgery Program Leaders Meeting hosted by Operation Giving Back (OGB) was held at the American College of Surgeons (ACS) clinical congress in San Diego, California on October 23rd, 2017. The goal of this meeting was to discuss the current challenges faced by academic surgery residency programs pursuing opportunities in global surgery for their trainees, and develop the structure of academic global surgery as an organization. The session was moderated by Girma Tefera, MD, FACS (Medical Director, Operation Giving Back).

**Consortia of Academic Global Surgery Programs: Why?**

Haile T. Debas, MD, FACS (Director Emeritus, University of California Global Health Institute) started the discussion by emphasizing the growing enthusiasm among medical students, surgical residents, and faculty regarding global surgery as an academic discipline. Two major publications in 2015 fueled the progression of surgery as an independent global health priority: the Lancet Commission on Global Surgery and Disease Control Priorities, third edition [1, 2]. The salient momentum was gained when major surgical organizations such as the ACS and the Association for Academic Surgery (AAS) started to focus their attention on surgery as a global issue.

In the global health context, there are over 143 million surgical procedures that need doing with 5 billion people lacking access. Just by providing essential surgery to these populations, 1.5 million deaths can be averted in low and middle-income countries (LMIC). The global surgical need is a pressing matter, an investment which will save lives and promote economic growth in return.

Responding to the global need, U.S. academic institutions have instituted overseas electives and courses that have developed into formal education programs. Surgical resident interest remains high, despite student loan debt. However, not all global surgery education programs are of equal quality. Dr. Debas pointed out that a mature global surgery education program should have departmental funding and support, collaboration with an established global health or public health program, established academic partnerships, and American Board of Surgery approval.

As a result, the idea of an academic global surgery consortium was introduced. A consortium can serve as a platform for collaboration in education, research, and clinical services. In forming alliances, we can develop governance and organizational structure, which facilitates recognition and advocacy. In a field still in its infancy, a consortium will facilitate academic global surgery grow faster and allow American surgery to lead and contribute worldwide.

Finally, in order to create a win-win partnership with LMICs, Dr. Debas underscored three areas of focus: surgical education, including the medical students whose passion is limitless, training of local surgical workforce and the development of trauma care systems.
**Accreditation for International Global Surgery Program: How?**

Jocelyn Logan, MD, FACS (University of Cincinnati) gave a presentation on University of Cincinnati’s experience in the development of an international global surgery program in partnership with Mzuzu Central Hospital in Malawi. This program consists of a full time on-site surgical faculty and senior residents from University of Cincinnati, Washington University, and University of Kansas. In this 8-week rotation, trainees complete on average over 400 cases. In getting the global surgery program accredited, Dr. Logan’s primary goals were bidirectional partnership, providing surgical care, and enhancing educational experience for residents.

She identified four crucial components of successfully establishing a global surgery program: a champion at home, site identification, a champion at the host institution, and adequate and appropriate preparation.

Acquiring the support of a champion at home includes the backing of a program chair, which sometimes requires patience and persistence. It is important to stress to leadership the benefit international rotations bring to the residency program, such as recruiting desirable residency candidates that have an interest in global surgery. Additionally, Dr. Logan provided her program chair with an action item and budget plan after site visits, to solidify buy in from the department.

Site identification is the most difficult part of accreditation; for successful site identification, one should have clear goals in mind and be fully aware of the Residency Review Committee (RRC) requirements. Once these are fulfilled, the process is followed by a site visit. During which a needs-assessment is done and may require an inquiry of activity from the visiting institution, i.e., number of cases, outpatient care, and inpatient services that are in place to care for patients. This is necessary to identify a site that will suit the interests of both programs.

Next, it is important to have a champion at the host institution who shares the same philosophy as the visiting institution. Dr. Logan hosted Dr. Douglas Lungu, a surgeon at Mzuzu Central Hospital, at University of Cincinnati hospital to participate and observe trainees’ clinical and educational experience at home. This gave him a better understanding of the surgical service and teaching skills at the visiting institution and played a big role in obtaining his buy-in. During this time, the two institutions were able to jointly identify objectives based on the need for access to surgical care and educational interest of both sets of residents. The defined goals were the following: senior level resident participation for at least 8 weeks per rotation to give ample time to adapt to a new environment, resident presence 12 months per year to ensure consistent service in an area of high needs, and only performing cases if U.S. trainees are not taking opportunities away from a local trainee.

In the preparation phase, the logistics component, such as housing, transportation, safety, licensure, and insurance were identified. Once these were addressed, there was a month-long pilot run in order to ensure a smooth transition. Having gone through the process of establishing a global surgery program, University of Cincinnati has developed a multi-institutional effort with Washington University and University of Kansas. This provides a stable workforce to the host institution and the programs contribute funding together to sustain the program. She hopes that academic partnership for global surgery programs will serve as a model for institutions hoping to establish experiences for their residents.
Developing Center for Global Surgery: What you should know

Raymond Price, MD, FACS (Director, Center of Global Surgery, University of Utah) discussed the steps involved in developing a center for global surgery. There exist different perceptions regarding what a center for academic global surgery is, including but not limited to volunteerism, charity work, Non-Government Organization (NGO), research, and clinical rotation. The goal of this discussion was to better define the framework of a global surgery center.

With his colleague Dr. Catherine deVries, Dr. Price identified four areas to be incorporated into the framework of center for global surgery center: development of alliances within the home program, aligning the mission of a global surgery program with that of the home academic institution, promoting the value of academic global surgery to the home program, and securing funding.

He started development of alliances by looking at existing programs at University of Utah, starting with the department of surgery, then broadening the search to engineering, business, and public health. As a result, University of Utah hosts an annual conference, the Extreme Affordability Conference, a truly multidisciplinary meeting. Additionally, by bringing together disciplines from home ranging from public health and social work to oncology, radiology, and plastic surgery, he was able to collaborate with existing local programs on a breast cancer prevention and treatment project in Ghana. For aligning the mission of a global surgery program with that of home institution, he gave the University of California San Francisco as an example. Their mission statement is to develop the next generation of leaders in surgery; to provide outstanding quality clinical care that is cost effective, yet compassionate; and to make significant advances in scientific knowledge and clinical practice through basic and clinical research. These are the same values that a center for global surgery strives to achieve.

There are many ways that the value of a center for global surgery in an academic institution can be promoted. There is a rising interest and passion in prospective applicants. Presence of global surgery can help with burnout rates; create new funding opportunities, increase trainee scholarly activities that continue to have marketable impact worldwide, and improvement of our own healthcare via reverse innovation.

As is the case in many other programs, identifying funding source remains a challenge. There are opportunities for grants, many still rely on philanthropic contribution, and some turn to business endeavors. Question remains on whether there should be standardized global health and surgery competency, which will hopefully be addressed at the current and future meetings.

He finished the presentation with two examples of academic global surgery programs; Baylor University Global Surgery Fellowship and Sloan Kettering International Surgical Oncology Global Cancer Disparities Fellowship as unique opportunities that incorporate clinical and academic practices.
Invited Commentaries

Jeffrey Matthews, MD, FACS (Chair, Surgery RRC) showed his support on behalf of the RRC for international surgical rotation in its role in creating a valuable experience for trainees. He stressed that an application for each rotation must be approved by the RRC and ABS and that every program have goals and objectives, along with case numbers performed by residents. Irrespective of the broader value of academic global surgery, RRC’s primary consideration in approving elective rotations is their value to the trainees. Due to the limited amount of time involved, RRC so far has only considered approval process for general surgery residency, not fellowship level training or surgical subspecialties. RRC at this time is unable to provide a comprehensive list of all approved global surgery programs.

Jo Buyske, MD, FACS (Executive Director, ABS) offered insight from the ABS perspective regarding academic global surgery. She shared her sympathy and enthusiasm for having trainees exposed to international settings. Dr. Buyske had developed international surgical rotation program at the ABS, where she reviews every application. Most applications are approved as programs abide by the requirements. The most common reason that a program does not get approved is the short length of the rotation. She reiterated Dr. Matthews’ comment that the interest of ABS is in the residents, and that rotations as short as 2 weeks is not likely to benefit trainees. There are global surgery opportunities that may not meet the ABS requirements but still valuable to the trainees and Dr. Buyske encouraged academic programs to explore these options as long as the flexibilities of respective programs will allow. Collaboration among institutions is encouraged in order to maximize resident experience. Unfortunately, there are no plans in place to extend global surgery experience abroad for PGY-5 level trainees as the graduating chief class must stay within their home institutions. Individual cases may be considered, but ABS would like to keep overall standards stable across every program.

Charles Filipi, MD, FACS (Professor of Surgery, Creighton University) shared his experience with Creighton University (CU) global surgery fellowship, which was initiated in July 2017 to close the gap in surgical inequality across the world. The goal for each fellow is to each save 1000 lives each year, either by direct surgical service, changing health care systems, or both. Curriculum of the CU global surgery program is adjusted to be integrated to and reflect the mission statement of Creighton University. Applicants must be U.S. citizens, board certified or eligible, and need an average ABSITE score greater than 50th percentile. First year of fellowship includes clinical rotation in urology, orthopedics, anesthesia, ENT, and OB/GYN in Omaha, NE, hernia repair trips to the Dominican Republic, and cadaver dissection lab. Second year of fellowship includes surgical work in underserved countries and teach health system development at host countries, during which time curriculum changes will happen in collaboration. In the first three months, Creighton University program has learned that the number of competition need to be minimized, certain specialties are more advanced than presumed, and that directors of each clinical rotations need deeper buy-in to the concept of global surgery.

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Audience Response Questionnaires

In order to obtain a better assessment of current status of global academic surgery in training programs, a survey was prepared. These questions were asked during the meeting, using a real-time audience response system.

Of the attendees of the meeting, 70% had responded that their program does not offer a formal ABS-approved international surgical experience for their trainees. For those with or without formal programs in place, attendees ranked funding as the greatest challenge (41%) to sending residents abroad, followed by lack of support from the department (30%) and lack of ABS-certified attending surgeon on the ground (22%). When asked if there is enough interest from faculty within their respective home programs to serve as the in-country supervising surgeon, 32% responded positively. 47% reported “no,” and 21% were unsure.

Among programs that offer international surgical experiences, 69% offered a formal pre-departure meeting or an education session, and 58% responded that they also offer a formal post-international rotation debriefing. 9% of responded that there is no “formal” debriefing, but residents are asked to provide feedback through a survey or a personal reflection.

When residents are training abroad, there were differences in how they are evaluated. Most frequent method was via direct feedback from in-country attending surgeons (39%), followed by ACGME core competency-based grading system (29%). 29% responded that there is no formal evaluation system.

In terms of developing a consortium, greater than a majority (71%) currently does not work in alliance with other institutions but 45% were willing to host residents from other institutions. Others responded that they will host residents if there can be an agreement of exchange programs (10%) or if the resident from other institution can secure his/her own funding (45%). Participants viewed shared funding source, wider geographic range of opportunities for residents, research collaboration opportunities, and having more qualified surgeons to oversee trainees’ work as potential benefits of forming a consortium.

Closing Remarks and Open Discussion

Dr. Kathryn Chu from University of Cape Town welcomed the idea of international consortium, in addition to consortium within the U.S., for bidirectional benefit.

Dr. Tamara Fitzgerald from Duke University suggested a future meeting with leadership in major institutions and programs, such as NIH/Fogarty, in order to discuss the inequality in funding for academic endeavors.

Dr. Catherine deVries from University of Utah introduced Consortium of Universities for Global Health (CUGH), which had its inaugural global surgery satellite session last year. She extended the invitation for partnership with CUGH as another platform for those pursuing academic global surgery at their respective institutions.
Dr. Robert Riviello from Brigham and Women’s Hospital suggested another opportunity for consortia: shared educational resources, such as case library with commentaries or pre/post departure checklist.

Dr. Elliot Brender from University of California at Irvine shared his experience working in Cambodia and Vietnam. He expressed difficulty with maintaining continuity of care and obtaining departmental support without funding. He was able to secure funding from the Rotary Club and anonymous individual contributions and was open to having trainees from other institutions to join the global surgery experience.

Dr. Tefera concluded the session by expressing his appreciation for continued support to the development of academic global surgery. He emphasized the importance of collaboration and networking among academic institutions to develop a durable and sustainable impact.

**Conclusion**

In 2011, the American Board of Surgery (ABS) and Residency Review Committee (RRC) approved international surgery rotations to be a formal elective for general surgery residency programs. Since then, interest in global surgery has been increasing in both trainees and academic programs [3, 4]. However, due to its relatively new recognition in general surgery training, resident experience in global surgery is still facing a lot of hurdles. In a previous survey-based cross sectional study, general surgery program directors voiced the need for standardization of international surgical experience for trainees and shared educational resources [5]. Many academic general surgery residency programs face challenges in developing their global surgery opportunities into a mature program. Attendees of the session welcomed the prospect of forming a consortium of academic global surgery.

This meeting introduced and gauged the general interest in global surgery among leaders in academic programs. Consortium of academic global surgery will continue to develop into a structural organization and further discussion will follow at the Association for Academic Surgery meeting in February, 2018.

**References**