



20 23

ANNUAL REPORT



HARVARD
MEDICAL SCHOOL

BLAVATNIK INSTITUTE
GLOBAL HEALTH &
SOCIAL MEDICINE

PROGRAM IN GLOBAL SURGERY
AND SOCIAL CHANGE

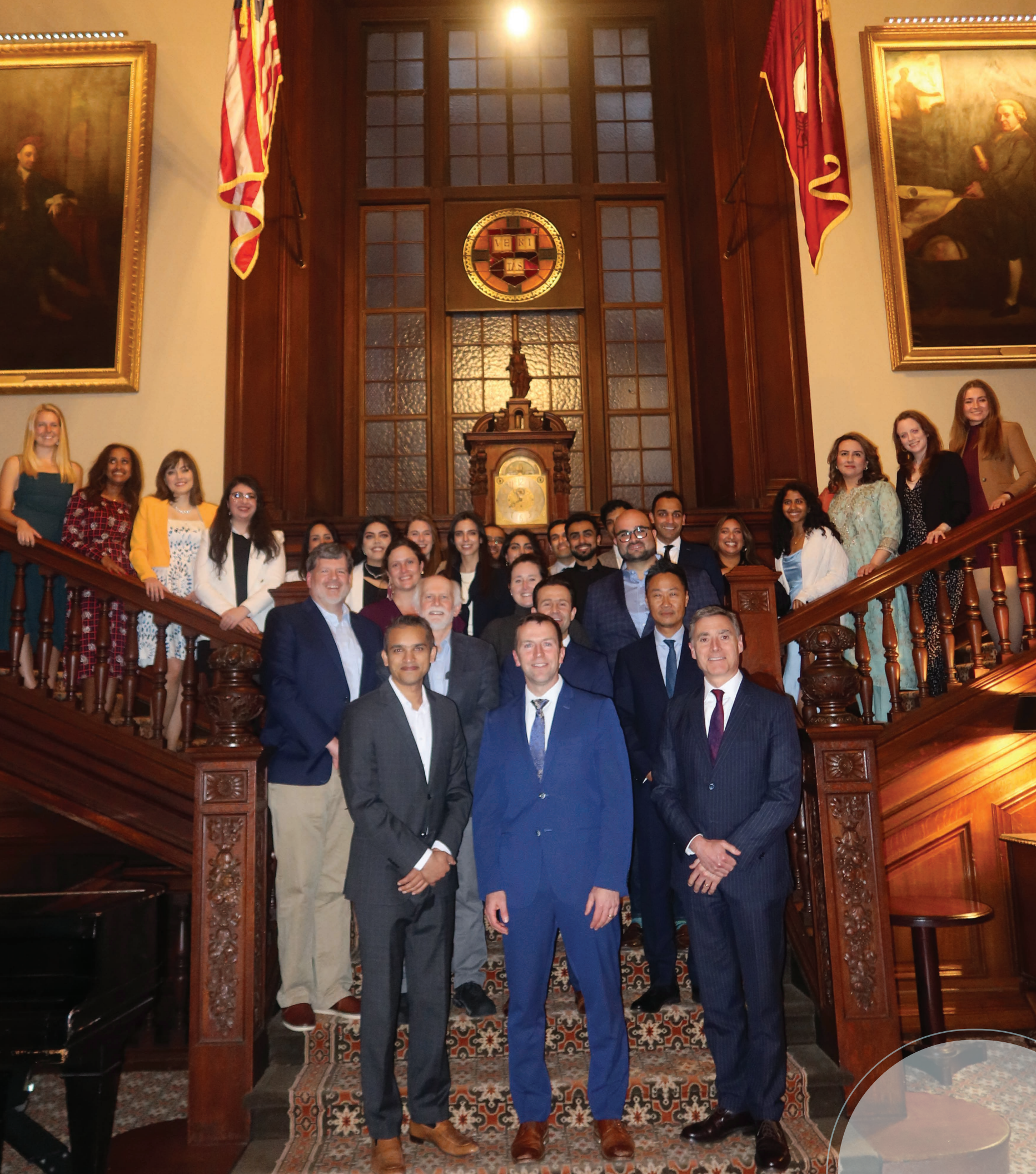


TABLE OF CONTENTS

04 Message From The New Director

06 Message From The Chief Strategist

08 Strategic Plan

10 Get To Know The Team

16 Important Events

20 Team Projects & Faculty Labs Project Update

36 Cross-Cutting Content Topic Units

44 Impact

04 MESSAGE FROM THE NEW DIRECTOR

This past year has undoubtedly been a year of many transitions. Perhaps this statement is true every year, even cliché.

Yet for the PGSSC, we deeply felt the transitions this year, and I think reflecting on these now helps ground us in our history and then to chart our course forward.

In the accompanying pages John reflects on the origins of the PGSSC and our close ties to Paul Farmer's vision and moral leadership. In this year after his death, we mourned Paul's death, contemplated his legacy, and galvanized our commitment to work towards health equity. Paul served as the chair of the Department of Global Health and Social Medicine (DGHS), to which the PGSSC belongs. We are grateful to Allan Brandt for compassionately and effectively leading the DGHS this year in an interim role, guiding us through a new strategic planning process, an external review, and a celebration of Paul's life. We now look forward with anticipation to the next

“

We acknowledge that we all live in a world riven by injustice, and yet we push forward towards the hope of equity, kindness, and frankly - love. Let's go there together.

transition to new departmental leadership under Vikram Patel this Fall.

In January of this year, we transitioned the role of director of PGSSC from John to me. John will remain a core faculty member and takes on the role of Chief Strategist for our Program. I am grateful to John for his many years of leading the PGSSC as its founding director. During his tenure, he made a home for Global Surgery at Harvard. He established a fellowship program that has been the bedrock of our activities - remarkable for the opportunities afforded to the fellows, the agency they are granted, and the global impact of their work. Many other achievements, "TNTC" (too numerous to count) as Paul would say, have followed. These include the Lancet Commission on Global Surgery; leadership in global advocacy for surgical access; multiple productive partnerships in education, research, and policy around the world; developing a diverse, world-class faculty; exploring and engaging in anti-racism in our midst.

As we look to the coming academic year, I am keen on fostering Integration throughout the PGSSC experience. Integration of faculty and fellow activities across our core pillars of Education, Training, Research, and Policy/Advocacy to further strengthen the quality of our work. Integration with our alumni of the last 15 years, to increase our connectivity and longitudinal mentoring in the domain of global surgery. Integrating with the broader DGHS community - that our work may benefit from the insights of Social Medicine and colleagues in adjacent fields. We will strengthen linkages across the Boston and beyond. We will work to be reliable and equitable co-laborers with a host of global partners, including (but not limited to!) the alphabet soup of UGHE, PIH, COSECSA, PAACS, WFNS, GSF, UNITAR, WHO, SADC, UCT. Finally, we will integrate into all of our work the pro-active ethical lenses of anti-racism and planetary health.

I hope you will enjoy reading through this Annual Report. It highlights some of the great work currently underway, which forms the foundation for the work ahead. We acknowledge that we all live in a world riven by injustice, and yet we push forward toward the hope of equity, kindness, and frankly - love. Let's go there together.



06 MESSAGE FROM THE CHIEF STRATEGIST

Although we trained together at the Brigham & Women's Hospital in the 1990s, it was not until 2007 that I traveled with Paul to Haiti for the first time.

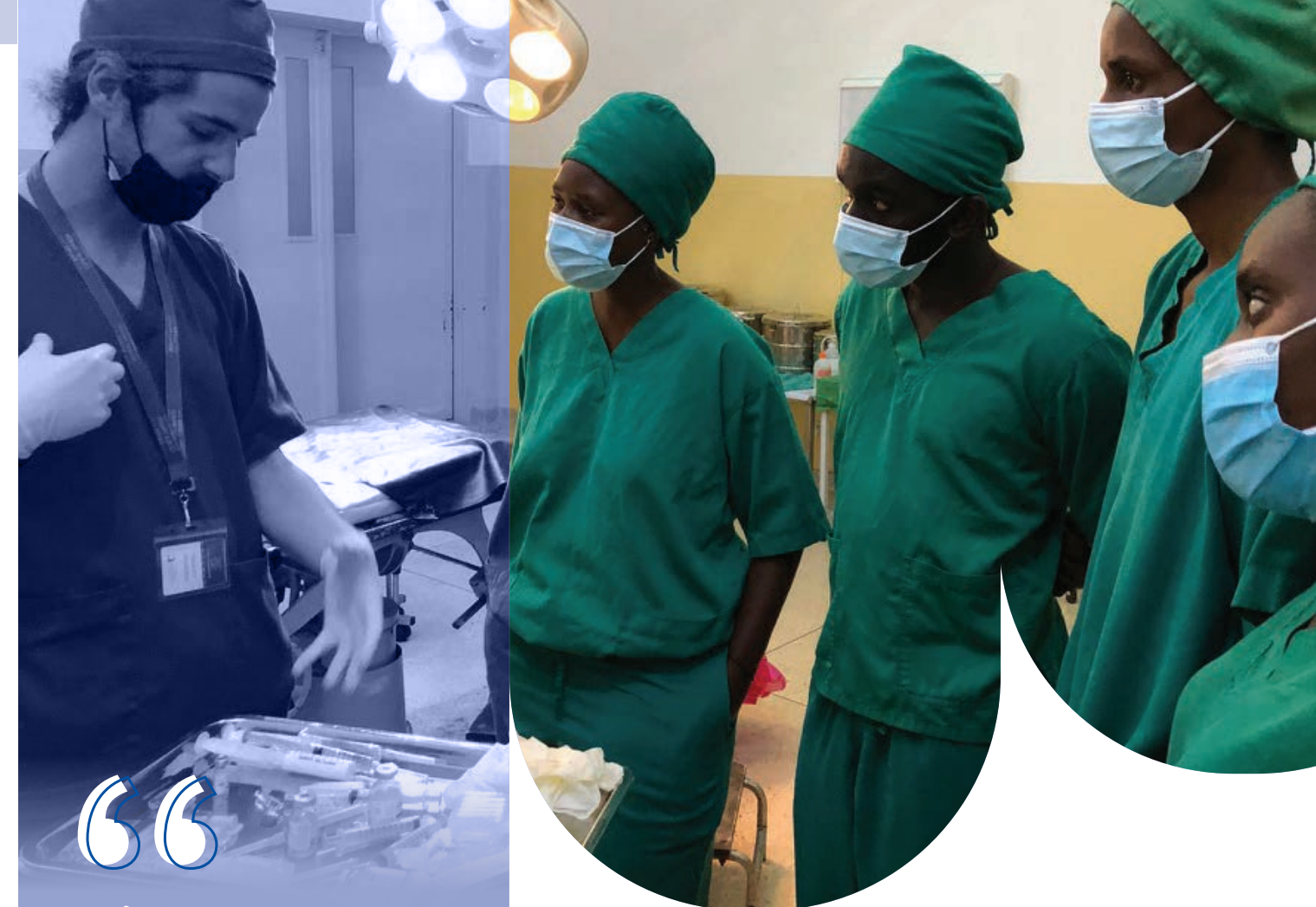
He took me to Cange where I visited his home, just a few yards away from the hospital compound. His home was both modest and magical at the same time, surrounded by a magnificent garden with plants from around the world. Paul gave a guided tour with a narration of the various plant origins and the backstory of how he smuggled many of them into the country. On Sunday we went to Mass and as we were leaving the church, one of the Haitian medical students brought me an X-ray of a young boy with an obviously displaced femur fracture. I looked at the film and told the young student: "This is a serious fracture; you will need your orthopedic surgeon". He smiled at me and responded: "Oh Dr. John, you are the orthopedic surgeon". And so began my work with PIH and Zanmi Lasante.

On the plane ride back to Miami, Paul and I discussed the young boy and the horrible inequities in access to surgical and anesthesia care. Our patient with the femur fracture was just one of thousands in Haiti and billions around the world for whom there was no reliable access to quality, timely, safe, affordable surgical and anesthesia care. For this patient, on this weekend, serendipity was with him, and we happened to be visiting just at the right time. I remember thinking to myself: Surely serendipity can not be the only hope for billions who need surgical care. Paul and I made a decision on that plane, somewhere over the ocean between Port au Prince and Miami, that we would start an academic training and research program at Harvard Medical School focused on the needs of the surgical patient; more specifically addressing the social, political and commercial constructs that seemingly conspired in unison to keep surgical care and surgical access from the world's poor and marginalized. The PGSSC vision began that day, on that plane ride!

Eight years later – in 2015 – the PGSSC found itself fully engaged in the Lancet Commission on Global Surgery; our fellows and students became the unofficial secretariat for the Commission. Without them, the Commission would never have been possible. That same year, Carmella Kletjian donated the first global surgery chair at Harvard Medical School; and very likely the first endowed global surgery chair at any university in the world! It was a momentous year to be certain; as the WHA resolution 68/15 was passed in May of that year, formally recognizing surgery and anesthesia as critical components of UHC, and our Program for the first time had sustainable funding.

Another eight years have passed and PGSSC has been a partner and catalyst for change in the global surgery community that has positively impacted research, education, advocacy, and policy. Hundreds of fellows and research students have trained with us and made us better; in fact, our "special sauce" has been this seemingly unending stream of talented, passionate, young, soon-to-be global surgery leaders who have joined us for one or more years with a commitment to accompaniment, health equity, and social change.

It is important, however, to recognize that in the last three years, we have gone through events that will define our generation. COVID changed our lives and social structure for three years, forcing our team to change the very nature of our strength – close contact collaboration, travel, working directly with partners, social and political interaction – all the components of what we knew to be essential to accompaniment. We adapted and survived but no one relished that time. Now that the COVID barriers seem to be receding, a renewed sense of commitment and excitement is present. If that were not enough, in the midst of COVID, the George Floyd murder opened up a centuries-long wound in America – what has been called America's "original sin" – racism. As a program founded on the principles of equity and justice, we did not back away; in fact,



With a renewed commitment, we crafted a forward-looking PGSSC strategy founded on both anti-racism and anti-colonialism; this would be our "North Star" for the future.

we leaned into the complexities of racism and its cousin, colonialism. We had hard conversations as a team and worked together to re-examine and re-envision our strategic plan as a program. With a renewed commitment, we crafted a forward-looking PGSSC strategy founded on both anti-racism and anti-colonialism; this would be our "North Star" for the future.

In January 2023, I was proud to introduce the new Director of the PGSSC – Robert Riviello. He is already bringing a fresh approach and new ideas to the Program. Although he is our new director, Robert has been with us since our inception. This gives him a unique ability to keep us grounded in our history, while still leading and inspiring us toward a future where global surgery is an equal partner in health system strengthening, planetary health, and global health security.

There is no doubt in my mind that this is exactly what Paul would have wanted us to do. And so, I look forward to working with all of you in the coming years, living and working together in accompaniment and pragmatic solidarity with the poor and marginalized.

08 STRATEGIC PLAN

Over a decade ago, the establishment of the PGSSC created a unique opportunity to bring together faculty and fellows across Harvard Medical School and affiliated hospitals from the clinical fields of surgery, anesthesia, obstetrics & gynecology with a health equity commitment. Housed within the Department of Global Health and Social Medicine, the PGSSC has benefited from multi-disciplinary and trans-sectoral collaborations. Researchers in the PGSSC pursue initiatives that integrate the social sciences, clinical specialties, and expertise in health care delivery. Through this approach, the program is able to advance an empirical base relevant to care delivery for bio-socially complex diseases and settings across the full spectrum of surgical care, while also expanding the traditional scope of the surgical care provider.



VISION Universal access to safe, affordable, and timely surgical, obstetric, and anesthesia care

MISSION Strengthening surgical systems as part of universal health coverage through research, policy development, advocacy, capacity building, and training of leaders in global surgery

VALUES

- Social Justice and Equity
- Zero Tolerance of Discrimination
- Accompaniment and Solidarity
- Evidence-based Innovation
- Implementation and Solution

STRATEGIC PILLARS



STRATEGIC PRIORITIES



HEALTH EQUITY
through universal access to safe, timely, and affordable SOA care



LEADERSHIP
in the field of global surgery



SOCIAL CHANGE
through equitable partnerships

10 GET TO KNOW THE TEAM

DIRECTOR



Robert Riviello, MD, MPH

Associate Professor of Surgery, Global Health, Surgery Programs, Center of Surgery and

and Social Medicine, Harvard Medical School. Director of Global Public Health, Brigham and Women's Hospital

CHIEF STRATEGIST



John G. Meara, MD, DMD, MBA

Chief, Department of Plastic and Oral Surgery, Boston Children's Hospital

FELLOWSHIP DIRECTOR



Nakul Raykar, MD, MPH

Assistant Professor of Surgery, Division of Trauma, Burn, and Surgical Critical Care Brigham and Women's Hospital

ADMINISTRATIVE COORDINATOR



Kiara Lindeborg

ASSISTANT FELLOWSHIP DIRECTOR



Geoffrey Anderson, MD, MPH

Assistant Professor of Surgery, Division of Trauma, Burn and Surgical Critical Care Brigham and Women's Hospital.



Kavitha Ranganathan, MD

Assistant Professor of Surgery, Division of Plastic Surgery Brigham & Women's Hospital, Director of Craniofacial Reconstruction.



Salim Afshar, MD, DMD, FACS

Attending Surgeon, Department of Plastic and Oral Surgery Boston Children's Hospital.

EDUCATION



Craig D. McClain, MD, MPH

Co-director - Pediatric Neuroanesthesia, Department of Anesthesiology, Critical Care & Pain Medicine Director - Global Pediatric Anesthesiology Fellowship, Boston Children's Hospital Associate Professor of Anesthesia, Harvard Medical School



Scott Corlew, MD, MPH, FACS

Lecturer, Department of Global Health and Social Medicine, Harvard Medical School.

FACULTY



Sabrina Juran, PhD

Sr. Technical Specialist Population Census & Geospatial Data, United Nations Population Fund (UNFPA); Lecturer, Department of Global Health and Social Medicine, Harvard Medical School; Associated Researchers Epidemiology & Global Health, Technical University Munich, Germany.



Blake Alkire, MD, MPH

Otolaryngologist, Massachusetts Eye and Ear Infirmary Instructor in Otolaryngology, Harvard Medical School.

STRATEGY: HEALTH EQUITY / SOCIAL JUSTICE



William Bean, MPH, MBA, PhD

Instructor and Practicum Advisor for Field Practice & Leadership, Harvard T.H. Chan School of Public Health.



Michelle Joseph, MBBS, MSc, PhD

Instructor, Department of Global Health and Social Medicine, Harvard Medical School.

RESEARCH



Bethany Hedt-Gauthier, PhD

Associate Professor of Global Health and Social Medicine, Harvard Medical School Associate Professor in the Department of Biostatistics, Harvard T.H. Chan School of Public Health.



Adeline A. Boatin, MD, MPH

Assistant Professor of Obstetrics, Gynecology and Reproductive Biology, Massachusetts General Hospital, Harvard Medical School.

POLICY & ADVOCACY



Kee B. Park, MD, MPH

Lecturer, Department of Global Health and Social Medicine, Harvard Medical School.



Pablo Tarsicio Uribe Leitz, MD, MP

Instructor in Surgery, Department of Global Health and Social Medicine, Harvard Medical School Investigator | Data Manager, Center for Surgery and Public Health, Brigham and Women's Hospital.



Mark G. Shrime, MD, MPH, PhD

Professor and Chair of the Institute of Global Surgery, Royal College of Surgeons in Ireland; Lecturer, Global Health and Social Medicine at Harvard Medical School.



Lauri Romanzi, MD, MScPH, FACOG, FPMR

Obstetrics, Gynecology and Urogynecology Previously Director of the Fistula Care Plus project at EngenderHealth, Washington D.C. Lecturer, Department of Global Health and Social Medicine, Harvard Medical School.



Benjamin C. Warf, MD

Director, Neonatal and Congenital Anomaly Neurosurgery; Associate Professor of Neurosurgery, Harvard Medical School.

RESEARCH FELLOWS



Rashi JhunJhunwala, MD, MA

Rashi was born and raised in Portland, Oregon and is currently a general surgery resident at Beth Israel Deaconess Medical Center in Boston.

She received her MD from Emory University and then went on to earn a Masters of Arts in Bioethics & Society from King's College London, where she studied ethical justifications for prioritizing surgery on the path to universal health coverage. Her interests include the ethics, development, and implementation of NSOAPs.



Callum Forbes, MBChB

Callum is a British Anesthesia trainee. Born and raised a proud Scouser, he completed his medical degree from the University of Edinburgh, Scotland in

2013. After completing a junior clinical fellowship in Critical Care Medicine, he commenced his anesthesia training in Edinburgh in 2016 before moving to New Zealand in 2019. His research interests include the role of safe anesthesia in surgery provision and the interplay between Global Surgery and climate change.



Sarah Hill, MD

Sarah is a general surgery resident from The University of Toledo in Toledo, OH. During her time at PGSSC, she has primarily directed her efforts

in Drs. Uribe-Leitz and Juran's lab to investigate the burden of surgical disease among the population served by Partners in Health in Chiapas, Mexico; drive the development of the Ecuadorian NSOAP; and emphasize the importance of advocacy, policy-writing, and diplomacy. Sarah also collaborated with the Global Surgery Foundation and United Nations Institute for Training and Research, ultimately completing a fellowship with these organizations in Geneva, Switzerland.



Diana del Valle, MD

Diana was born and raised in Mexico City and is currently in the process of getting ECFMG certified to continue with her training. She received her MD degree

from La Salle University Mexican Faculty of Medicine and is pursuing an MPH in Clinical Effectiveness at the Harvard TH Chan School of Public Health. She plans to specialize in plastic and reconstructive surgery and is particularly interested in timely access to surgical care in health literacy, and surgical education.



Meghan Lim, MBChB

Meghan is a pediatric surgery resident based in Singapore. She received her medical degree from the University of Edinburgh and subsequently obtained

her MSc in Surgical Science from the Royal College of Surgeons Edinburgh and her DPhil in Biomedical Engineering from Oxford University. Her research interests include policy and advocacy for surgical systems strengthening, the development of low-cost surgical equipment for low and middle-income countries as well medical education in low-resource settings.



Jennifer Hon, MBChB, BDS, MA, MPH

Jen is an oral & maxillofacial registrar from London, UK. She obtained an MA from Cambridge University, completed her medical degree at Edinburgh University,

and after several years working as a junior doctor earned a dental degree at King's College London. She has a particular interest in surgical systems strengthening in Southern Africa. Alongside the PGSSC, she has undertaken an MPH in Global Health at Harvard School of Public Health on a Frank Knox Fellowship.



Radzi Hamzah, MBBS, MPH

Radzi is an aspiring academic global neurosurgeon. He received his medical degree from Manipal University, India, and completed his MPH from Harvard

University. His interests include migrant/refugee health, surgical system strengthening, and the application of machine learning in medicine.



Shreenik Kundu, MD

Shreenik completed his MBBS degree from the West China School of Medicine, Sichuan University, China, and went on to earn his Masters in Experimental & Global

Surgery from McGill University, Canada. He has experience in global collaborative research with projects in China, India, and Canada. His current interests include trauma and disaster management research, innovative patient education in surgery & maternal health, and MedTech research & development.



Carolina Torres, MD

Carolina was born and raised in Lima, Peru where she completed her medical school training. She is a general surgery resident at Beth Israel Deaconess Medical Center in

Boston, MA, and a second-year fellow at the Program in Global Surgery and Social Change. Her interests include surgical education, global cultural dexterity, mentorship, and promoting inclusion and equity in healthcare and research. She also enjoys interior design, cooking, and going on walks with her dog Lucy.



Selam Degu, MD

Selam is an anesthesia trainee from Ethiopia and a recent business graduate from the University of Notre Dame. Some of her research includes a scoping review

looking at the workforce crisis in anesthesia in LMICs. She also serves as a visiting faculty at the University of Global Health Equity (UGHE) in Rwanda where she is involved with the development of a context-specific anesthesia curriculum for undergraduate medical students.



Faith Odwaro, MD

Faith is a Ukrainian trained general surgeon, professionally working in Kenya. She has a long-standing interest in community health, which spans from her 15 years of

experience working at The Mazira Foundation as the founder and managing trustee. Her interests include women's health and advocacy, with a focus on equity in accessing timely surgical interventions in low resource settings.



Ali Rae, MD

Ali Rae is a fifth-year resident in neurological surgery at Oregon Health & Science University in Portland, OR. He earned his medical degree from Brown University and

his Masters in Public Health from Columbia University with a focus on health policy and big data. He was born in Pakistan and raised in Atlanta, Georgia. His pertinent interests include global neurosurgery, econometrics, and policy & advocacy for global surgical infrastructure development.



Mehreen Zaigham, MBBS, PhD

Mehreen is a Swedish Obstetrics and Gynecology specialist of Pakistan origin. She works at Skåne University Hospital in Malmö, Sweden, and completed her PhD

from Lund University studying the role of umbilical cord blood sampling in predicting neurodevelopmental handicaps in infants later on in life. Her research interests include maternal-fetal medicine, COVID-19 in pregnancy, health equity, maternal health advocacy, and strengthening of Ob/Gyn healthcare systems in low-resource settings.



Anabelle Jones, MD

Anabelle was born and raised in Homer, New York, on a working horse and cattle farm, and is currently a general surgery resident at Brigham and Women's Hospital.

She received her B.A. from Middlebury College, where she completed a degree in Molecular Biology and Biochemistry, as well as a minor in Global Health. Her MD was obtained from Stony Brook University School of Medicine, during which she performed research focused on global health disparities.



Madeleine Carroll, MD

Madeleine Carroll grew up in Washington, DC, and Narberth, PA, and received her undergraduate degree from Wesleyan University. She went on to receive her

MD from the Lewis Katz School of Medicine at Temple University and is now a surgical resident at Yale New Haven Hospital. Her interests include trauma systems development, violence and injury prevention, and pediatric surgery capacity building.

**Saksham Gupta, MD**

Saksham was born in Karlsruhe, Germany, and raised in New Delhi, India, and Acton, Massachusetts. He is a neurosurgery resident at the Brigham and Women's Hospital. He earned his MD from Harvard Medical School and is currently enrolled in the MPH program at the Harvard School of Public Health. He is passionate about resident/trainee education in neurosurgery worldwide and quality monitoring in growing surgical systems.

**Kate Obayagbona, MD, MPH, MWACS**

Kate is a specialist Obstetrician and Gynaecologist with the West African College of Surgeons, prior to this she obtained a Masters in Public Health from Leeds University UK and spent several years working within various capacities and several projects for different development Organizations. She is very passionate about Health systems strengthening, Research development and management, capacity building, disease prevention, and control, and improving the quality of women's and child Health.

**Emad Madha, MD**

Emad was born and raised in New Jersey and is currently a General Surgery Resident at Walter Reed National Military Medical Center. He received his BS from the University of Pittsburgh and his MD from the Uniformed Services University. During his time as a Research Fellow, Emad has focused his research on understanding civilian-military trauma systems integration around the world and has been involved in work on National Surgical, Obstetrics, and Anesthesia Plan (NSOAP) development in the Republic of Ecuador. He has also been active in the Anti-Racism Curriculum (ARC) and Climate in Obstetrics, Anesthesia & Surgery Team (COAST).

**Hannah Gilder, MD**

Hannah grew up in the United States and completed undergraduate studies in neuroscience and Spanish at Tulane University in New Orleans. She then moved to Rochester, Minnesota to attend Mayo Medical School and remained at Mayo Clinic for a neurosurgery residency. She is now a fifth-year resident with special interests in pediatric and global neurosurgery.

RESEARCH COLLABORATORS**Sarah Nuss**

Sarah Nuss is from Boston, Massachusetts, and is an MD candidate at the Warren Alpert Medical School at Brown University in Providence, RI. She has spent her year with PGSSC in Rwanda working with Partners in Health Rwanda / Inshuti Mu Buzima on a pediatric surgical capacity assessment project. Sarah developed an interest in health equity through public health research in Peru and Costa Rica. She went on to work for Partners in Health in Chiapas, Mexico, where she became interested in global surgery systems strengthening. She serves as a Research Team co-lead for the Global Otolaryngology-Head and Neck Surgery Initiative. Sarah's interests include gender disparities, surgical system capacity building, and research equity.

**Rohini Dutta, MBBS**

Dr. Rohini Dutta earned her MBBS from Christian Medical College and Hospital, Ludhiana, India. She is committed to a lifetime of empowering women through the provision of high-quality healthcare and strengthening its provision through socially conscious frugal solutions and policies. As a Global Women's Health Fellow at the Brigham and Women's Hospital where she is developing an educational mHealth tool for high-risk pregnant women undergoing cesarean delivery in Uganda to enhance their birth preparedness.

**Mayte Alberti, MD**

Mayte Bryce-Alberti, MD is a Peruvian Medical Doctor who completed her medical training at Universidad Peruana Cayetano Heredia. Mayte is a Research Collaborator at the Program in Global Surgery and Social Change, who has dedicated her time to projects focused on Rwanda and the Pan-American region. Her work involves strengthening health systems, surgical education, and improving access to minimally invasive surgery. She is an active member of the Anti-Racism Curriculum team, organizing discussions, webinars, and capacity-building sessions for program members.

**Vanitha Raguveer**

Vanitha is an MD candidate at the University of Illinois at Chicago. As a first-generation Indian immigrant with a background in biomedical engineering, she is passionate about using innovative technologies to address global health disparities. She currently serves as a national vice president of research for the Global Surgery Student Alliance and is interested in surgical innovation, advocacy, and ethics.

**Leticia Campos**

Letícia Campos, a Brazilian medical student from Universidade de Pernambuco, is a Research Collaborator at PGSSC, where her academic and policy skills have flourished. Recognized for her potential, she has earned scholarships from Fundação Maria Emília and Fundação Estudar, organizations dedicated to nurturing Brazil's brightest young leaders and researchers. Additionally, Letícia served as the Chair of InciSioN Brazil in 2021 and 2022. She further showcased as the Latin America Regional Representative on the Association of Women Surgeons' Medical Student Committee

**Hamaiyal Sana**

Hamaiyal Sana is Paul Farmer global surgery fellow at Harvard Medical School. She is the first-ever chair of the WHO Youth Council. She got her degree in medicine from Bolan Medical College, Quetta in 2022, and got her Bachelor's in Economics and Sociology from the University of Balochistan in 2018. She is also the elected Liaison Officer to the World Health Organisation (WHO) representing 1.3 million medical students from over 130 countries for the International Federation of Medical Students Association (IFMSA).

**Vedant Shukla, MBBS**

Vedant is a recent medical graduate from Mumbai, India. He studied in a rural medical college and trained as a medical intern in the largest tertiary care hospital in urban Maharashtra aided by the Government serving a diverse population. He is an aspiring surgeon and Global Health advocate with a keen interest in Diversity and Inclusion, Health Policy, and Health Equity, in the International Federation of Medical Students' Association (IFMSA) and InciSioN Global- International Student Surgical Network.

**Shehnaz Alidina SD, MPH**

Shehnaz is the senior global health systems researcher in the Program for Global Surgery and Social Change. She received her MPH and her SD in health policy & management from the Harvard Chan School of Public Health.



16 IMPORTANT EVENTS

AMERICAN COLLEGE OF SURGEONS' REUNION

We held our first-ever PGSSC Family Reunion at the American College of Surgeons Clinical Congress in San Diego! Trainees past and present gathered to reminisce about previous projects, trips, and escapades, forge collaborations and partnerships for the future, and to revel in the community of PGSSCers from the last decade onwards! As Dr. John Meara always says, "Once a PGSSCer, always a PGSSCer!"

UNITED NATIONS GENERAL ASSEMBLY SIDE EVENT: PLANETARY HEALTH

During the United Nations 77th General Assembly in New York, the PGSSC and our strategic partners organized an inspiring side event at the Harvard Club of New York City. Convening a diverse portfolio of stakeholders, we openly discussed the challenges confronted by the global surgery and planetary health communities. The event highlighted the importance of expanding surgical services while simultaneously mitigating their significant carbon footprint. As the world faced multiple crises, and economic and social inequities continue to grow, the event reiterated the need for "staff, stuff, space, and systems" which have been proven to be critical for meeting these

challenges. The Prime Minister of Fiji, the Honorable Bainimarama, delivering his impactful key-note speech pointed out the grave danger climate change had imposed on his country: "We have relocated six communities to escape the rising seas and have over 40 more in the queue to be moved. Fourteen cyclones have struck us since 2016, the worst of which, wiped out one-third of the value of our GDP in just 36 hours". All speakers underlined the vital importance of continued investment in the sustainable scale-up of surgical, obstetric, and anesthesia care with adequate training of local operating staff as a central strategic step.

UNITED NATIONS GENERAL ASSEMBLY ROUND TABLES: CREATING END-TO-END INVESTABLE SOLUTIONS FOR WOMEN'S HEALTH: FOCUSING ON NCDS INCLUDING WOMEN'S CANCER AND ACCESS TO SURGICAL CARE

PGSSC co-hosted a series of half-day round tables in conjunction with the Centre for Global Health and Development at the Harvard Club of New York to discuss financing frugal solutions towards cervical and breast cancer in low-and-middle-income countries. The sessions gathered government representatives, foundations, development finance institutions, development agencies, and private capital investors. The discussion focused on designing a financing structure that allows a project to be self-sustainable after the end of philanthropic and grant funding. Governments shared their commitments, willingness, and requirements to support sustainable solutions. Lastly, partners shared their expertise in implementing financially sustainable projects in various geographies.



COSECSA CONFERENCE

The PGSSC team was well-represented at this year's College of Surgeons of East, Central, and Southern Africa Scientific Conference in Windhoek, Namibia. Work conducted by the Riviello Lab, the Corlew Lab, and the Raykar Lab was presented to a wide audience. This work was broad and included topics such as undergraduate surgical curriculum development, barriers and facilitators to the development and implementation of national surgical plans, and VR trauma and hemorrhage control training for prehospital care providers. The conference also gave a valuable opportunity for networking with colleagues from across sub-Saharan Africa; for many, this meant meeting in person for the first time after many years of virtual collaboration!

CONSORTIUM OF UNIVERSITIES FOR GLOBAL HEALTH (CUGH) ACADEMIC EQUITY CONFERENCE

While the main CUGH conference was held in person in Washington DC, many virtual satellite events were held the week preceding the conference. Convened by Dr. Bethany Hedt-Gauthier, one of these events was entitled "Transforming Universities for Equity and Impact in Global Health". In this session, speakers from across the Global Health space in all stages of academia and various spaces within Global Health came together to discuss our collective responsibility to address power imbalances in global health research. The session aimed to build consensus on university-level reforms needed to improve collaborations and impact and to develop strategies to advocate for institutional-level or disciplinary-level changes.

CUGH GLOBAL SURGERY SATELLITE DAY: MOVING FROM POLICY TO IMPLEMENTATION

This full-day session consisted of informational panels that stimulated lively discussion with participants and concluded with an interactive session that fosters learning and sustainable relationships. Participants discussed the state of global surgery with a multidisciplinary panel of clinical, public health, and policy perspectives, followed by a panel centering on the district-level hospital with specific emphasis on common implementation obstacles, generalizable solutions, and reduction of trauma burden by bringing together funders with pitches from countries such as Namibia, DRC, Rwanda, and Ecuador. The afternoon focused on the application of entrepreneurship in global surgery and the importance of intentional business models and public-private partnerships. The day ended with an interactive format, allowing expert facilitators to lead small groups in training around entrepreneurial thinking, investment models, relationship building, and the role of data. By bringing together a multidisciplinary group of participants and experts, we created an environment conducive to sustainable innovation and continued conversation beyond this satellite session.



WORLD HEALTH ASSEMBLY WEEK (WHA76)

PGSSC turned out in force for this year's World Health Assembly, with 16 fellows and research collaborators and 6 faculty members attending the week's events in Geneva, as they keenly followed the passage of the Emergency, Critical and Operative (ECO) Care resolution, WHA76.2. This important resolution builds on the previous work of the Global Surgery community in communicating that strengthening emergency and essential surgical care and anesthesia is a key component of universal health coverage (WHA 68.15). The team also took advantage of the growing number of side events, many of which were on the topic of Global Surgery or relevant through cross-cutting themes such as technology, UHC, cancer and financing. These have provided opportunities to expand both our knowledge and our network of friends in the Global Surgery community.

THE GLOBAL SURGERY FOUNDATION WHA76 SIDE EVENT

Last year's Global Surgery Foundation side event which was focused on the need for sustainable financing, set the standard for high-quality well-attended WHA side events for Global Surgery. PGSSC has been proud to continue supporting The Global Surgery Foundation as it staged another hugely successful event this year which announced the establishment of a multilateral fund, SURGfund, and continued the discussion on what is required to implement surgical system strengthening. Its diverse panel represented the different sectors of academia, government, financial aid and private industry.

RESEARCH SEMINAR SERIES

The research seminar series for the reporting year commenced in September 2022 with the aim of exploring methods and outcomes of global surgery research from a diverse group of Global Surgery researchers. Under the guidance of faculty members Drs. Bethany Hedt-Gauthier and Adeline Boatin, a complimentary journal club, was paired with each seminar. This gave me the opportunity to Research Collaborators and Fellows to critically appraise the sections of the journal article and prepare ahead of each seminar. Topics covered within the reporting year were multi-site randomized control trials in global surgery, access to blood for global surgery,

gender disparity in global Surgery, task shifting for health care workers, cost-effectiveness and cost benefits, global Surgery systems readiness assessment, digital technology, and health equity through action on social determinants of health.

VICE PRESIDENT OF ECUADOR, DR ALFREDO BORRERO'S VISIT TO HMS

In April 2023, the Vice-president of Ecuador, Dr. Alfredo Borrero Vega, and his team visited Boston and the PGSSC as part of the ongoing collaboration between PGSSC, the Vice-presidency, and the Ministry of Public Health of Ecuador. Ecuador is the first nation in Latin America to commit to developing a National Surgical, Obstetric, and Anesthesia Plan (NSOAP). Dr. Borrero, who practiced as a neurosurgeon for over four decades, understands the importance of providing safe, timely, and affordable surgical services to the people of Ecuador. Currently, the nation faces not only long-standing health system challenges but also a backlog of urgent and elective surgical cases stemming from resource allocation for the COVID-19 pandemic.

Since 2022, the team has conducted a comprehensive analysis of the surgical services provided by the Ministry of Public Health of Ecuador. These results were presented to the Vice-president during his visit and the first stakeholder meeting in Quito in December 2022, which allowed for the first round of identification of priorities that will be included in the NSOAP. During his visit, Dr. Borrero met with members of the PGSSC to follow up on the NSOAP at the Department of Global Health and Social Medicine. The Vice-president's visit also extended to Brigham and Women's Hospital, where he greeted the leadership of the Neurosurgery Department and delivered a talk sharing his vision to improve access to care for Ecuadorians. Additionally, Dr. Borrero was introduced to the Innovation and Digital Health Accelerator team from Boston Children's Hospital and experts from Harvard Business School.

► A news article about the Vice-president's visit can be found on the Harvard Medical School's website at <https://hms.harvard.edu/news/ecuadoran-vp-promotes-global-surgery-health-equity>.



20 TEAM PROJECTS & FACULTY LABS PROJECT UPDATE

THE RIVIELLO LAB

The Riviello Lab is centered around strengthening a bi-directional partnership between the Center for Equity in Global Surgery at the University of Global Health Equity in Rwanda and the PGSSC. Often based full-time in Butaro, Rwanda, fellows within the Riviello Lab continue to support the development and delivery of undergraduate educational curriculum for medical students as well as post-graduate medical education and training as a means of increasing access to surgical care across sub-Saharan Africa.

UGHE collaboration

Over the past 12 months, the lab has developed, through continent-wide consensus-seeking, a contextualized anesthesia, and critical care curriculum, which was then successfully delivered to the first cohort of MBBS students at UGHE. This was done in collaboration with Rwandan anesthesia providers from the University of Rwanda and the McClain lab.

The Riviello Lab also led an extensive review and improvement process of the junior surgical clerkship following the delivery of the curriculum to the inaugural MBBS 2025 class. We continue to support the delivery of this clerkship and later this calendar year, we will expand to do likewise for the senior surgical clerkship.

The Lab's involvement in post-graduate training has included collaboration on the delivery of The College of Surgeons of East, Central, and Southern Africa 8-part virtual lecture series on neglected sub-specialties, development and delivery of multi-disciplinary operating room simulation training courses for Butaro District Hospital staff, and planning toward delivery of a Global Surgery track within the existing UGHE Master of Global Health Delivery degree program to launch in January 2024.

Smart Specialization Strategy (S3) for Surgical Specialty Training Pilot

The Riviello Lab is supporting an iterative policy project that is piloting the application of the EU's Smart Specialization Strategy (S3) to surgical specialty training in Rwanda. This project directly follows the PGSSC's work supporting the National Surgical, Obstetric, and Anesthesia Plan (NSOAP) efforts in Rwanda in 2017-2018. It was born out of an effort to inform prioritization and strategic planning with evidence-based decision-making. The project has involved interviewing general and specialist surgeons across Rwanda to better understand the distribution of key specialty surgical resources in the country and uses geospatial mapping to identify areas with a high density of specialty resources, where the government might wish to further invest to create training programs in particular specialties. This methodology is in a pilot phase but there has been interest in the region more broadly with regards to generating tools to better support the implementation of ambitious surgical plans.



The Riviello Lab is centered around strengthening a bi-directional partnership between the Center for Equity in Global Surgery in Rwanda and the PGSSC.

Multi-Professional Non-technical Skills for Surgical Teams in Sub-Saharan Africa (NOTSS)

The Malawi Project. As part of their ongoing efforts to support the delivery of safe surgical care through non-technical skills team training, the Riviello Lab and the Global NOTSS team are working with Kamuzu University of Health Sciences, Queen Elizabeth Central Hospital, and Mercy James Pediatric Hospital in Blantyre, Malawi. Following a needs assessment and

working with a multi-professional team from Malawi, they will introduce a contextualized Non-Technical Skills for Surgery in the Variable Resource Context (NOTSS-VRC) course into the operative team continuing medical education.

THE MCCLAIN LAB

The Craig McClain lab focuses on advancing the quality of anesthesia care among the 5 billion people (including 1.7 billion children) who lack access to safe and affordable quality surgical, obstetric, and anesthetic care. Our work primarily focuses on Rwanda and India, but we have worked in and with other nations as well.

Scaling Spinal Anesthesia Training of Medical Officers in Rural India

The McClain lab completed a randomized controlled trial in Southern India demonstrating the non-inferiority of medical officers in the delivery of spinal anesthesia after the completion of a three-phase training program. In conjunction with local partners including ASHWINI and Gudalur Adivasi Hospital, the lab has collaborated with publishers and is now in the final phase of compiling a clinical handbook of spinal anesthesia to produce an affordable, widely accessible, and easily digestible handbook for medical officers and non-physician anesthesia providers in lower resourced settings to increase access to safe and effective spinal anesthesia. In addition to publishing the curriculum in book form, the lab is also supporting the

development and implementation of a spinal anesthesia course at Martin Luther Christian College in Shillong, Meghalaya India. The hope is that this will help scale the training of medical officers in India to improve access to safe, quality anesthesia as well as serve as a model for other similar courses throughout other nations where a limited anesthesia workforce is an impediment to having necessary surgical procedures.

- Task Shifting and Task Sharing in Anesthesia in LMICs We are conducting a scoping review of the literature on task-shifting and task-sharing in anesthesia within the context of low-and-middle-income countries published before and after the LCoGS Report in 2015 to assess published models of practice and evaluate both the regions of source and focus of that literature.
- Development of a contextualized anesthesiology curriculum for the University of Global Health Equity (UGHE) in Burera District, Butaro, Rwanda

Working in close collaboration with the Riviello lab and Rwandan anesthesiologists, the McClain Lab led a Delphi process, developing consensus among over 50 African anesthesiologists living and practicing in 12 countries across Sub-Saharan Africa regarding what constitutes appropriate anesthesiology curriculum content for rotating medical students in sub-Saharan Africa. The results of the Delphi process were utilized to develop and subsequently deliver a contextualized anesthesia and critical care clerkship to the inaugural MBBS 2025 class at UGHE. The structure of the 4-week rotation consisted of a one-week boot camp including a series of lectures and simulations delivered by Drs. Forbes and McClain in partnership with anesthesiologists from Rwanda and Haiti (through Partners In Health), followed by clinical placements for the remainder of the student’s time in Kigali. We developed and delivered contextualized Multiple Choice Question examinations as well as several qualitative assessments of the students’ performances. The McClain lab will continue to support the anesthesiology and critical care clerkship at UGHE as we collaboratively transition to create a sustainable program with strong local ownership. Following the completion of the first iteration of this clerkship, the team will undertake an extensive review process in order to drive more streamlined, effective clerkship delivery for future cohorts.



Our work primarily focuses on Rwanda and India, but we have worked in and with other nations as well.

THE AGASEKE LAB

The AGASEKE lab (Advancing Global Access to Surgery through Education, Knowledge, and Equity), led by Dr. Bethany Hedt-Gauthier and including PGSSC Fellow Faith Odwaro and Research Collaborator Sarah Nuss, conducts research to improve access to high-quality surgical care in rural district hospitals. The team works in partnership with Partners In Health/Inshuti Mu Buzima in Rwanda. Research areas include health-systems capacity building, cesarean sections, and image-based diagnostics, with some 2022/2023 highlights below:



Communicating discharge instructions for c-section patients.
The team developed and evaluated two tools to communicate discharge instructions to women after c-section delivery. The tools had high acceptability amongst women, community health workers (CHWs), and clinical providers and improved women’s confidence in postoperative recovery.



mHealth tools for home-based postoperative follow-up.
Through an NIH-funded mHealth study, the lab developed a phone-based application integrating clinical decision support and AI image algorithms to screen women for surgical site infections at home following c-section. The tool passed usability and acceptability testing and will move on to prospective validation this fall.



Pediatric Surgical Capacity Assessments
As part of her Fogarty Fellowship, PGSSC Research Collaborator Sarah Nuss led a surgical readiness assessment for pediatric surgery across the three Partners-in-Health-supported district hospitals in rural Rwanda to build upon a recently conducted baseline assessment of adult surgical capacity. As part of this study, we evaluated the hospital’s team and individual readiness to implement quality improvement and safety interventions for surgical care using the Safe Surgery Organizational Readiness Tool (SSORT).



Research training and capacity building.
In addition to within-team research strengthening and skills transfer, the AGASEKE lab participated in the 2023 Intermediate Operational Research Training (IORT) launched in March 2023. IORT is a research and mentorship program aimed at providing Rwandan researchers with a focus on research questions aligned with the Ministry of Health’s priorities.

THE CORLEW LAB

The Corlew Lab is focused on surgical system strengthening across the sixteen member states of the Southern African Development Community (SADC).

National Surgical Obstetric & Anaesthesia Plans (NSOAPs)

As a partner organization to the SADC Technical Experts' Working Group on Surgery, Obstetrics & Anaesthesia (SOA) care, the Corlew Lab has assisted member states at various stages of national policy development for SOA. This has included compiling and analyzing facility assessment data from hospitals in the Democratic Republic of Congo; refining a facility assessment tool for Zambia to use in its situation analysis for its second NSOAP, and assisting Namibia's Ministry of Health and Social Services with writing its first NSOAP. This year also saw the publication of Zimbabwe's first NSOAP, which rightly garnered considerable media attention.

However, the NSOAP concept has not been adopted by all SADC member states, and progress has been slower than anticipated despite the pandemic. As such, the Corlew Lab has conducted a study investigating the barriers and facilitators to NSOAP development and implementation, the results of which are currently being analyzed.

University of Cape Town (UCT) collaboration

Building on the relationship with UCT's Global Surgery department, the Corlew Lab was invited back to hold faculty roles for the second consecutive year of the Executive Leadership in Global Surgery course, specifically designed for leaders to become change agents in their own contexts. Additionally, the Corlew Lab has provided on-the-ground support for the Global Surgery in Action team in undertaking a qualitative research project to gain the perspectives of the healthcare workers and administrators at a successful rural hospital in the Eastern Cape province, to inform how surgical services could and should be scaled up for their local community. It is intended that this work will be followed up with a project to understand the perspectives of the community itself.

Outcomes of external fixators as a treatment for traumatic fracture in middle- and low-income countries

The Corlew Lab started the project to assess the outcomes of surgical management of low extremity fractures in low and middle countries. The review

returned over 6000 articles to screen. The findings of this study were presented at the Global Surgical Innovation Conference at the University of Michigan and at the Bethune Round Table Conference in Toronto.

Related research

The Corlew Lab is working to validate an evaluation tool to assess the pandemic preparedness of a surgical department to address essential and emergency surgical needs during an active pandemic. This is being done in conjunction with our Zambian colleagues. At Boston Children's Hospital, we are assessing artificial intelligence/machine learning as a tool in the evaluation of velopharyngeal insufficiency.

Global Surgery Foundation

The Corlew Lab serves as the focal point in the PGSSC collaboration with the GSF and UNITAR, assisting in a number of research and implementation projects.

GLOBAL REPRODUCTIVE SURGERY (BOATIN) LAB

Led by Dr. Adeline Boatin and based in Uganda and Ghana, the lab conducts research to improve the quality of perioperative care for pregnant people and women who undergo surgery in low-resource settings. Primary projects in the last year included:

CRADLING Uganda and Ghana

Optimizing cesarean delivery rates is a critical element of safe motherhood. This project uses a mix of methods – secondary analysis of DHIS2 data, survey, geospatial mapping, and qualitative and primary quantitative data collection at facilities across Uganda and Ghana to understand cesarean delivery usage, rate variation, and quality of care metrics around cesarean delivery in these two countries.

mTUSA Study: Timeliness and Use of Safe and Appropriate Cesarean Section

In much of sub-Saharan Africa, most cesareans are done as emergencies. This timing increases the risks of complications including stillbirth, uterine rupture, iatrogenic surgical injury, and possible maternal death. This project is centered on a quality improvement initiative to interrupt the emergency cesarean cycle and create a platform for scheduled timely CS targeting women with an appropriate pre-labor indication for cesarean delivery.



Wireless Vital Sign Monitoring for Improving Perioperative Care

This project aims to investigate the use of a simple wireless vital sign monitor to improve the detection of complications immediately after cesarean delivery and allow clinicians to provide life-saving interventions when needed.



The Corlew Lab is focused on surgical system strengthening across the sixteen member states of the Southern African Development Community.



THE JURAN & URIBE-LEITZ LAB

Surgical Epidemiology, Trauma Systems & Geographic Inequalities Lab

Led by Dr. Sabrina Juran and Dr. Tarsicio Uribe-Leitz, this lab aims to identify socioeconomic and geographic inequalities to promote the development of sustainable policy. The lab utilizes geographic and epidemiological information systems to visualize surgical relationships and improve access to high-quality surgical care in Latin America. The team boasts experience in both quantitative and qualitative data analysis. Some of the lab endeavors and project areas are as follows:

Surgical Systems' Preparedness and Response to Climate Change and Disasters

The lab conducts studies assessing timely access to surgical or specialty care services utilizing geospatial mapping. One such study characterizes populations with timely access to surgical care in the event of earthquakes and identifies groups at higher risk in the state of Guerrero, Mexico. Accordingly, another study assesses the impact of the 2007 severe flood in the states of Chiapas and Tabasco, Mexico, on maternal mortality and mode of obstetric delivery.

Access to and Provision of Surgical Services

One study examines access to laparoscopic surgery in Mexican public hospitals and identifies relevant geographic, clinical, and demographic factors associated with receiving a laparoscopic operation. Furthermore, the team is conducting a scoping review to explore the literature on the surgical backlog provoked by the COVID-19 pandemic in Latin America and the Caribbean.

Global Surgery Indicators

We utilize nationwide publicly available datasets to better assess Mexico's access to essential surgical services following the Lancet Commission on Global Surgery Indicators and other surgery-related projects. Moreover, in collaboration with Partners in Health (PIH), the team evaluated timely access to surgical facilities by administering a comprehensive survey to people living within PIH's catchment areas in rural Chiapas, Mexico. Factors associated with financial toxicity within the surgical system were also analyzed.

Policy and Advocacy

The lab closely collaborates with high-level partners in the Ministry of Public Health and Office of the Vice Presidency of the Republic of Ecuador to provide technical assistance in developing the country's National Surgical, Obstetric, and Anesthesia plan.

Network to Prevent Gun Violence in the Americas

Our lab collaborates with this larger multidisciplinary, multicountry initiative to bring together health professionals, human rights advocates, arms trade specialists, and violence prevention activists to focus on challenges ahead and find solutions to address firearm violence in Mexico and Central America. Learn more about this vital organization at [Network to Prevent Gun Violence in the Americas](#).



The lab utilizes geographic and epidemiological information systems to visualize surgical relationships and improve access to high-quality surgical care in Latin America.



The Shrimelab focuses specifically on understanding the factors which influence decisions around surgical access on the individual, community, health system, and policy levels.

THE SHRIME LAB

The Shrimelab focuses specifically on understanding the factors which influence decisions around surgical access on the individual, community, health system, and policy levels. By working with nonprofit surgical care organizations, we aim to critically analyze the provision of surgical care in low-resource settings, and identify the most effective strategies to improve access to care. Current and longitudinal projects include:

- A patient-centered analysis of the health, financial, and equity impacts of surgery was provided at 8 non-profit pediatric hospitals in as many countries, using the WHO Disability Assessment Schedule (WHO-DAS) and the EQ-5D of patients before and after surgery.
- An evaluation of the financial toxicity of emergency bowel obstruction surgery in Burundi, using hospital-specific surveys on surgical costing.
- A cost-effectiveness study of low- versus high-flow oxygen in the ICUs across three sub-Saharan African countries

THE JOSEPH LAB

The Integrated Military Partnerships and Civilian Trauma Systems (IMPACT) Study Team, an international collaborative working group, has continued its multi-phase project to understand how military and civilian trauma systems may integrate to improve trauma care. Dr. Joseph was awarded a grant for the project of \$100,000 through an innovator award from The Gillian Reny Stepping Strong Center for Trauma Innovation.

Dr. Joseph was awarded a grant for the project of

\$100,000

through an innovator award from The Gillian Reny Stepping Strong Center for Trauma Innovation.

The team published a case studies paper on examples of military-civilian trauma partnerships and has completed a scoping review of the literature to identify further global examples. In order to further characterize how integration between these sectors exists, the team is undertaking a pioneering mixed-methods study to characterize how military-civilian trauma integration exists worldwide and understand its feasibility barriers and facilitators to implementation.

THE STAB LAB

The STAB Lab, led by Dr. Nakul Raykar, is focused on strengthening trauma health systems worldwide, with a specific emphasis on access to transfusion. The team works closely with critical partners in India, at the World Health Organization Collaborating Centre (WHO-CC) for Surgical Care Delivery in LMICs (Mumbai, India), as well as in Kenya, Guatemala, and Chile. Major projects undertaken this year include

The Stepping Strong Project

With the support of the Gillian Reny Stepping Strong Foundation, this project aimed to characterize the need and feasibility of implementing a walking blood bank in a rural Kenyan district hospital through a mixed-methods study.

The Radcliffe Seminar

In April, the team hosted a 2-day hybrid seminar at the Harvard Radcliffe Institute about “Innovative Blood Transfusion Strategies for Blood Deserts in Low-and Middle-Income Countries”, where we brought together a multidisciplinary group of experts to define recommendations around intraoperative autotransfusion, civilian walking blood banks, and drone-based blood delivery.

SOTA COPs

The Surgical Obstetrics Trauma Anesthesia Community of Practice (SOTA COP) project is a joint collaboration between Boston Children’s Hospital, The George Institute in India, and PGSSC, with support from the Downs Foundation. The goal is to create a community of practice for rural operative providers and to build a network for learning and research.

CrashSavers

CrashSavers is a multi-country, multi-disciplinary group of trauma surgeons, radiologists, epidemiologists, engineers, and programmers who have collaborated to create a comprehensive hemorrhage control training program for emergency care providers worldwide. Our program includes a virtual-reality app-based training platform and a low-cost, easy-to-build physical simulator with built-in self-assessment so that learners can gauge their progress in real-time. Currently, the training program has been piloted in Guatemala with the volunteer firefighters who serve as the country’s primary pre-hospital care providers. This work has been supported by the Intuitive Foundation Global Surgery Training Challenge.





Our research team is comprised of Brazilian medical students and medical graduates with a strong interest in global surgery research.

THE BRAZIL LAB

The four central aims of Team Brazil are:

1 To analyze gaps in surgical education at all levels of training in Brazil

2 To develop sustainable improvements in surgical care in Brazil

3 To correlate surgical indicators with national indices on economics, policy and expenditure in Brazil

4 To examine gender disparities in surgical fields in Brazil and worldwide.

Our PGSSC faculty mentor is Dr. David Mooney, Associate Professor of Surgery at Harvard Medical School, pediatric surgeon, and Director of the Trauma Center at Boston Children's Hospital. Our Brazilian faculty mentors continue to include Dr. Fabio Botelho (pediatric surgeon) and Dr. Julia Loyola (pediatric surgeon), Dr. Nivaldo Alonso (plastic surgeon), Dr. Roseanne Ferreira, and Dr. Rodrigo Vaz (trauma surgeon). This year we have been fortunate to recruit two additional Brazilian faculty mentors – Dr. Christina Camargo (plastic surgeon) and Dr. Joaquim Bustorff (pediatric surgeon) – both of whom have become invaluable members of Team Brazil and greatly enhanced our research productivity. Our research team is comprised of Brazilian medical students and medical graduates with a strong interest in global surgery research. Listed below are some of our ongoing and recently completed projects.

► Pediatric Trauma Care in Brazil and Other LMICs

Global Trauma Resuscitation in Kids (gTRIK) Course

- Assessing the efficacy and impact of a global adaptation of an established pediatric trauma management course for physicians.
- Pilot course took place in Belo Horizonte, Brazil in October of 2022

Management of Pediatric Blunt Splenic Injury in Brazil

- Comparing overall rates of operative vs non-operative management in Brazil vs high-income countries.
- Comparing rates of operative vs non-operative management in Brazil when patients are managed by pediatric surgeons vs non-pediatric surgeons.

Scoping Review of Pediatric Trauma Research/Management Globally

- Comparing the number of publications from countries of different income classifications and different regions.

A 10-year Descriptive Analysis of Non-Accidental Trauma for Children Under Five in Brazil

► Pediatric Surgical Care in Brazil

Congenital Disease Mortality in Brazil

- Investigating regional disparities regarding outcomes for patients with gastrointestinal congenital malformations and the associations between surgical workforce, socioeconomic inequity, and mortality.

Surgical Workforce and Under Five Mortality Rate: A Focused Look at Piaui, Brazil

- Evaluating how pediatric surgical workforce and socioeconomic indicators impact infant mortality in Piaui.
- Utilizing geospatial mapping to gauge the accessibility of pediatric surgical care.

► Gender Disparities Impacting Surgeons in Brazil and Globally

Gender Disparities in Female Authorship: A Worldwide Megadata Analysis

- Assessing women's representation in surgical authorship worldwide from 2018 to 2021

Family Planning and Fertility Among Brazilian Surgeons: A National Survey

- Aim is to compare experiences and attitudes toward family planning and fertility among surgeons of different gender identities and different surgical subspecialties.

► Medical/Surgical Education

Medical Education During COVID-19: An International Medical Student Survey

- Evaluating how medical schools worldwide adapted their curricula during the height and aftermath of the COVID-19 pandemic

Impact of COVID-19 on Surgical Residency Training in Brazil

- Survey-based study evaluating trainees' perceptions of the impact of COVID-19 on their residency programs.

► Other Ongoing Projects

- Analyzing Traffic Accident Mortality in Brazil by Region
- The Use of Illicit Cosmetic Injectables in Brazil: A Scoping Review
- Evaluating Out of Pocket Expenditure for Surgical Care in Brazil



SURGEONS AGAINST POVERTY LAB

The Surgeons Against Poverty lab mentored by Dr. Ranganathan focuses on assessing the impact of healthcare inequities on vulnerable populations. Our work is primarily based on studies ongoing in the United States and India, with broad topics including financial toxicity after surgical care, gender inequality, and food insecurity.

India out-of-pocket expenditure study

This study is a prospective longitudinal survey assessment of financial toxicity after surgical trauma care in India at three different major hospitals. Survey data is collected at 1-, 3-, and 6 months post-discharge. The aim of the study is to identify and describe the risk factors for postoperative catastrophic health expenditure in this context. This research will help guide targeted interventions to reduce CHE in trauma patients

Catastrophic Health Expenditure in the United States

Over 23 million people in the US struggle with medical debt. Granular data on this population is lacking. We are conducting an analysis of the Medical Expenditure Panel Survey to better quantify the epidemiological burden of postoperative CHE in the United States and identify risk factors for CHE in surgical patients.

Qualitative analyses of financial toxicity

Quantitative metrics of financial toxicity are beginning to gain traction. However, subjective metrics of financial toxicity must be developed, validated, and employed to place the quantitative analyses in context. The aim of this work is to report and validate patient-reported outcomes of financial toxicity to guide further research.

Gender Equity in Healthcare

Gender inequality is a pervasive phenomenon that is present in healthcare, both for patients and practitioners. We are conducting various studies in this space

Parental leave and the Surgeon-Parent

Parental leave policies in the US are seldom advertised for residency programs. Equitable cultural expectations of child-rearing require parental leave policies that include paternity as well as maternity leave. We aim to describe the current state of these policies. We are also working on a survey study of children of women surgeons regarding beliefs and attitudes toward their parent’s work.

Gender biases in paging behaviors

Gender inequality can present as subtle differential treatments based on gender. We are conducting a study on paging behavior differences between male and female surgeons to assess implicit gender biases within the culture of hospital communications.

Financial toxicity after gender-affirming care

Gender-affirming surgery has significant health benefits for patients. We are conducting a study on the risk of financial toxicity after gender-affirming surgery using a standardized assessment tool.

Food insecurity

Postoperative CHE affects the ability of patients to afford basic necessities, including food and clothing. We are conducting studies both in the Medical Expenditure Panel Survey and the India longitudinal database to assess the impact of postoperative care on food security. This information can guide targeted safety-net programs to mitigate the consequences of unaffordable healthcare costs.



Our work is primarily based on studies ongoing in the United States and India, with broad topics including financial toxicity after surgical care, gender inequality, and food insecurity.



THE TIGER LAB

The TIGER Lab, led by Dr. Geoffrey Anderson, is dedicated to enhancing surgical education and improving trauma care in low-resource settings, by analyzing the factors that condition trauma in patients, determining clinical outcomes, and building the capacity of future generations of providers in surgical techniques. Its current projects include:

The University of Global Health Equity (UGHE) Simulation Center.

Collaborate with the Riviello Lab and UGHE to design and implement an intensive, sustainable, and contextually relevant simulation-based surgical curriculum, to establish the center as a regional hub for surgical education and training in East Africa.

Collaboration with the GlobalSurgBox Surgical Simulator.

Partner with an internationally utilized, low-cost, portable, and sustainable surgical simulator kit (GlobalSurgBox) to create and distribute video-based surgical tutorials on online media platforms, and integrate them into surgical curriculums for low-resource settings.

Mapping Social Determinants, Investigating Causes, and Assessing the Capacity of Trauma Care.

Series of projects involving the analysis of large

databases, geospatial mapping, and scoping reviews to deepen our understanding of how trauma care is experienced differently by the most vulnerable in our society and the societal drivers of this inequity. We evaluate the social determinants of trauma and look at the costs associated with excess trauma. We have a specific interest in firearm violence in the USA.

Surgery in Conflict Zones.

TIGER lab is starting to get involved in a series of projects associated with international armed conflicts. We are looking at the capacity of non-governmental organizations and countries that try to provide surgical care during the war. We also are examining the challenges involved in teaching trauma care in an active war zone (specifically Ukraine)

Capacity Building of Trauma Care.

Collaborate with the University of Rwanda to design and implement an intensive simulation-based trauma course, where general surgeons are trained and equipped to teach the same course to their own residents, ensuring that the impact of the project extends beyond the initial training.

THE GLOBAL NEUROSURGERY LAB

Which started as the Global Neurosurgery Initiative at the PGSSC in 2016 had developed into a full lab. Directed by Dr. Kee Park, the lab has been a leader in integrating global public health practice into the neurosurgical profession and publishing landmark papers with unexpectedly high impact. For example, “Estimating the Global Incidence of Traumatic Brain Injury,” published in the Journal of Neurosurgery in 2019, has already been cited over 1500 times and ranked #1 in impact for 2019 and #13 of all articles published by the journal.

While high-quality, impactful research output is a core function of the lab, the lab also engages in advocacy and policy dialogue by holding regular webinars and events as well as supporting neurosurgeons involved in their national surgical planning processes. Furthermore, in response to the overwhelming amount of interest from students, trainees, and surgeons, we have created an interest group to facilitate research collaboration and mentoring. Below are some of the ongoing projects under Kee Park’s lab:

Supporting the editorial team of the Journal of Global Neurosurgery

The world’s first academic journal dedicated to the field of Global Neurosurgery. The journal aims to reverse the disparities in research output from LMICs by helping to build the research capacity of LMIC-based neurosurgeons

WHO Academy, emergency neurosurgery module

The WHO is updating and expanding a decade-old version of their emergency operative care manual for district hospital surgeons. Our lab has developed the written guide, online interactive teaching module, and hands-on skill stations covering neurotrauma knowledge and skill basics for use by surgeons in settings where specialty neurosurgical care is unavailable and/or inaccessible

Comprehensive Brain Tumor Recommendation for LMIC

In partnership with Aga Khan University, the lab is working on a series of literature reviews of various aspects of brain tumor care in LMICs to help inform health systems-level policy recommendations for the management of these patients

Out-of-Pocket Expenses

Affordable care is a tenant of access, but little has been written about the cost of emergency neurosurgical care in LMICs. We conducted a survey of patients and providers in various LMICs to assess risk factors for financial toxicity after receiving emergency craniotomy or shunt placement.

Neurosurgery Workforce Survey

There has been a strong push over the last decade to promote and expand global neurosurgery activities, but it is unknown whether this has corresponded to an increase in the neurosurgeon workforce. In this study, we investigate temporal and regional trends in the global neurosurgery workforce and trainee population and explore the resources that different neurosurgeons have access to.

Systematic Review: Innovation and Technology in Global Surgery and its Application in Global Neurosurgery

The field of global surgery has experienced a significant surge in the adoption of technology to enhance healthcare access for patients in low- and middle-income countries. In this comprehensive study, we conduct a meticulous systematic review of articles published online, which focus on the application and impact of innovation and technology within the realm of global surgery and application in Neurosurgery.

Health System Development: Neurosurgery in Afghanistan and Sierra Leone

Constructing a robust neurological system necessitates adopting a holistic approach that encompasses not only the operating theater but also the underlying support systems. As part of our ongoing work with the Global Neurosurgical Committee, we actively participate in coordinating efforts aimed at building and enhancing neurosurgical systems in low-income countries, specifically focusing on Afghanistan and Sierra Leone.



36 CROSS-CUTTING CONTENT TOPIC UNITS

STAR

The Surgery and Trauma Advocacy Research (STAR) cluster is a cross-cutting working group launched in 2021 within PGSSC that aims to facilitate research and collaboration related to surgical systems with internal and external partners, with a specific focus on trauma systems and evaluation of The Lancet Commission on Global Surgery. The team is led by Drs. Nakul Raykar, Kavitha Ranganathan, Geoffrey Anderson, Tarcisio Uribe-Leitz, and senior fellow Carolina Torres Perez-Iglesias. PGSSC members and external collaborators meet bimonthly with the goal of discussing, reviewing, proposing, and implementing new research ideas. Previous work focused on comparing outcomes in patients with trauma between India and USA using a unified T2 dataset, developed by the STAB (Raykar) Lab, Dr. Tarsicio

**The Surgery and Trauma
Advocacy Research (STAR)
cluster is a cross-cutting
working group launched in**

2021

Uribe-Leitz, the BWH Center for Surgery and Public Health, and the Mumbai's WHO Collaborating Centre for Research in Surgical Care Delivery in LMICs. The T2 dataset will advance the understanding of trauma system benchmarking between contexts and provide participants with opportunities to improve quantitative research skills. Multiple projects from STAR have already been presented at national and international conferences.

► Current Research Projects

- On Mortality Risk-Adjustment in a Cross-National Study of Injured Patients in the United States and India
- Traumatic Cardiac and Thoracic Vascular Injuries in India Compared to the United States: a Database Study
- Outcomes of Patients with Penetrating Injuries in an Urban Indian Trauma Cohort
- Blood transfusions in trauma patients: a comparative study between USA and India
- Comparison of Injury and Mortality Characteristics in India and US with ACS Level Stratification
- Characterizing FAST exam usage in Indian & US trauma settings
- Trends in the Reporting of Surgical Indicators after the Publication of the Lancet Commission on Global Surgery
- Macroeconomic impact of NSOAP implementation

COAST

Climate change and surgical care are caught in a vicious cycle. Climate change is leading to a much greater burden of surgical disease, often more so in marginalized communities with pre-existing shortfalls in access to surgical care. Concurrently the significant footprint of surgical care and systems continues to contribute to anthropogenic climate change.

The Climate in Obstetrics, Anesthesia, and Surgery Team (COAST) is a collaborative group of clinicians and researchers from PGSSC and the Center for Surgery and Public Health (CSPH) working at this interface. Led by Dr. Craig McClain, over the past year, the team has continued to advocate for the climate-conscious scale-up of surgical services globally, building partnerships with researchers and global health professionals across the world. Under the COAST umbrella, fellows and research collaborators have also had numerous works published in both peer-reviewed journals and global health and policy websites such as Think Global Health and Health Affairs.

We are currently collaborating with the Department of Public Health at the Pacific Community, Auckland University, Brown University, and Georgetown University to map the impacts of climate change on surgical care delivery using novel climate change modeling techniques and geospatial mapping of population and healthcare data. This work will be used to advocate for evidence-based surgical system adaptation investment and we will look to scale up this approach to other similarly climate-vulnerable regions such as the Caribbean Island Nations and sub-Saharan Africa in the coming years.

In April, the team organized a panel at CUGH 2023 on climate justice and surgical system strengthening. The event brought together experts from the fields of healthcare and global health, journalism, and

“

**In April, the
team organized
a panel at CUGH
2023 on climate
justice and
surgical system
strengthening.**

academia to discuss the concept of climate justice as it pertains to surgical care and the unique role of surgical system strengthening in addressing the issue of climate justice.

The team is currently collaborating with clinicians and researchers from across 6 different countries, both high-income and low- and middle-income, to accurately track the environmental impacts and carbon emissions from common surgical procedures such as Cesarean section. Clearly defining emissions 'hot spots' and best practices will allow us to more appropriately and effectively advocate for the sustainable scale of surgical care across contexts.

Over the coming year, we will continue to expand our network of collaborators in conducting much-needed primary research in this field while also advocating for climate change considerations in all aspects of the work that PGSSC and the global community at large undertake.



The term began with a successful webinar, “Global Perspectives on Anti-Racism: What Can We Learn from Each Other?”, in collaboration with the Campaign Against Racism

ARC ANNUAL REPORT: FOSTERING INCLUSIVITY IN GLOBAL SURGERY RESEARCH

Under Dr. Michelle Joseph's leadership, the PGSSC Anti-Racism Curriculum (ARC) was developed and delivered by research fellows and collaborators, including Rashi Jhunjunwala, Carolina Torres, Radzi Hamzah, Annabelle Jones, Emad Madha, Faith Odwaro, Mayte Bryce Alberti, and Vedant Shukla. ARC's vision is to cultivate an equitable and inclusive environment for global surgery research, with the mission of educating and empowering learners in the field.

During the 2022-2023 academic year, PGSSC faculty, fellows, and research collaborators completed the latest ARC iteration. Incorporating feedback from previous sessions, the curriculum was streamlined into four terms (17 sessions):

1

Foundations

2

The Why

3

Resources for Action

4

Next Steps

This format guided participants from building an informed knowledge base to addressing gaps and challenging complacency.

The term began with a successful webinar, “Global Perspectives on Anti-Racism: What Can We Learn from Each Other?”, in collaboration with the Campaign Against Racism. ARC participants deepened their understanding and practice of anti-racism through a comprehensive curriculum. The program welcomed new guest speakers, such

as Dr. Cricket Fisher and Dr. Daniele Olveczky on upstander training, Dr. Gezzar Ortega on cultural dexterity, and Dr. Júlia Loyola Ferreira on Gender Equity in Global Surgery. Recurring speakers, like Dr. Alex Keuroghlian, continued to address vital topics, including LGBTQIA+ health.

This year, ARC was privileged to have two former research fellows as speakers: Dr. Isioma Okolo, discussing positionality, and Dr. Mike Biard, exploring whiteness and white privilege. Their insights enriched the ARC experience, fostering open dialogues among participants.

In conclusion, the ARC has made significant progress in delivering a robust anti-racism curriculum for faculty, fellows, and research collaborators. By encouraging open dialogue, providing actionable resources, and presenting diverse perspectives, the curriculum empowers participants to challenge the status quo and advance anti-racist practices in their journey as global surgery practitioners and leaders.

PGSSC POLICY AND ADVOCACY CLUSTER

Policy and Advocacy (P/A) play important roles in advancing surgical care delivery in low- and middle-income countries where access to safe and affordable surgery is limited. Efforts to advance global surgery should prioritize collaboration, sustainable development, and the engagement of stakeholders across sectors. With that vision, the PGSSC launched its policy and advocacy cluster in June of 2022 under the aegis of Dr. Kee Park, Director of Policy and Advocacy at PGSSC. The focal point of the year 2022-23 was Research Collaborator Rohini Dutta. This serves to streamline all policy and advocacy-related activities through monthly meetings that occur either on the last Monday of the month or as a part of the Thursday morning report every two months. Each lab has a P/A focal point that brings updates about their lab activities. This forum furthers inter-lab collaboration and serves as a guide to those interested in gaining a better understanding of P/A in global surgery. Learn more about the events coordinated under the P/A cluster umbrella in the “Events” section!



The PGSSC launched its policy and advocacy cluster in June of 2022 under the aegis of Dr. Kee Park, Director of Policy and Advocacy at PGSSC.



NOTABLE ACHIEVEMENTS:

Ecuador NSOAP

Members: Dr. Tarsicio Uribe Leitz, Dr. Kee Park, Dr. Sarah Hill, Dr. Carolina Torres, Perez-Iglesias, Leticia Campos, and Dr. Emad Madha

The PGSSC Ecuador Team was created in 2021 after a meeting between our Director of Policy and Advocacy, Dr. Kee B. Park, and the Vice-president of Ecuador, Dr. Alfredo Borrero Vega, at the World Health Summit in Berlin, Germany. The ongoing collaboration, which includes the Ministry of Public Health of Ecuador, is committed to developing a National Surgical, Obstetric, and Anesthesia Plan (NSOAP) with a long-term plan to achieve safe, timely, and affordable surgical services for the people of Ecuador.

A situational analysis, led by the Team Ecuador faculty lead, Dr. Tarsicio Uribe Leitz, conducted in 2022 assessed the capacity and identified improvement areas of the surgical services operated by the Ministry of Public Health. The results were presented during the first stakeholder meeting in Quito in December

2022, where national priorities were identified by a diverse group of stakeholders, including surgical providers, hospital leaders, civil society committee representatives, and government officials. The analysis will subsequently incorporate the other health subsystems in Ecuador, such as the Ecuadorian Social Security Institute (IESS), the Social Security Institute of the Armed Forces (ISSFA), the Social Security Institute of the National Police (ISSPOL), and the private sector. The NSOAP is planned to be published and implemented in 2024.

A situational analysis, led by the Team Ecuador faculty lead, Dr. Tarsicio Uribe Leitz, conducted in

2022

assessed the capacity and identified improvement areas of the surgical services operated by the Ministry of Public Health

Dr. Hamaiyal Sana, Vice Chair of the WHO Youth Council

Hamaiyal Sana was appointed as the first-ever Vice Chair of Dr. Tedros the Director General of WHO's Youth Council. In her role, she will directly work with the WHO secretariat and senior leadership to shape the agenda of WHO towards youth partnership and excellence. Through the Youth Council, WHO will develop an inclusive Youth Engagement Strategy across all levels of the organization.

Namibia NSOAP Workshop

A follow-up NSOAP writing workshop was organized by the Namibian Ministry of Health and Social Service (MHSS) on 12-14 December 2022 to finalize the NSOAP document. Technical support was sought from Professor Emmanuel M. Makasa from the Republic of Zambia and Director at the WitSSurg Centre, who has extensive experience in NSOAP policy formulation and implementation activities and in collaboration with representatives from the Harvard Medical School's Programme in Global Surgery for Social Change (PGSSC) and University of Witwatersrand's WitSSurg Centre to facilitate the NSOAP writing meeting. The diverse cohort of participants and interactive workshop structure allowed for the inclusive, representative, and iterative formulation of the core NSOAP pillars, chapters, and potential outputs. Each working group addressed a core Namibia NSOAP domain. Working group members selected groups based on self-identified areas of expertise and knowledge. The fact that the meeting was MHSS-led and the diversity of stakeholder engagement provided insight and a sense of local ownership of the NSOAP development process. Currently, The Republic of Namibia has successfully developed a comprehensive NSOAP which has now been shared with the World Health Organization for costing. As part of the Next steps, the NSOAP will be presented to MHSS Management and the Policy Management and Development Review Committee (PMDRC) for approval. The MHSS will also mobilize resources for final editing, formatting, and printing. Hopefully, The Namibian NSOAP will be launched and disseminated both locally and Internationally in a few months from now.

“The diverse cohort of participants and interactive workshop structure allowed for the inclusive, representative, and iterative formulation of the core NSOAP pillars, chapters, and potential outputs.”



GLOBAL SURGERY FOUNDATION ELECTIVE FELLOWS:



Dr. Shreenik Kundu

“During my time at the Global Surgery Foundation, I had an incredible experience as a fellow. The fellowship was a highly educational and enriching opportunity on multiple levels. Through my interactions with the team members and partners from around the world, I was able to develop my skills and gain valuable insights into the nuances of diplomacy and the art of planning high-level events with important stakeholders. As the first in-person fellow in Geneva after the pandemic, I found the GSF team to be highly knowledgeable and supportive of inquiry. I was able to broaden my perspectives on global health and global surgery with a snapshot of the UN workflow and have first-hand experience in global surgery advocacy. Moreover, in addition to developing as a scholar, I also became a stronger advocate for global surgery.”



Dr. Sarah Hill

“During my fellowship within the PGSSC, I have had the immense opportunity to collaborate with the Global Surgery Foundation (GSF) and United Nations Institute for Training and Research (UNITAR). Prior to joining the team for an in-person fellowship in Geneva, Switzerland, I was able to join the organization virtually for approximately one-and-a-half years. This experience enabled me to gain a greater appreciation for the diverse initiatives that the GSF is involved in and witness the development of the GSF into a growing, independent entity. During my elective, I was able to customize my experience to my career goals and the skillsets I wished to improve upon. In my case, this included academic publications, networking, high-level event planning, and creative brainstorming. The policy and advocacy aspects of global surgery emphasized by the GSF complement PGSSC’s more technical and academic foci very well, culminating in a well-rounded experience and fostering diverse skillsets.”



Dr. Jen Hon

“I was privileged to spend 10 weeks with the GSF team in Geneva, where I have been supporting efforts for organizing its WHA76 side event and establishing processes around the newly established SURGfund, a multilateral fund to support surgical system strengthening in LMICs. Beyond enjoying the novelty of being in a very international environment, this has been a fantastic opportunity to strengthen skills in communication and diplomacy. I also want to thank the GSF team for making me feel a valued member of the team and entrusting me with tasks that supported their largest annual event. It was extremely gratifying to be part of the team and share in the success of that night.”

WHO-CC Activities

The PGSSC has been designated as the WHO Collaborating Centre on research and development of surgical care systems policy since 2019. Through this relationship, the PGSSC supports WHO in improving the country’s governance capacity to formulate, implement and review comprehensive national health policies, strategies, and plans, and assists WHO in the dissemination of information and best practices in the field of surgical care delivery. Also, at the request of WHO, the PGSSC provides technical assistance to Member States in enhancing surgical care delivery and supports WHO’s work at the national, regional, and global levels in the field of surgical care delivery. The Collaborating Center status of PGSSC is currently under renewal and the team is working in collaboration with the WHO to ensure that our agreement most appropriately reflects, and helps us address, current issues relating to the provision of safe, affordable, timely surgical care globally.



The PGSSC has been designated as the WHO Collaborating Centre on research and development of surgical care systems policy since 2019.



44 IMPACT

FUNDING/ GRANTS

Dr. Geoffrey Anderson, PGSSC Faculty was awarded a MassGeneral Brigham United Against Racism award of \$200,000 for a project entitled “Non-English Speaking Trauma Survivor Pathway. Improving the post-discharge outcomes for trauma survivors with limited English proficiency.”

Dr. Rohini Dutta, PGSSC Research Collaborator, received the Global Women’s Health Fellowship Award from the Mary Horrigan Connors Centre for Women’s Health and Gender Biology at the Brigham and Women’s Hospital. The funds awarded will be used for the study “ Education of pregnant women with a prenatal indication for Cesarean section through periodic short message service (SMS) and interactive voice response (IVR) system in Uganda.” Dr. Dutta will be mentored by PGSSC faculty Dr. Adeline Boatin for this project.

Dr. Anam Noor Ehsan, PGSSC Research Collaborator, received the USD \$50,000 National Endowment for Plastic Surgery grant from The Plastic Surgery Foundation for her project on “Financial Hardship due to Surgery: A Mixed Methods, Multicenter Study in India.” Dr. Ehsan will be mentored by PGSSC faculty Dr. Mark Shrime for this project.

Dr. Rashi Jhunjunwala, PGSSC Chief Fellow under the mentorship of PGSSC Faculty Michelle Joseph, received a \$30,000 Sandra and Richard Cummings Research Fellowship Award from the BIDMC Department of Surgery for her work on developing an anti-racism curriculum for surgical residents.

Dr. Jen Hon, PGSSC Research Fellow, was awarded a British Association of Oral & Maxillofacial Surgeons’ Travel Grant to support with maintenance costs during her time with the PGSSC in Boston.

Dr. Ahmed Negida, PGSSC Research Fellow, was awarded the European Association of Neurosurgical Societies Travel Grant for the EANS 2022 in Belgrade, Serbia. He was also awarded

the World Society of Stereotactic and Functional Neurosurgery Travel Grant for the WSSFN 2022 in Seoul, South Korea.

Dr. Kavitha Ranganathan received the National Endowment for Plastic Surgery Grant for her multi-center study examining the impact of out-of-pocket costs on surgical patients in India.

Dr. Mehreen Zaigham was awarded the Fulbright Scholars Grant 2022-2023 from Fulbright Sweden. The award supports her projects as part of the Global Reproductive Surgery (Boatin) Lab, PGSSC. Dr. Adeline Boatin is her primary mentor.

Drs. Bethany Hedt-Gauthier, Adeline Boatin, and Robert Riviello, PGSSC Faculty Members, were part of a team that won first prize in the NIH Technology Accelerator Challenge. The \$500,000 cash prize recognizes their work in developing tools to support home-based monitoring after Cesarean deliveries in global contexts.

Member Dr. Bethany Hedt-Gauthier, PGSSC Faculty Member, was part of a team that received the Statistical Partnerships Among Academia, Industry, and Government (SPAIG) Award recognizing the ongoing partnership between Harvard Medical School and Partners In Health, particularly related to the COVID-19 response.

Dr. Michelle Joseph, PGSSC Faculty, was awarded a 2022 Innovator Award from the Gillian Reny Stepping Strong Center for Trauma Innovation. She is the primary investigator on the Integrated Military Partnerships and Civilian Trauma Systems (IMPACT) Study, which the award supports. The IMPACT Study, conducted by a multinational team, seeks to identify areas of military-civilian integration in trauma care and understand the feasibility of integration and barriers and facilitators to that end.

Dr. Mehreen Zaigham, received the International Postdoc Grant in Medicine and Health from the Swedish Research Council 2022-2024. This grant will support Mehreen’s research activities in the

PGSSC and a project titled “Functionality and Acceptability of Wireless Vital Sign Monitoring in Women after Caesarean Birth in Pakistan” which she will conduct under the mentorship of Dr. Adeline Boatin, PGSSC faculty.

Dr. Diana D. Del Valle, PGSSC Research Fellow, received the Americas Hepato-Pancreato-Biliary Association (AHPBA) 2023 Underrepresented Minority Travel Grant. This travel grant allowed her to attend the Annual AHPBA Conference in Miami, FLO this past March, and present her work entitled: “Liver Transplantation Trends in Mexico: Unmet Needs in the Face Of A Public Health Crisis.” This research has been conducted in collaboration with Dr. Dageforde, from the Transplant Surgery Department at Massachusetts General Hospital, as well as PGSSC faculty Dr. Uribe-Leitz, and several collaborators located in Mexico City.

Dr. Sarah Hill, PGSSC Research Fellow, received the Brigid Scanlan Travelling Mentorship Award from Women in Thoracic Surgery to engage in a clinical elective alongside Dr. Sara Pereira, Program Director for the Cardiothoracic Fellowship program, Surgical Director for the Structural Heart Program, and a Professor of Surgery at the University of Utah.

Dr. Annabelle Jones, PGSSC Research Fellow, received a travel grant from the Center of Expertise in Global & Community Health at the Brigham & Women’s Hospital. The funds awarded will be used for the study “Mapping Surgeon-reported Ancillary Service Referral Patterns Nationally To Inform Resource Allocation Prioritisation In Rwanda”. Dr. Jones is mentored by PGSSC faculty Dr. Robert Riviello for this project.

Dr. Michelle Joseph, PGSSC Faculty, was awarded a 2023 Harold Amos Faculty Diversity Award established to recognize and celebrate faculty (clinical, pre-clinical, research, administrative) of Harvard Medical School and Harvard School of Dental Medicine who have made exceptional efforts in the areas of equity, diversity, and inclusion at Harvard Medical School and Harvard School of Dental Medicine.

FELLOWS/RAS TRAINED

3

Visiting Scholars

5

Clinical Fellows

72

Research Fellows

87

Research Collaborators

PUBLICATIONS

87

Pubmed-Indexed Publications
From 2022-2023



And so, I look forward to working with all of you in the coming years, living and working together in accompaniment and pragmatic solidarity with the poor and marginalized.

John G. Meara, MD, DMD, MBA
Chief, Department of Plastic and Oral
Surgery, Boston Children's Hospital