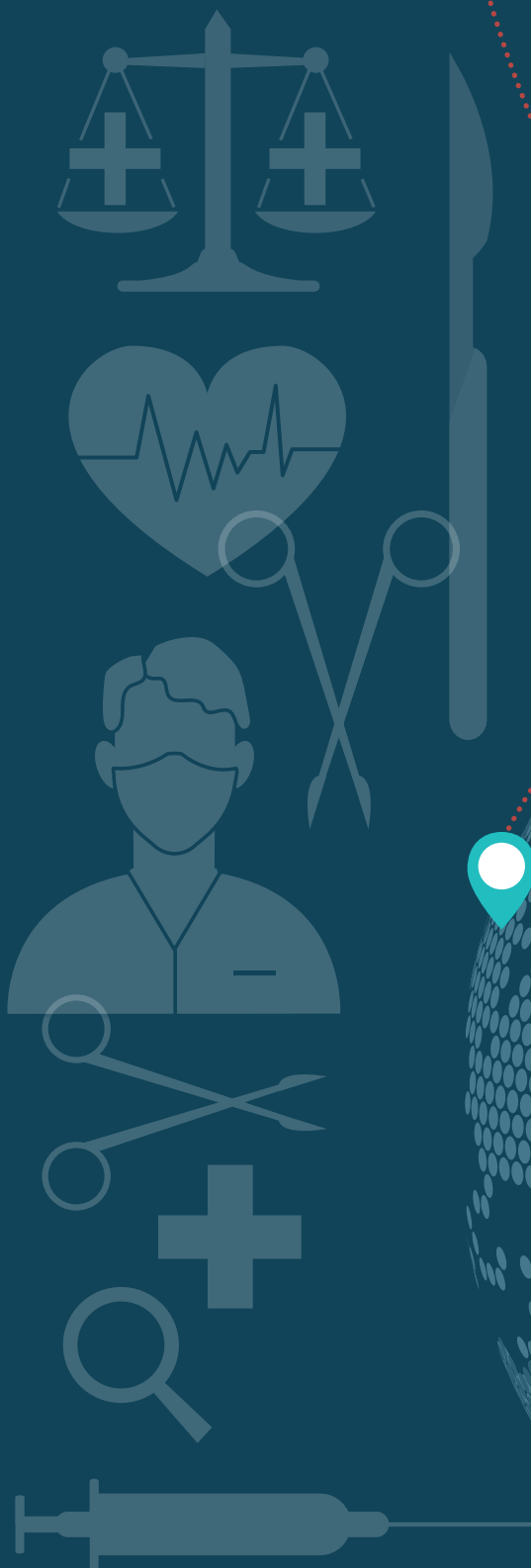


# Annual Report **2021**



**PROGRAM IN GLOBAL SURGERY  
AND SOCIAL CHANGE**

Harvard Medical School

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PROGRAM IN GLOBAL SURGERY  
AND SOCIAL CHANGE  
| Harvard Medical School

# Dear Colleagues & Friends

## Message from the Director

### Dear Colleagues and Friends

It would be remiss to reflect on our year at the Program in Global Surgery and Social Change (PGSSC) without acknowledging the pain, suffering and chaos we as global citizens endured, and continue to endure, as a result of the COVID-19 pandemic. As we tried to find some semblance of normalcy amidst this new reality, our community also joined the rest of the country in confronting the deep-rooted structural racism that continues to poison our society. The PGSSC was born out of the dire need to advocate for, promote and enhance the efforts towards ensuring safe, timely, and affordable surgical access universally. The events of the past year and a half, however distressing, were instrumental in allowing us to reflect on how we strive to meet our goals of strengthening surgical systems as part of universal health coverage through research, policy development, advocacy, capacity building, and training of leaders in global surgery.

The virtual era of COVID-19 redefined how we conduct our work and collaborate with our partners from a distance. By maintaining values of equity, accompaniment and solidarity, we continued to advance programs, agendas and research where voices and priorities of in-country partners are not only supported, but elevated. All too often, socio-economic and geopolitical factors prevent participants from low-and-middle income countries from gaining a seat at the table at high profile global health conferences. We took advantage of the virtual platform to host a multitude of key conferences, reaching and engaging with thousands of stakeholders from around the world, across different time zones. We remain steadfast in our work in confronting and challenging the unjust barriers that limit access to information from the very communities we wish to advocate for. One prime example of this effort was our launch, in collaboration with the Global Surgery

Foundation and the United Nations Institute for Training and Research (UNITAR), of a seven-part special educational webinar series on The National Surgical Obstetric Anesthesia Planning (NSOAP) process, where leaders in global surgery shared frameworks and pathways for governments to systematically integrate surgical systems strengthening as part of their overall national health strategies. Last fall's virtual 75th United Nations General Assembly was yet another opportunity for the PGSSC to collaborate with The International Student Surgical Network (InciSioN), and The World Medical Association, in highlighting the incredible youth leaders in global surgery from across the globe, providing them the platform to discuss their work and share their innovative ideas about advancing surgical care in their respective countries.

It is with great excitement that we embark on yet another year at the PGSSC. Our newest cohort of Paul Farmer Global Surgery Research Fellows and Research Associates represent immense diversity in thought, culture, perspective and background. We are honored to host such enthusiastic agents for change in the fields of surgery, anesthesia, and obstetrics and gynecology. With social justice and equity as our foundation, we vow to continue to push the needle forward in making safe, timely and affordable surgery, obstetric and anesthesia care for all a top priority.

*Kind Regards,*



*John G. Meara MD, DMD, MBA  
Program Director*

“The virtual era of COVID-19 redefined how we conduct our work and collaborate with our partners from a distance.”



# Anti-Racism Work

**This year as part of its focus on promoting self-reflection and active anti-racism, the PGSSC piloted an internal anti-racism curriculum for all of its research associates, fellows, and faculty.**

This program, now integrated into Thursday Morning Reports twice a month, aimed to provide a forum to discuss difficult topics that are at the center of global surgery and social justice. The anti-racism curriculum was developed to provide a foundation for our individual and organizational learning of complex topics at the core of global surgery and social justice. Over four semesters,

faculty, fellows, research associates and administration committed to participate in two dedicated sessions every month. Each semester had a theme: **Semester 1. Colonialism and Slavery, Semester 2. Racism, Health Equity and Global Health, Semester 3. Whiteness and Structural Racism, and Semester 4. Intersectionality.** Topics covered under these themes included implicit bias, defining racism versus discrimination, socioeconomics of racism, racism in global health, among others. Due to the pandemic, the entire curriculum was conducted over zoom. We utilized breakout rooms to hold initial smaller group discussions, followed by the gathering of the whole group for further discussion and processing. Each session was supplemented with pre-reading, and a video or podcast from experts in social justice and health equity. Content from these materials were used by the curriculum development team to create questions intended to aid the session discussions. The curriculum was intentionally kept internal to protect the space in which difficult conversations could take place.

The impact of this curriculum was overwhelmingly positive, as evidenced in the feedback. We will continue to deliver this curriculum as an essential component of the wider PGSSC Education Curriculum. As an organization, we believe that beyond educating ourselves, we must also act. In accordance with our goals set out in our anti-racism statement, we have formed a justice, equity and anti-racism working group that will focus on our priorities and deliverables, both proximally and in our global work. Through the curriculum and our working group, the PGSSC will learn from history, our experiences, and the experiences of those with whom we work to continuously educate ourselves and translate this into action. In doing so, we aim to ensure that our work is conducted on a foundation of equity and social justice.

“...we aim to ensure that our work is conducted on a foundation of equity and social justice.”





# Strategic Plan

**2020 brought many challenges for our team and partners. Events ranging from the global COVID-19 pandemic to the raw discussions regarding racial injustice in the United States and elsewhere have particularly highlighted the importance of equity and justice in our work.**

Our team was inspired to tackle these issues head-on, and we started the academic year with many thoughtful and reflective conversations about our roles as global surgery researchers and advocates. The process of these conversations led to the development of the PGSSC's strategic plan for 2021-2025.

Faculty, fellows, research associates, and staff worked in teams to review and consider our team's Mission, Vision, and Values, and worked together to critically examine the types of work we do and the ways in which we do it. At the end of 2020, the PGSSC faculty took these initial reflections and planned and participated in the first virtual faculty retreat, creating a space to further refine the ongoing focus and commitments of the program. We remain steadfast in our commitment to universal access to safe, affordable, and timely surgical, anesthesia, and obstetric care. We aim to achieve this vision through surgical systems strengthening with a particular focus on our core values of social justice and equity, accompaniment, solidarity, and evidence-based solutions.

Three strategic pillars emerged as focus areas through which we aim to achieve this mission: Research, Policy and Advocacy, and Capacity Building. We additionally defined three strategic priorities for the next 5 years,

including a focus on health equity through universal access to safe, timely and affordable SOA care; social change through equitable partnerships; and the development of future leaders in the field of global surgery.

Finally, the team has chosen to place a specific focus on the work of educating ourselves in anti-racism. We have piloted a bi-weekly, year-long curriculum that aims to provide a forum to discuss difficult topics that are at the center of global surgery and social justice. Through this curriculum, the PGSSC hopes to be able to learn from history, our experiences, and the experiences of those with whom we work to continuously educate ourselves and to ensure that our work is conducted on a foundation of equity and social justice.

We are excited to move into the next phase of growth for the PGSSC with renewed dedication to our mission and values as represented in our strategy for the future.



# Our Leadership

## DIRECTOR

Development/Fundraising



**John G. Meara, MD, DMD, MBA**  
Kletjian Professor of Global Surgery, Harvard Medical School  
Chief, Department of Plastic and Oral Surgery, Boston Children's Hospital

## DEPUTY DIRECTOR

External Partnerships



**Robert Riviello, MD, MPH**  
Associate Professor of Surgery,  
Global Health and Social Medicine,  
Harvard Medical School  
Director of Global Surgery Programs,  
Center of Surgery and Public Health,  
Brigham and Women's Hospital

## 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, PhD**  
Instructor, Department of Global Health and  
Social Medicine, Harvard Medical School

## ADMINISTRATIVE COORDINATOR



**Reema Chapatwala, MPH**



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



**Blake Alkire, MD, MPH**  
Otolaryngologist, Massachusetts  
Eye and Ear Infirmary  
Instructor in Otolaryngology,  
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



**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



**Pablo Tarsicio Uribe Leitz,  
MD, MPH**  
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



**Benjamin C. Warf, MD**  
Director, Neonatal and  
Congenital Anomaly  
Neurosurgery  
Associate Professor of  
Neurosurgery, Harvard  
Medical School

## FELLOWSHIP DIRECTOR TEAM



**Nakul Raykar, MD, MPH**  
Associate Surgeon, Division of Trauma,  
Burn and Surgical Critical Care Brigham  
and Women's Hospital



**Geoffrey Anderson, MD, MPH**  
Associate Surgeon, Division of Trauma,  
Burn and Surgical Critical Care Brigham  
and Women's Hospital



**Kavitha Ranganathan, MD**  
Associate Surgeon, Division of Plastic  
Surgery Brigham and 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 and Pain Medicine  
Director - Global  
Pediatric Anesthesiology Fellowship,  
Boston Children's Hospital Associate  
Professor of Anaesthesia, Harvard  
Medical School



**Scott Corlew, MD, MPH, FACS**  
Lecturer, 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



# Get to know Our Team

## Get To Know Our Team



Visiting Scholar



Research Fellows



Research Associates



### Sangchul Yoon, MD, PhD

Dr. Sangchul Yoon is a professor at College of Medicine Yonsei university and Vice Director of Center for Global Development, Yonsei University Health System. He is a board-certified ophthalmologist with sub-specialty in cornea, and preventive ophthalmology. He received his Ph D in public health from Yonsei University in 2018. He is a public health expert connecting the laboratory and the real field in the process of generating evidence. His research interests have been focused on innovative technology to improve health accessibility and efficiency such as digital health and artificial intelligence.

### Laura Pompermaier, MD, PhD

Laura, originally from Italy, studied Medicine in Austria and completed residencies in General Surgery, Plastic Surgery and PhD studies in Sweden. She works as a consultant in Plastic Surgery in Sweden at Linköping University Hospital, where she is dedicated primarily towards surgical treatment of severe burn victims and genital reconstructive surgery. She has worked in resource-poor settings as well, including clinical work as a voluntary surgeon in Kenya. During 2019-2021, she was Visiting Scholar at the Program of Global Surgery and Social change at Harvard, with research-projects focusing on the burden of burns in low- and middle-income countries.



### Adam Ammar, MD

Adam received his BA in Neuroscience from the Johns Hopkins University in 2010, and his medical degree from the University of Illinois in 2015. He is currently a 6th year neurosurgery resident at the Montefiore Medical Center/Albert Einstein College of Medicine in New York. His interests are in global health, pediatric neurosurgery, and improving neurosurgical equipment affordability in low resource settings. As the Global Neurosurgery Fellow at PGSSC, he led the secretariat of the World Federation of Neurosurgical Societies Global Neurosurgery Committee and spearheaded the formation of the Journal of Global Neurosurgery, which aims to support research capacity building in LMICs and provide equitable access to global neurosurgery research.

### Barnabas Alayande, MD, MBA

Barnabas is a general surgeon with the National Postgraduate Medical College of Nigeria and a Senior Registrar with the West African College of Surgeons. His medical training was at a WHO Collaborating Center for Community Based Experience and Service, and he has a postgraduate diploma in Theology and a master's in business administration. His research interests are focused on driving advances in surgical education in low resource settings, non-technical skills for surgery, trauma care systems, and filling gaps in health management. He is a fellow with the University of Global Health Equity Rwanda and works to develop novel curricula and research with the Centre of Equity in Global Surgery.



### Paul Truché, MD, MPH

Paul is a general surgery resident at Rutgers-RWJMS. He developed his interest in global surgery while researching access to surgical care and prehospital systems in Colombia. He is currently pursuing his MPH in Clinical Effectiveness at the Harvard TH Chan School of Public Health with a desire to build a career implementing high quality, ethical clinical research in low resource settings. He plans to specialize in pediatric surgery and has been focusing his research in South America.

### Alexis Bowder, MD, MPH

Alexis obtained her MD from the University of Nebraska Medical Center and is a general surgery resident at the MCW and an MPH from Harvard. She has field experience in Nepal, Jamaica, Honduras, Peru, Haiti and Brazil. Her efforts are focused on three main areas, piloting a one-year curriculum to build research capacity in Haiti, improving access to pediatric surgical care worldwide, and advocating for gender equity in Brazilian surgical, anesthesia, and obstetric specialties.



### Lisa Miranda, MD, MPH

Lisa is currently an integrated vascular surgery resident at the University of Southern California. She received an MPH from The Dartmouth Institute, and during her time there she worked with the Ministry of Health in Rwanda studying child malnutrition and effectiveness of HIV prevention programs. Elizabeth's research interests include delivery of surgical care, outcomes research, and development of surgical training programs in low- and middle-income countries.

### Belain Eyob, MD

Belain is a general surgery resident at New York Presbyterian/Columbia University in New York City. Originally from Addis Ababa, Ethiopia, she moved to the US for higher education, obtaining her medical degree from Georgetown University School of Medicine. She is particularly interested in strengthening surgical education and capacity building in LMIC through partnership with local stakeholders. In the future, she plans to pursue a fellowship in surgical oncology.

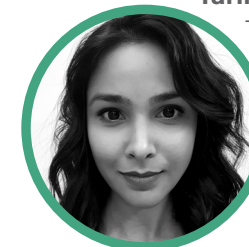


### Alaska Pendleton, MD, MPH

Alaska is a vascular surgery resident at Massachusetts General Hospital. Originally from Wisconsin, she earned a BS from the University of Wisconsin-Madison and her MD from Harvard University. She is currently a first-year MPH student at the T.H. Chan School of Public Health. Her interests include delivery of vascular care in low-resource settings, backpacking, running, and traveling to all 50 states before her brothers.

### Zachary Fowler, MD, MPH

Zach is a general surgery resident at Hofstra University / Northwell Health in New York. Originally from the Midwest, he attended medical school at the University of North Dakota, where he spent time investigating barriers to surgical care in Mexico and community health in Peru. His interests include strengthening surgical systems in rural areas, policy guided by high quality research, and funding mechanisms in global health.



### Tarinee Kucchal, MD

Tarinee was born in Mumbai, India and raised in Melbourne, Australia and Singapore. She attended medical school at Monash University and then worked as a General Surgical Registrar and Medical Officer at the Austin Hospital, Melbourne, and Tan Tock Seng Hospital, Singapore. Her public health interests include cancer care and prevention and trauma management in the resource limited setting, innovative healthcare financing and gender equity in healthcare.

### Myron Rolle, MD, MSc

Myron is Bahamian-American, is a Rhodes Scholar and read for his MSc in Medical Anthropology at Oxford University in 2010. He played professional American football for the Tennessee Titans and Pittsburgh Steelers from 2010 to 2012. He earned his medical degree from the Florida State University in 2017 and is currently a Neurosurgery resident at the Massachusetts General Hospital. He is a member of President Clinton's Global Initiative lead team and founder of the Myron L Rolle Foundation.





**Manon Pigeolet, MD, MSc**

Manon is a Belgian orthopedic surgery resident with a specific interest in pediatric orthopedic surgery. She obtained her MD and MSc in International relations and Diplomacy from the University of Antwerp. Her research interests are surgical and trauma systems strengthening and policy development as well as qualitative and culturally sensitive pediatric surgical care delivery. While with the PGSSC she will work with team Haïti while pursuing an MPH in Global Health.

**Rennie Qin, MD**

Rennie completed her medical degree and Honors thesis in epidemiology from the University of Auckland, New Zealand. She has a long-standing interest in global health with experiences spanning from a WHO internship to quantitative and qualitative research fieldwork in Nepal and China. She is interested in strengthening surgical care in the Asia-Pacific region and in the application of anthropological methods to global surgery research with a focus on equity.

**Shehnaz Alidina SD, MPH**

As senior global health systems researcher in the Program for Global Surgery and Social Change, Shehnaz Alidina leads a research team conducting a longitudinal, mixed methods evaluation to examine the impact of a multi-component safe surgery intervention on surgical quality in Tanzania. Shehnaz's interest is in improving the quality, integration, and performance of health delivery systems. She received her MPH and her SD in health policy & management from the Harvard Chan School of Public Health.

**Rashi Jhunjunwala, MD**

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.

**Isioma Okolo, MBChB, MRCOG, DTMH**

Isioma is a Nigerian Obstetrics & Gynaecology registrar in Scotland, UK. She graduated from University of Edinburgh in 2011 and was elected to the Membership of the Royal College of Obstetrics & Gynaecology in 2018. Her research interests include racial and gender equity, advocacy and strengthening of obstetric & gynaecological clinical capacity in low resource settings. She is a joint BEST Scholar and Connor's Global Women's Health fellowship recipient for 2020-2021.

**Alexandra Buda**

Alexandra is currently an MD candidate at the University of Rochester School of Medicine and Dentistry. After graduating from the University of Connecticut with a degree in Molecular Biology and Human Rights, she served in the Peace Corps as a health volunteer in Ethiopia. Alexandra has been supporting the Brazil team as a Research Associate in a variety of different projects over the year. Her specific interests include sustainable partnerships, surgical capacity research, geospatial mapping, and gender equity. Alexandra also enjoys pottery, cycling, and taking care of her plants.

**Anchelo Vital**

Anchelo is a final year medical student at the State University of Haiti. Interested in Research and Global Health. Aspiring neurosurgeon. Active member of the Haitian Medical Student Association and Head of Research of InciSioN-Haiti.

**Gabrielle Cahill**

Gabrielle is an MD candidate at the University of California, San Diego, where she is a PRIME - Health Equity scholar. She received her MPH in Quantitative Methods with a concentration in Humanitarian Studies, Ethics, and Human Rights from the Harvard T.H. Chan School of Public Health. She is particularly interested in global surgery advocacy and the effective delivery of humanitarian aid.

**Deen Garba**

Deen is currently an MD Candidate at the University of North Carolina in Chapel Hill, NC. He obtained his BSPH in Health Policy and Management from UNC's Gillings School of Global Public Health. He previously worked for the Global Health Policy Center at the Center for Strategic and International Studies in Washington, D.C. where he conducted policy research on U.S. Tuberculosis and Malaria control efforts in Nigeria, South Africa, India, and Ethiopia.

**Anusha Jayaram**

Born in Singapore and raised in Australia, Anusha is an MD/MBA candidate at Tufts University School of Medicine. After graduating from NYU with a degree in Anthropology, she worked in clinical surgical research at Mount Sinai. Currently the National Co-Chair for the Global Surgery Student Alliance, she engages in global surgery research, advocacy, and education for and with students and trainees. Her interests include innovation, operations management, and gender equity.

**Makela Stankey**

Makela is an MD candidate at the Keck School of Medicine at USC. With experience in healthcare technology, health policy, and social justice, she is excited to use these skills to work toward eliminating health disparities both locally and globally. She plans to become an anesthesiologist. Outside of medicine, Makela enjoys climbing, basketball, and read.

**Deena El Gabri**

Deena is an MD candidate at the University of Wisconsin School of Medicine and Public Health. After graduating from the University of Michigan with a degree in Neuroscience and Arabic, she received a MScGH from Duke Global Health Institute. There, she discovered a passion for global surgery research focused on capacity building in LMICs. She aspires to become an academic vascular surgeon researcher with partnerships in East Africa and the Middle East.

**Visiting Scholar****Research Fellows****Research Associates**

# Webinars



## UNITAR NSOAP Series

The NSOAP Manual was published as a collaborative initiative between the United Nations Institute for Training and Research (UNITAR), the Harvard Medical School Program in Global Surgery and Social Change, and the Global Surgery Foundation. It was officially launched on 28 September 2020 and supported by a 7-part online Educational Series which PGSSC fellows and RAs assisted with organizing and facilitating. These webinars as described below, ran from September 2020 until January 2021.

1

**SEPT. 28  
2020**

The official publication launch of the NSOAP Manual

2

**OCT. 14  
2020**

First-hand experience of delivering an NSOAP

3

**OCT. 28  
2020**

Integrating an NSOAP into National Health and Pandemic Response strategies: aligning the plans with high priority government strategies

4

**NOV. 11  
2020**

Donors' perspective on funding the implementation of NSOAPs: What strategies do the funding agencies feel necessary to fund large-scale surgical healthcare programs

5

**NOV. 25  
2020**

Ministries of Health perspective on NSOAPs: Streamlining NSOAPs for rapid adoption and diffusion

6

**DEC. 9  
2020**

The role of NGOs, academic institutions, professional associations, and other nonstate actors insupporting the NSOAP process

7

**JAN. 19  
2021**

Adopting a pragmatic lens: Five simple steps for every health manager to improve facility efficiency on Monday morning

“The session made it very clear that the global community cannot ignore surgical care, even during a viral pandemic, and in fact, investing in surgical care delivery and infrastructure may be a cost-effective way to strengthen health systems and their abilities to respond to future pandemics.”



“The session ended with a lively discussion between Dr. Paul Farmer and the rest of the panelists, covering topics such as how to safely reintroduce surgical services and the social inequities highlighted by the pandemic.”

### COVID 19 and Surgical Care

As part of the COVID-19 Seminar Series hosted by the Harvard Medical School Department of Global Health and Social Medicine, PGSSC organized and hosted a webinar entitled “COVID-19 and Surgical Care” on May 21, 2020. PGSSC program director Dr. John Meara opened the session with an overview of the COVID-19 pandemic and a discussion of the need for international cooperation in combating it. Former fellows Drs. Alex Peters and Vatsalan Santhirapala then shared experiences from New York City and London, respectively, and current fellow Dr. Alaska Pendleton discussed the creation of the COVID-19 Bundled Response for Access (COBRA) line team at Massachusetts General Hospital in Boston. Former research associate Dr. Nabeel Ashraf, Lancet Commissioner Dr. Nivaldo Alonso, and Dr. Sadoscar Hakizimana, OB-Gyn at Partners In Health - Rwanda, then shared their experiences working in Pakistan, Brazil, and Rwanda, respectively, and how surgical care in their communities had been affected by the pandemic. Dr. Abebe Bekele, dean of the University of Global Health Equity in Rwanda, then gave an overview of the impact of COVID-19 on surgical care delivery in Africa. These effects ranged from increasing delays in access to care due to difficulty finding transport, interruption of medical and surgical education and training, diversion of resources away from surgical care, and the risks and stress faced by healthcare workers treating COVID patients in hospitals without sufficient testing or personal protective equipment (PPE) available. Finally, Dr. Kee Park highlighted investing in surgical systems strengthening as a “best buy” for pandemic preparedness. The session ended with a lively discussion between Dr. Paul Farmer and the rest of the panelists, covering topics such as how to safely reintroduce surgical services and the social inequities highlighted by the pandemic. The session made it very clear that the global community cannot ignore surgical care, even during a viral pandemic, and in fact, investing in surgical care delivery and infrastructure may be a cost-effective way to strengthen health systems and their abilities to respond to future pandemics. The video of this session can be found on PGSSC’s website.



### World Health Summit

In October, the PGSSC helped facilitate a session “Essential Surgical and Trauma Care: An Integral Part of Universal Health Coverage” at the World Health Summit (WHS) based in Berlin, Germany. Co-hosted by the AO Alliance Foundation and PGSSC and chaired by Dr. Geoff Ibbotson of the Global Surgery Foundation and Dr. John Meara, this was one of the first WHS sessions to recognize surgical care as an indivisible and indispensable component of achieving universal health coverage. Speakers including Dr. Jim Harrison of the AO Alliance Foundation, Dr. Ali Jaffarian of Tehran University of Medical Sciences, Dr. Teri Reynolds of the WHO, Dr. Lubna Samad of Indus Health Network, and Minister of Health for the Republic of Fiji Dr. Ifereimi Waqainabete shared their vision for surgery as a cornerstone for strong, resilient and sustainable healthcare systems. Panelists advocated for investment in surgical services as an affordable means of promoting economic growth, pandemic preparedness, and saving lives.



### Innovative Financing

Inadequate financing poses a major constraint to implementation and the provision of quality care in LMICs and new strategies are needed to expand fiscal space for health to finance scale-up of surgical services. Innovative financing structures present a channel that enable the flow of private capital pools to expand the fiscal space for health. To explore the potential of impact investing in Global Surgery, we assembled a panel of experts for our webinar “Innovative Financing for Universal Healthcare: The Catalytic Role of Impact Investing”. Our panelists represented key stakeholders that could draw from their experiences and provide a unique perspective on the opportunity impact investing provides for Global Surgery. We were introduced to the concept of Impact Investing and its current use in healthcare, explored its potential application in Global Surgery, and were enlightened on how private sector finance interests and government run health organizations may align in LMIC settings. Finally, we were given an insider’s perspective on the considerations made when structuring an impact investing instrument for global surgery and the challenges it may face. The session highlights one key message: Impact investing is a new and innovative financing structure that can unlock crucial catalytic capital to fund global surgery and enable the provision of quality surgical care in LMICs. With new and alternative financing instruments being developed every day, we must consider the role of private finance and the application of impact investing as new programs, ideas or interventions develop from inception. Impact investing is not a panacea but an opportunity. An opportunity that we must understand and leverage today.



### Asia Pacific

The PGSSC, in partnership with the Center for Global Health Delivery at Harvard Medical School, Royal Australasian College of Surgeons, the United Nations Institute for Training and Research, and the Global Surgery Foundation, hosted a series of three virtual meetings this February and March titled Strategic Planning to Improve Surgical, Obstetric, Anesthesia, and Trauma Care in the Asia-Pacific Region. The goals of the meeting were fourfold:

1

Provide recent updates and historical context for surgical capacity strengthening in the Asia Pacific and globally.

2

Identify challenges and opportunities to improve surgical care in the Asia-Pacific.

3

Discuss the role of partnerships in support of strategic planning and implementation of surgical care.

4

Explore the possibilities for coordinated efforts and regional collaboration.

The virtual meeting series featured high-level speakers such as Dr Takeshi Kasai (WHO Regional Director for the Western Pacific), Dr Poonam Singh (WHO Regional Director for South East Asia), Dr Jim Kim (ex-President of the World Bank), and Dr Paul Farmer (founder of Partners in Health). It convened a broad group of stakeholders, hailing from all professional backgrounds including governments, intergovernmental organizations, funding agencies, academic institutions, the private sector, and more, to discuss initiatives to strengthen surgical care in the Asia-Pacific region. Thanks to the virtual meeting format, it was made openly accessible to the public, allowing anyone around the world to tune in. Almost 500 people were registered for each webinar.

### Trauma Injury Webinar

In May 2021, the PGSSC Trauma and Injury Working Group, in partnership with the Trauma Healers documentary, G4 Alliance, and Cure International, hosted a highly successful webinar event entitled Comprehensive Approach to Road Traffic Injuries: from Prevention to Trauma Care Webinar. The moderators for this webinar were PGSSC Faculty Michelle Joseph, Orthopedic Trauma Surgeon, Trauma and Injury Lead, and Kee Park, Neurosurgeon, Director of Policy and Advocacy. The content focused on why road traffic injuries require both a robust trauma system to deliver treatment and road safety initiatives to prevent injuries occurring.

This webinar was designed to draw a diverse audience, beyond academics, reaching those less familiar with this devastating public health crisis. It was also important for us to attract a younger audience- the age group with the highest road traffic fatality rate. To achieve this, we included strong advocacy messages from special guests Jean Todt, UN Special Envoy for Road Safety and President of The Fédération Internationale de l'Automobile - FIA (English: International Automobile Federation), and Siwon Choi, UNICEF Ambassador and Member of Super Junior. Equally as critical was to have an expert panel that reflected our attendees and could speak to the challenges faced in low and middle-income countries. Dr Arturo Cervantes, President of the National Alliance for Road Safety, Mexico, Dr Etienne Krug, Director of Social Determinants of Health, World Health Organization (WHO), Professor Ken Ozoilo, Head of Division of Trauma Surgery, University of Jos, Nigeria, Dr Sabrina Asturias, Chief of Emergency Surgery, Roosevelt Hospital, Guatemala, and Robert Parish, Filmmaker/ Producer, Trauma Healers Documentary, all offered real insight into their experiences, the barriers to prevention and trauma care delivery, and the crucial role of advocacy.

This webinar attracted a large audience of over 1,100 participants from across the globe. There were several requests from participants, both during and after the webinar, for topics such as mental health sequelae and gun-violence to be addressed. We intend to deliver on this.

Here is the YouTube link to the webinar. Details of the Trauma Healers documentary and broadcasting listings and events can be found at <https://www.traumahealers.org>

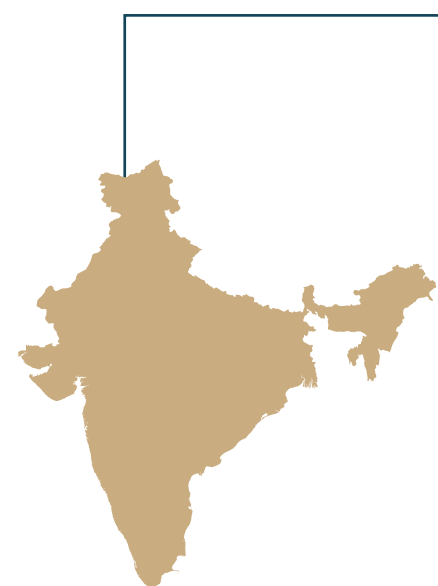
“There were several requests from participants, both during and after the webinar, for topics such as mental health sequelae and gun-violence to be addressed. We intend to deliver on this.”

# Teams/Project Profiles



## Haiti

Haiti is conducting two major projects: Research Capacity Building, and Trauma Systems Development. The Research Capacity Building initiative is a multi-collaborator project that began its pilot course in January 2021. The Trauma Systems Development is a longitudinal implementation project designed to assess the epidemiology of trauma in North Haiti, understand the baseline capacity for delivery of trauma care, assess the process and impact of implementing a trauma intervention package consisting of trauma training courses and trauma registry documentation.



## India

Following the Lancet Commission on Global Surgery in 2015, a group of surgeons from the Association of Rural Surgeons of India (ARSI) partnered with a team from the LCoGS and the PGSSC to advance surgical access in India. Out of these efforts came the Karad Consensus Statement, which focused on short- and medium-term solutions to key deficits in infrastructure, equipment, workforce, and blood availability in India. Recognising the major constraints in blood access as deficits in blood infrastructure, unregulated pricing on banked blood, and legal barriers to safe alternatives to blood banking such as Unbanked Directed Blood Transfusion, PGSSC's Team India has partnered once again with Dr Nobhojit Roy and Dr Anita Gadgil and their team at the WHO Collaboration-Center for Research on Surgical Care Delivery in Low- and Middle-Income Countries. Together we aim to describe the deficit of blood in LMICs such as India, identify the public health consequences of this blood shortage, explore solutions to strengthening the blood supply and delivery systems, and advocate for the inclusion and legalisation of alternative blood strategies in public health practice. Over the past year, we have analysed whether caesarean section rates in the Indian state of Bihar were related to blood access, quantified the supply of blood and its shortages relative to the population need, explored methods for strengthening blood delivery systems by increasing blood banks and introducing drone delivery systems, and we have investigated blood alternatives for use in LMICs through a systematic review. Finally, the team commenced a pilot study with Saveetha Medical College in Chennai to estimate the out-of-pocket expenditure (OOPE) from medical costs associated with utilization of surgical care as reported by patients. This study will ultimately quantify one of the key LCoGS indicators in India – the risk of catastrophic and impoverishing expenditure incurred by patients seeking surgical care. Pending successful completion of this study, the PGSSC hopes to extend the OOPE survey to partner sites, including those in Mexico, Zambia and Brazil.

## Brazil

Team Brazil has a collaboration with the University of Sao Paulo and the Federal University of Minas Gerais. This year our team focused on four large areas, the impact of COVID-19, gender equity in the Brazilian surgical, anesthetic and obstetric specialties, burn injury patterns, and pediatric trauma systems in Brazil. We performed an international survey of the effect on COVID-19 on medical education. Additionally, we explored the effect COVID-19 had on pediatric surgeons globally and how it affected surgical care in Brazil. We also explored patterns of burn injuries during the COVID-19 pandemic. Finally, we supported our colleagues who developed and implemented a trauma checklist for pediatric trauma care in Brazil.



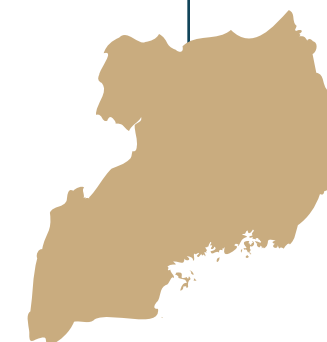
## Uganda

Team Uganda works in collaboration with researchers at the Mbarara University of Science and Technology (MUST) in Western Uganda.

Our research aims to improve the quality of peri-operative obstetric care in low resource settings using implementation science methods, systematic reviews, geospatial mapping, and healthy system mapping.

This past academic year, we have focused on using geospatial analysis and mixed methodology to investigate the variation in caesarean section usage according to provider characteristics, knowledge, attitudes and practice, as well as patient and facility characteristics in Uganda. We have also conducted a systematic review of trial of labour after caesarean section (TOLAC) versus repeat caesarean section in sub Saharan Africa. Other ongoing research under the leadership of faculty member Dr Adeline Boatin include:

- Wireless Monitoring Study, comparing physiological monitoring to wireless monitoring after caesarean section
- Timeliness and use of Safe and Appropriate Caesarean Section (TUSA Study)
- Electronic Medical Records (EMR) development for peri-operative care
- Surgical Management for Post-Partum Haemorrhage



## Mexico

Team Mexico works with a variety of partners and uses several approaches to understanding the surgical ecosystem. Through collaborations with Anáhuac University and the United Nations Population Fund, we use large databases and geospatial mapping techniques to identify system gaps and challenges that vulnerable populations are facing. Our research places additional emphasis on indigenous populations, gun violence victims, and gender and sexual minorities. In southern Mexico we work with Companeros en Salud (Partners in Health) and have supported the organization in the development of a surgical program at a rural public hospital. This has involved conducting assessments of surgical need in the surrounding communities and monitoring quality and safety. With each of our partners, we work with students and trainees to build local research capacity. We are also collecting and publishing data related to the LCoGS, identifying stakeholders and advocating towards a NSOAP for Mexico in the near future.





### SADC (Southern African Development Community)

Early in the year, the PGSSC joined the SADC Technical Experts Working Group (TEWG), a periodic meeting between representatives from the SADC member states and other partner organizations invested in increasing access to surgical healthcare in the region. This group, chaired by Professor Emmanuel Makasa of the University of Witwatersrand, stemmed from resolutions passed at the 2018 and 2019 SADC Health Ministers meetings. This novel group provides a platform for surgical healthcare stakeholders and partners to discuss issues surrounding surgical care in the region. Through the TEWG, the PGSSC assisted in the development of a regional strategy document, a status update form and template, and tools that can help guide continued efforts to develop national surgical, obstetric, and anesthesia plans (NSOAPs) in the SADC region. These documents are to be presented at the next SADC Health Ministers meeting for review and approval by member states.

Additionally, PGSSC had the opportunity to work with several global surgery centers in the region. In conjunction with the Wits Centre for Surgical Healthcare, the team is developing a project aiming to assess the barriers and facilitators to NSOAP development in the SADC region. This qualitative assessment will utilize interviews with stakeholders essential to the NSOAP process, allowing other countries and regions to further learn from the SADC experience. With team members from the Stellenbosch University Centre for Global Surgery, PGSSC fellows participated in projects including a review of existing community support groups for trauma survivors and the development of an online training module for frontline health care workers in the diagnosis and treatment of surgical infections. In collaboration with the University of Cape Town's Division of Global Surgery, PGSSC is assisting in the development of a global surgery course aimed at health care executives and health policy leaders.

Additionally, fellows are currently completing a review of quality monitoring and evaluation methods for surgical and anesthesia skills training programs. This will ultimately inform the development of a comprehensive monitoring and evaluation framework for a training program to be implemented at two district hospitals in the Eastern Cape of South Africa. This training program will aim to provide increased capacity at the district hospitals for general anesthesia delivery and surgical treatment of burns, ectopic pregnancies, and open fractures, all priorities identified by the providers at these hospitals. These partnerships are invaluable learning experiences for PGSSC fellows and provide opportunities to support research, advocacy, and policy efforts aimed at increasing access to surgical healthcare in the SADC region.

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In collaboration with the University of Cape Town's Division of Global Surgery, PGSSC is assisting in the development of a global surgery course aimed at health care executives and health policy leaders.”

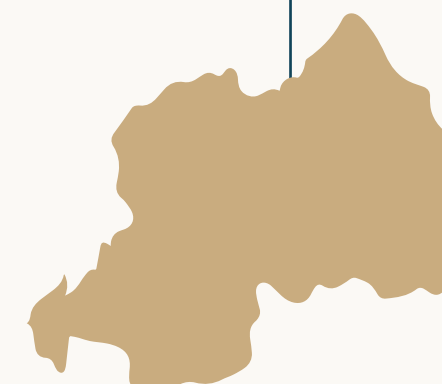
### Western Pacific

The Western Pacific team works with the World Health Organization, the Royal Australasian College of Surgeons, the Pacific Community, and local Ministries of Health to develop strategies and policies to improve surgical care. This work began with support for the WHO Action Framework for Safe and Affordable Surgery in the Western Pacific Region which was adopted by the region's 37 countries and areas at the 2020 Regional Committee Meeting. Five Pacific Island Countries are also developing national strategies to improve surgical care, and we have supported their efforts by conducting situational analyses, engaging stakeholders through dozens of interviews, and organizing national planning meetings. We also held a webinar series to facilitate partnerships in the region and generate support for surgical plan implementation and funding. This initial work in the region has created a foundation for strong partnerships for future research and policy work in the Western Pacific.



### Rwanda

The PGSSC Rwanda team works in two major domains—strengthening health systems through research and capacity building in partnership with Inshuti Mu Buzima/Partners In Health, Rwanda, and providing support for the Centre for Equity in Global Surgery at the University of Global Health Equity, Butaro, Rwanda. This year, our team focus was on wrapping up innovative telemedicine projects and research, accompanying Rwandan researchers in the Intermediate Operational Research Training, curriculum development for local undergraduate and postgraduate surgery, equity in global surgery, support for Rwanda academic teams, and academic research in the COSECSA and West African regions in collaboration with regional surgical colleges. We also collaborated with plastic surgery trainees at the University Teaching Hospital of Kigali (CHUK) on four projects centered around burn care in sub-Saharan African and in the CHUK burn unit, the only dedicated burn unit in the country. Some of our other ongoing projects include a number of scoping reviews on vascular disease in LMICs, machine learning in global surgery and innovative surgical curricula, validation of post-caesarean surgical site infection predictive machine learning algorithms, development of post-discharge consensus instructions, analysis of migration and retention patterns of surgical trainees in sub-Saharan Africa, non-technical skills for African surgical teams and qualitative work around community health workers among other projects.





## Trauma Projects

### The PGSSC is conducting trauma projects within the civilian-military space and Haiti.

#### Civilian-Military Response: Lessons Learned from the Haiti Earthquake

The PGSSC has been collaborating with Naval War College (NWC) and Uniformed Services University (USU) on a scoping review and qualitative study both aimed at determining the lessons learned from the civilian-military response to the Haiti Earthquake, from a systems level perspective. Areas of focus include resources, communication, infrastructure loss and coordination. The importance of this project is to identify key lessons that can be used to assist with future coordinated disaster responses and to highlight the barriers to surge capacity.

#### IMPACT Study — Integrated Military Partnerships and Civilian Trauma Systems

The IMPACT study is a collaborative study, formed of a partnership between the PGSSC and a multinational group of military and civilian personnel with representatives from: USU, King's College London, Royal Medical Services of the Jordanian Armed Forces, Army Hospital Colombo, Universidad Peruana de Ciencias Aplicadas, and South Africa Interallied Confederation of Medical Reserve Officers, all of whom have an interest in trauma systems development.



Historically, militaries and academic civilian organizations have an interest in building trauma capacity and capability in multiple regions around the world both in conflict but also in peacetime. In the past, different militaries and academic institutions may work on trauma system development in the same region but do not necessarily work together. Further, institutional power structures have not favoured achieving equitable collaboration in the development process, and as such, limits the inclusion of partner nation perspective and influence. To date there are no integrated frameworks that give guidance on how to systematically work together and pool resources to improve trauma care globally.

An innovative project, The IMPACT study aims to first understand the function and capabilities of military trauma systems, and the level (if any) of integration that may exist with civilian trauma systems. We hope this data will provide evidence for the feasibility of developing a framework to guide integration.

#### PROTHA Study – Project Trauma Haiti

The PROTHA Study is an implementation and quality improvement pilot study being conducted at four facilities in Haiti. The study has three phases: pre-implementation, implementation and post-implementation. The lead investigator organizations involved in the study are Association Haitienne de Chirurgie (ASHAC), Comité de Trauma (CT), Société Haitienne de Médecine d'Urgence et de Catastrophe (SHAMUC), and Faculté de Médecine et de Pharmacie de l'Université d'État d'Haiti(FMP/UEH).

The focus of this study is to pilot implementation of two components of a trauma system –trauma registry (WHO) and trauma assessment education (South Africa Triage Tool and Primary Trauma Care). Pre-implementation Phase of the study has involved collecting baseline epidemiological traumatic injury data from each of the facilities and assessing the clinical readiness and capacity to deliver trauma care- from emergency room to surgical care. In order to deliver this first phase, multiple site investigators have been undergoing training of the various tools and data transcription. We are aiming to complete this phase by the end of the year prior to implementation of the registry and education.



#### Conference Equity

Conference equity is defined as the: attainment of an equitable level of attendee active engagement, influence and access to a conference regardless of country of origin, location, available funds or affiliation, through the mitigation of known barriers and enhancement of efficacious facilitators. Measuring the barriers and facilitators requires a systematic approach. A team of researchers at the PGSSC in partnership with University of Global Health Equity, passionate about the inequities seen at conferences, built a multistudy project aimed at systematically identifying and measuring the key factors that drive the inequities. The studies completed thus far included an assessment of visa rejection rates and a systematic review of the barriers and facilitators. We are currently analyzing data from over 40,000 attendees from a number of global health and global surgery conferences in the hope of further identifying contributory influences. Further details can be found at [equityresearchhub.org](http://equityresearchhub.org).

#### Global Neurosurgery Initiative

The Global Neurosurgery Initiative (GNI) team within the Program in Global Surgery and Social Change continues to contribute to the efforts to meet the unmet neurosurgical needs in LMICs. The number of neurosurgery applicants to the PGSSC continues to grow suggesting increasing interest in global neurosurgery and the PGSSC program.

Following up on the “Comprehensive Policy Recommendation for the Management of Head and Spine Trauma in LMICs” project, the team is finalizing the “Policy Recommendation for the Comprehensive Management of Spina Bifida and Hydrocephalus in LMICs.” These documents are designed to inform and support surgical system strengthening by health ministries in developing countries and align well to the policy work of the PGSSC.

With the appointment of Dr. Kee Park as the co-chair of the Global Neurosurgery Committee of the World Federation of Neurosurgical Societies, the team took on the important secretariat role of facilitating the development of the Global Action Plan and its implementation. The team is on track to achieving most of the targets of the action


plan by March of 2022. The research output is guided by policy work and seeks to understand key issues such as strategies for neurosurgical workforce expansion, barriers to training, affordability of essential and emergency neurosurgical operations, and building research capacity in LMICs.

Lastly, the editorial team for the newly launched Journal of Global Neurosurgery has key PGSSC members. The primary aim of the journal is to address inequities in research output and access.


#### Anesthesia

There are a number of initiatives within the PGSSC revolving around anesthesia. We have enjoyed a long and fruitful partnership with ASHWINI and Gudalur Adivasi Hospital in rural southern India in the state of Tamil Nadu. We have completed our spinal anesthesia trial looking at the effect of a robust training program for medical officers on their ability to safely and effectively administer spinal anesthesia. We conducted a randomized controlled trial (the first of its kind) comparing the safety and effectiveness of spinal anesthetics delivered by these trained medical officers vs. board certified anesthesiologists. We found no difference in either effectiveness or safety between the groups indicating that with a robust training program, medical officers can safely and effectively deliver quality spinal anesthesia. The implication of this is to augment the anesthesia workforce in rural India and beyond with such a program. This could potentially improve access to safe and quality anesthesia for millions of people. In an effort to scale this program, we have now partnered with Martin Luther Christian University in Meghalaya in Northeastern India to sponsor this program on a larger scale. Then hope is to attract interested medical officers from rural hospitals all over India to train using our program and be able to dramatically reduce the anesthesia workforce gap while ensuring safe and quality delivery of anesthetic and perioperative care for millions of people in India. Ultimately, we hope to be able to partner with other interested institutions in other LMICs to offer a similar course that can directly address the anesthesia workforce gap that exists in LMICs.

**Safe Surgery 2020 is a multi-partner collaboration funded by the General Electric (GE) Foundation, implemented in Ethiopia, Tanzania and Cambodia. GE Foundation is a private, charitable organization of GE and is committed to improving access to safe, high-quality surgical services in resource-limited settings as part of its mission of “building a world that works better.”**



**Tanzania**  
PGSSC supported Tanzanian policy makers and key stakeholders in developing Tanzania's first National Surgical, Obstetric and Anesthesia Plan (NSOAP). This involved more than 200 interviews with policy makers and surgical, obstetric, and anesthesia stakeholders, a systematic review of the literature on the five domains of a surgical system in Tanzania, and supporting a planning process to develop the first NSOAP, which was released in March 2018. PGSSC led a mixed methods evaluation to assess the effectiveness of the Safe Surgery 2020 multicomponent intervention as an approach to improving surgical quality in Tanzania. Our study design included two main elements: (1) a longitudinal, prospective, quasi-experimental study examining changes in surgical quality processes and postsurgical infections; and (2) an in-depth, longitudinal qualitative study exploring factors that distinguish high-performing facilities with the most improvement in surgical quality processes. Our quantitative results found that safety, teamwork and communication, and data completeness improved in intervention sites by an additional 20.5%, 33.3% and 41.8% respectively and maternal sepsis rates were reduced by 1.0%. A 1% reduction in the maternal sepsis rates among women age 15-49 years in Tanzania would correspond to a reduction of 135,736 maternal sepsis cases and 10,451 deaths. Our qualitative results found strengths in teamwork and collective learning differentiated higher- from lower-performing facilities. These results suggest that nontechnical aspects of surgery may be central to performance. To our knowledge, this is one of the largest prospective, multi-site surgical quality intervention studies focused on maternal sepsis, postoperative sepsis, and SSIs in sub-Saharan African hospitals.



**Cambodia**  
In 2018, the GE Foundation and PGSSC partnered with the Cambodian Ministry of Health, Calmette Hospital, and the University of Health Science to improve surgical and anesthesia care in Cambodia. As the research arm for the SS2020 initiative, the PGSSC had two key study aims: (1) to implement an intervention that strengthens the data infrastructure of Safe Surgery 2020 intervention sites in Cambodia, and (2) to test the impact of an intervention package implemented as part of SS2020 in Cambodia. Results showed increased utilization rates of the Safe Surgery Checklist by intervention hospitals, and improved safety practices, teamwork, and communication among surgical staff.

### Obstetric and Gynecology

Over the last year the obstetrics & gynaecology team at PGSSC have been involved in research, advocacy, and peer- education.

**Research** We continued to work closely with our partners from Mbarara University of Science & Technology(MUST) in Uganda, Korle Bu teaching Hospital in Ghana and University of Global Health Equity in Rwanda.

Our collaborative research focused on evaluating perioperative care (variation in caesarean section use; implementation of wireless monitoring of maternal observations; validation of post caesarean surgical site infection predictive machine learning algorithms & development of postoperative discharge consensus instruction) in Uganda and Rwanda in addition to planning a new research project to investigate the burden of pelvic organ prolapse in Ghana.

**Advocacy** Racial disparities in maternal health outcomes are a global phenomenon. Following our published commentary exploring 'Maternal Justice on Both Sides of the Atlantic' in the USA and UK, we were invited by HMS to contribute to the HMS series 'Addressing Health Disparities: Clinical Insights on Race & Social Justice'. The virtual event on 'Maternal Justice' attracted 542 attendants and has subsequently been adapted into HMS Postgraduate and Continuing Education program as an open-access educational resource.

During the UN General Assembly 2020, we participated in the G4 Alliance series exploring the role of surgical, obstetrics, trauma, and anaesthesia systems in pandemic preparedness. The event 'Obstetrics during and after COVID 19: delivering for mothers and babies' allowed us to collaborate with frontline workers from South Africa, Rwanda, Ethiopia as well as partners from the G4 Alliance and Jhpiego.

**Education** PGSSC fellows have the option of spending 2 months on a UNITAR rotation. In the last year, the rotation has focused on convening a platform aimed at strengthening the surgical systems for cervical cancer in Zambia and Rwanda. Our fellow has been engaged in a permanent fellow role, providing peer-mentorship to other rotating PGSSC fellows and research associates.

### Climate Change

We have formed a group of interested surgeons and anesthesiologists who are passionate about both improving global health equity and addressing the most vexing problem of our time – climate change. We have now published two separate manuscripts that begin to look at the intersection of global surgery/ anesthesia and climate change. LMICs who are developing surgical systems from the ground up have a unique opportunity to build their surgical system infrastructure in a climate friendly manner. This is in contrast to HICs who, while accounting for more CO2 emissions, must retrofit existing surgical system infrastructure to both mitigate and adapt to climate change. We have partnered with a group of climate change experts, government representatives and surgery/anesthesiology leaders from several nations in the Western Pacific region to engage in a deep dive looking at the benefits and implications of incorporating climate change considerations into National Surgical Obstetric and Anesthesia Plans (NSOAPs). Currently many nations in this region are both experiencing and existential threat from the changing climate and also undergoing the process of developing the NSOAPs. Thus, the time is right to explore this and PGSSC is in a unique position to expand on this work. In the future, we plan on looking at the link between climate change and surgical outcomes, global health security and global health equity. Finally, we are positioned, via our strong partner network, to examine the carbon footprints of building climate friendly facilities which is in the planning stages. The last year the obstetrics & gynaecology team at PGSSC have been involved in research, advocacy, and peer- education.

“The event ‘Obstetrics During and After COVID 19: Delivering for Mothers and Babies’ allowed us to collaborate with frontline workers from South Africa, Rwanda, Ethiopia as well as partners from the G4 Alliance and Jhpiego.”



# PGSSC Reach at a Glance

From 2010 to 2020

44

Fellows  
Trained

5

Clinical  
Fellows

63

Research  
Associates  
Trained

At PGSSC, we are able to extend our reach to a worldwide audience through our engaging active social media platforms



Twitter

75,000+

Impressions

12,800

Followers



Instagram

2,500+

Followers



Facebook

Audience by cities

Audience Insights	
Top Locations	
People who like your Page are in these locations. These numbers are estimates.	
Cities	Countries
Khartoum, Sudan	86
Port-au-Prince, Haiti	60
Lahore, Punjab, Pakistan	52
London, UK	51
Boston, MA	46
Karachi, Sindh, Pakistan	44
Dhaka, Dhaka Division, Bangladesh	40
Cairo, Cairo Governorate, Egypt	39
Lima, Peru	38
Montreal, QC, Canada	35

Audience Insights	
Top Locations	
People who like your Page are in these locations. These numbers are estimates.	
Cities	Countries
United States of America	438
Pakistan	185
Egypt	172
United Kingdom	125
Sudan	116
Canada	96
Haiti	96
India	95
Sweden	76
Mexico	73

Audience by countries

## Working Remotely

Even through the Covid-19 pandemic, our team made a big impact while working remotely. The map here shows where each of our team members were working in the last year



From 2019 to 2020

## Conferences

Our work was widely distributed publicly at over

10 conferences,

which ranged from local to regional platforms. All presentations were conducted virtually in either a poster or oral presentation format. Themes included health services, gender disparities, surgical capacity, and safe surgery.



## Publications

Our work was distributed in over

25 journals.





“  
With social justice and equity as our foundation, we vow to continue to push the needle forward in making safe, timely and affordable surgery, obstetric and anesthesia care for all a top priority.

– John G. Meara, MD, DMD, MBA  
Director

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