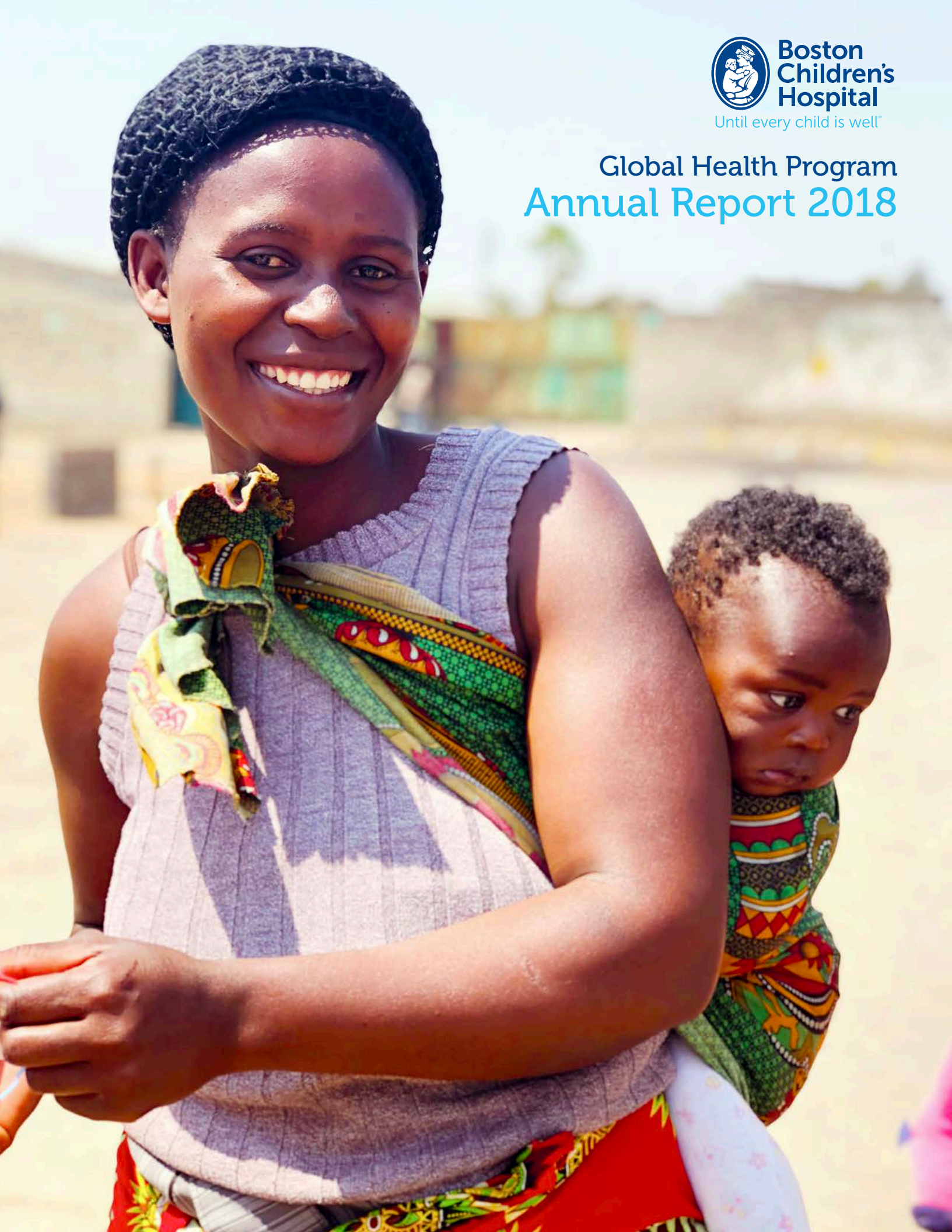


Boston Children's Hospital

Until every child is well™

Global Health Program
Annual Report 2018

Boston Children's Hospital
Global Health Program

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From the Desk of the **Director**

At Boston Children's Hospital's Global Health Program, we focus on impact. For us, this means action – sustainable, pragmatic strides towards the goal of every child everywhere having access to safe and quality healthcare.

We offer a broad spectrum of solutions to pediatric healthcare problems, including research, advocacy, education or assistance with direct clinical care delivery in times of disaster or crisis when local systems request a helping hand. We work in both development settings and complex humanitarian crises, providing solutions that are scalable and sustainable. Child health is complicated and multifactorial, requiring experts to efficiently and effectively impact the most challenging problems in countries like Liberia, Lebanon, and Laos.

We focus on problems identified and prioritized by our partners, empowering our local colleagues from the start. To develop sustainable, context-appropriate changes, we partner directly with local governments, teaching hospitals, and universities to weave initiatives into the framework of local systems. We pilot solutions together with our partners, testing them in real time. We continue to work with our partners once solutions are at scale to identify the next layer of problems to be solved to lift up their health systems.

PILOT **PARTNER** **SCALE** **SUSTAIN**



Once at scale, we look for opportunities to transfer tested solutions to other contexts. Our unique operational model, embedded within Boston Children's Hospital, amplifies our ability to find solutions to improve global child health by minimizing our direct operational costs and maximizing the returns on what is invested.

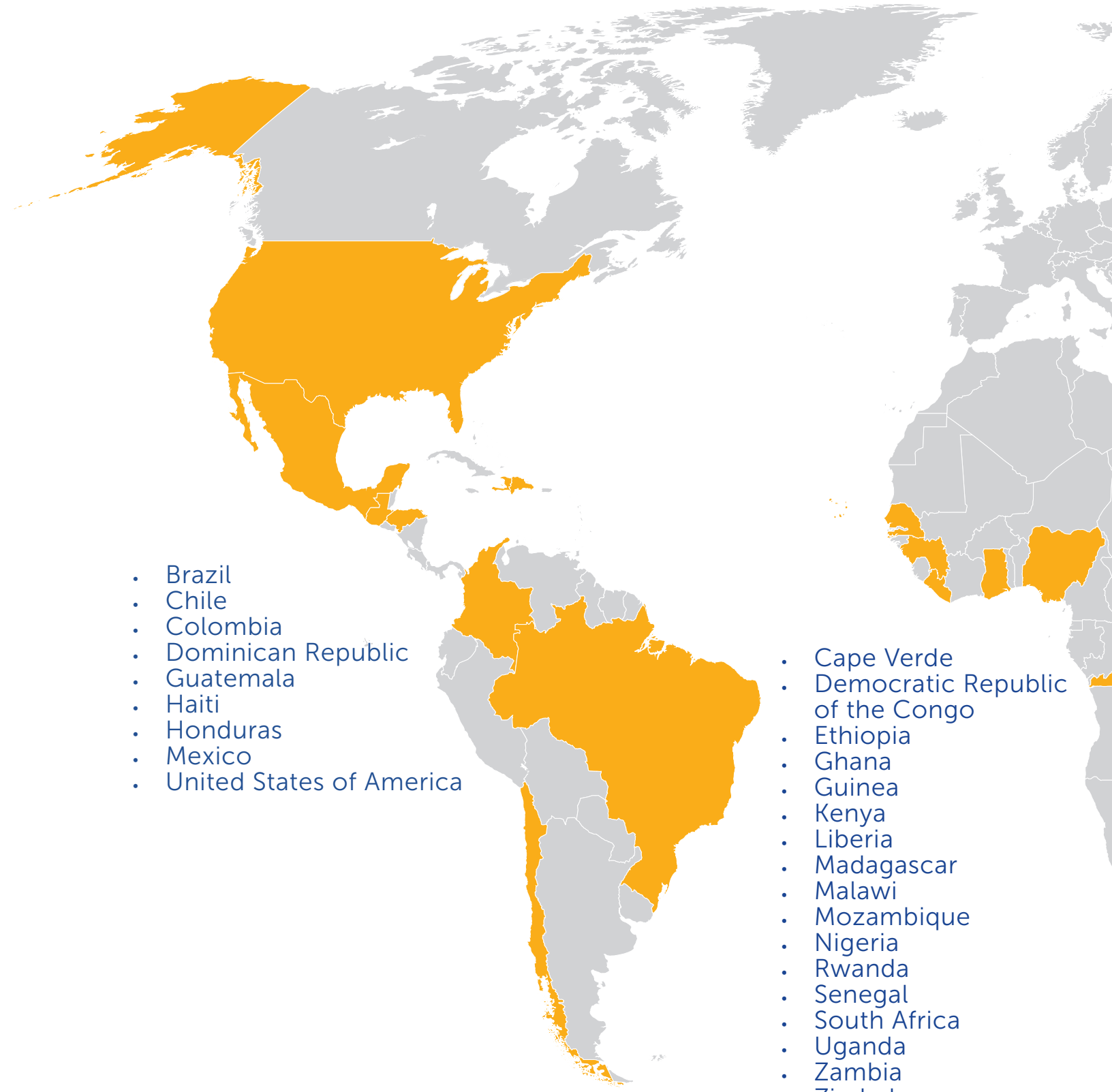
While Boston Children's has been contributing to global health since the invention of the polio vaccine in 1955, the establishment of the Global Health Program five years ago has led to organized, strategic responses that meet the most urgent threats to child health. This year's annual report highlights examples of our synergistic, partner-driven approach, giving you a glimpse into the problems that need to be solved, the solutions we've created, and where we can go in the future. With a long history of impacting global child health and a modern, efficient operating model, we are poised to expand our current efforts and tackle new problems. I hope in learning about these programs you'll see our unique value and opportunities to leverage our work and make an even greater and sustained impact.

We are growing - Come grow with us!

Michelle Niescierenko, MD, MPH
Director, Global Health Program

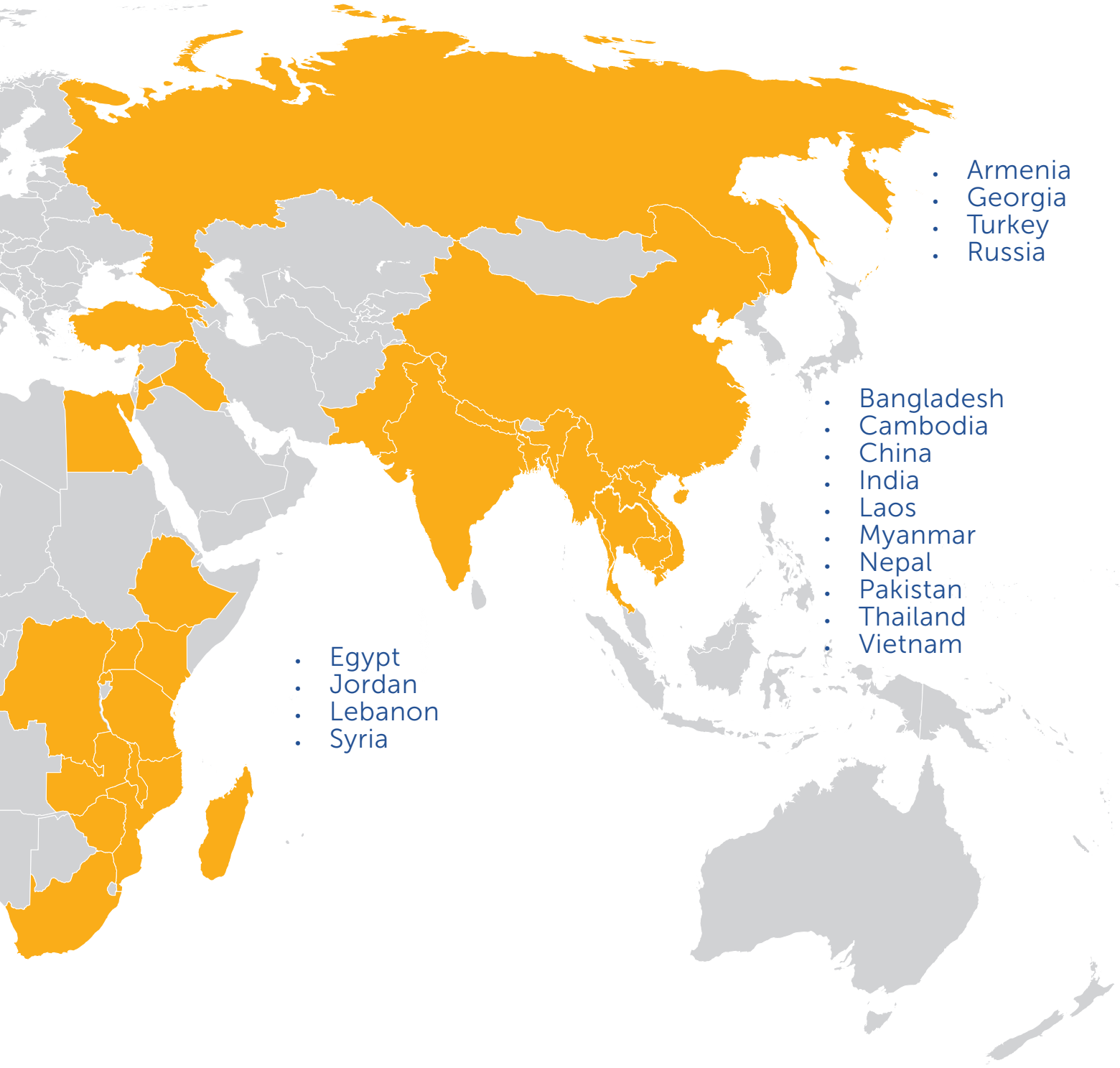


Where We Work



- Brazil
- Chile
- Colombia
- Dominican Republic
- Guatemala
- Haiti
- Honduras
- Mexico
- United States of America

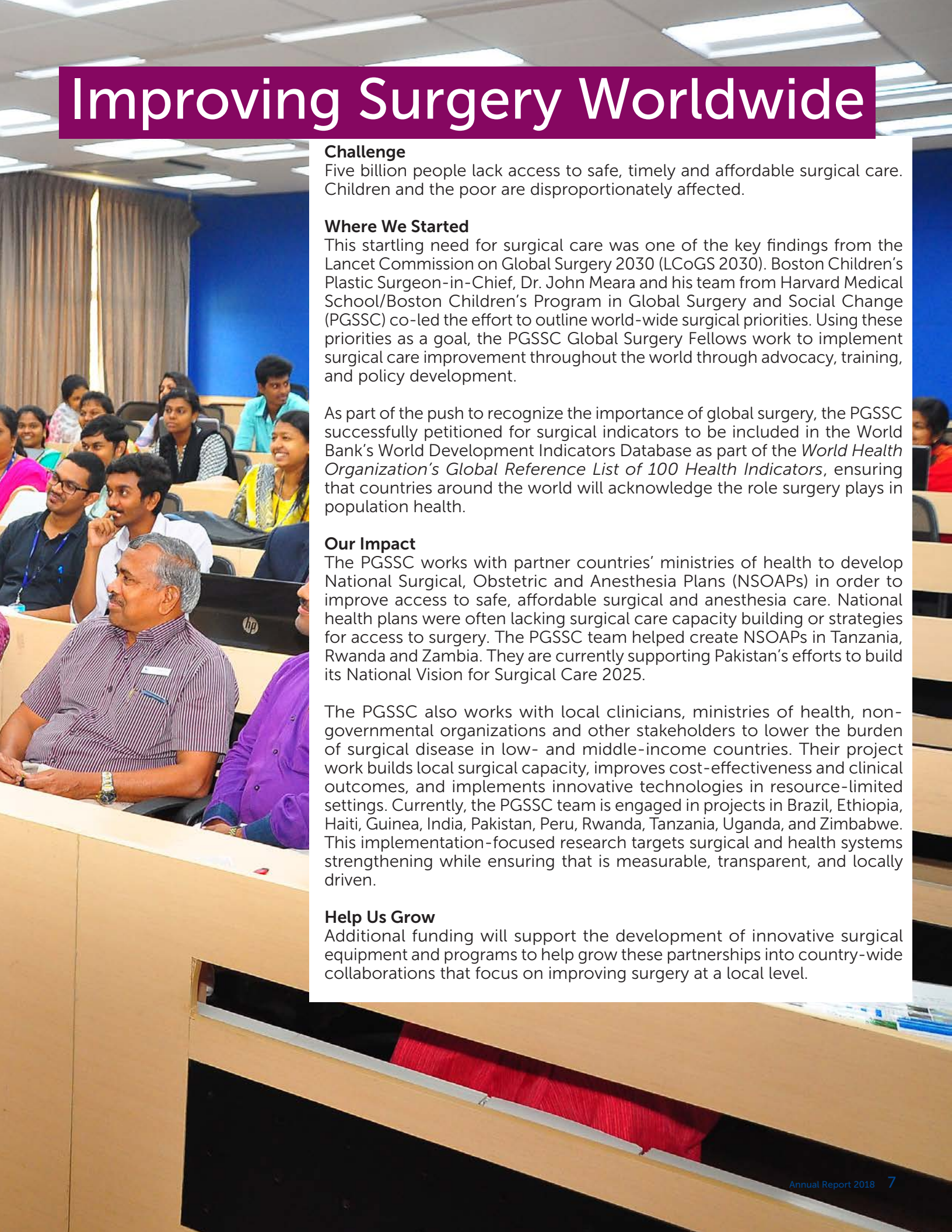
- Cape Verde
- Democratic Republic of the Congo
- Ethiopia
- Ghana
- Guinea
- Kenya
- Liberia
- Madagascar
- Malawi
- Mozambique
- Nigeria
- Rwanda
- Senegal
- South Africa
- Uganda
- Zambia
- Zimbabwe


Armenia
Georgia
Turkey
Russia
Bangladesh
Cambodia
China
India
Laos
Myanmar
Nepal
Pakistan
Thailand
Vietnam
Egypt
Jordan
Lebanon
Syria



The PGSSC team works with local surgeons to improve surgical delivery and capacity

Improving Surgery Worldwide



Challenge
Five billion people lack access to safe, timely and affordable surgical care. Children and the poor are disproportionately affected.

Where We Started
This startling need for surgical care was one of the key findings from the Lancet Commission on Global Surgery 2030 (LCoGS 2030). Boston Children's Plastic Surgeon-in-Chief, Dr. John Meara and his team from Harvard Medical School/Boston Children's Program in Global Surgery and Social Change (PGSSC) co-led the effort to outline world-wide surgical priorities. Using these priorities as a goal, the PGSSC Global Surgery Fellows work to implement surgical care improvement throughout the world through advocacy, training, and policy development.

As part of the push to recognize the importance of global surgery, the PGSSC successfully petitioned for surgical indicators to be included in the World Bank's World Development Indicators Database as part of the *World Health Organization's Global Reference List of 100 Health Indicators*, ensuring that countries around the world will acknowledge the role surgery plays in population health.

Our Impact
The PGSSC works with partner countries' ministries of health to develop National Surgical, Obstetric and Anesthesia Plans (NSOAPs) in order to improve access to safe, affordable surgical and anesthesia care. National health plans were often lacking surgical care capacity building or strategies for access to surgery. The PGSSC team helped create NSOAPs in Tanzania, Rwanda and Zambia. They are currently supporting Pakistan's efforts to build its National Vision for Surgical Care 2025.

The PGSSC also works with local clinicians, ministries of health, non-governmental organizations and other stakeholders to lower the burden of surgical disease in low- and middle-income countries. Their project work builds local surgical capacity, improves cost-effectiveness and clinical outcomes, and implements innovative technologies in resource-limited settings. Currently, the PGSSC team is engaged in projects in Brazil, Ethiopia, Haiti, Guinea, India, Pakistan, Peru, Rwanda, Tanzania, Uganda, and Zimbabwe. This implementation-focused research targets surgical and health systems strengthening while ensuring that is measurable, transparent, and locally driven.

Help Us Grow
Additional funding will support the development of innovative surgical equipment and programs to help grow these partnerships into country-wide collaborations that focus on improving surgery at a local level.

The Downs Foundation Helped Us Grow!
The generous support of the Rick and Sadhana Downs Foundation has allowed the PGSSC to develop a comprehensive multi-year program to improve access to safe surgery for patients by addressing technological, financial, and system barriers in India.

Recognizing the significant urban-rural divide in accessing surgical care, the PGSSC works with the Association of Rural Surgeons of India (ARSI) to identify, support, and train Indian surgeons who are successfully bringing care to the most rural, underserved communities in India.

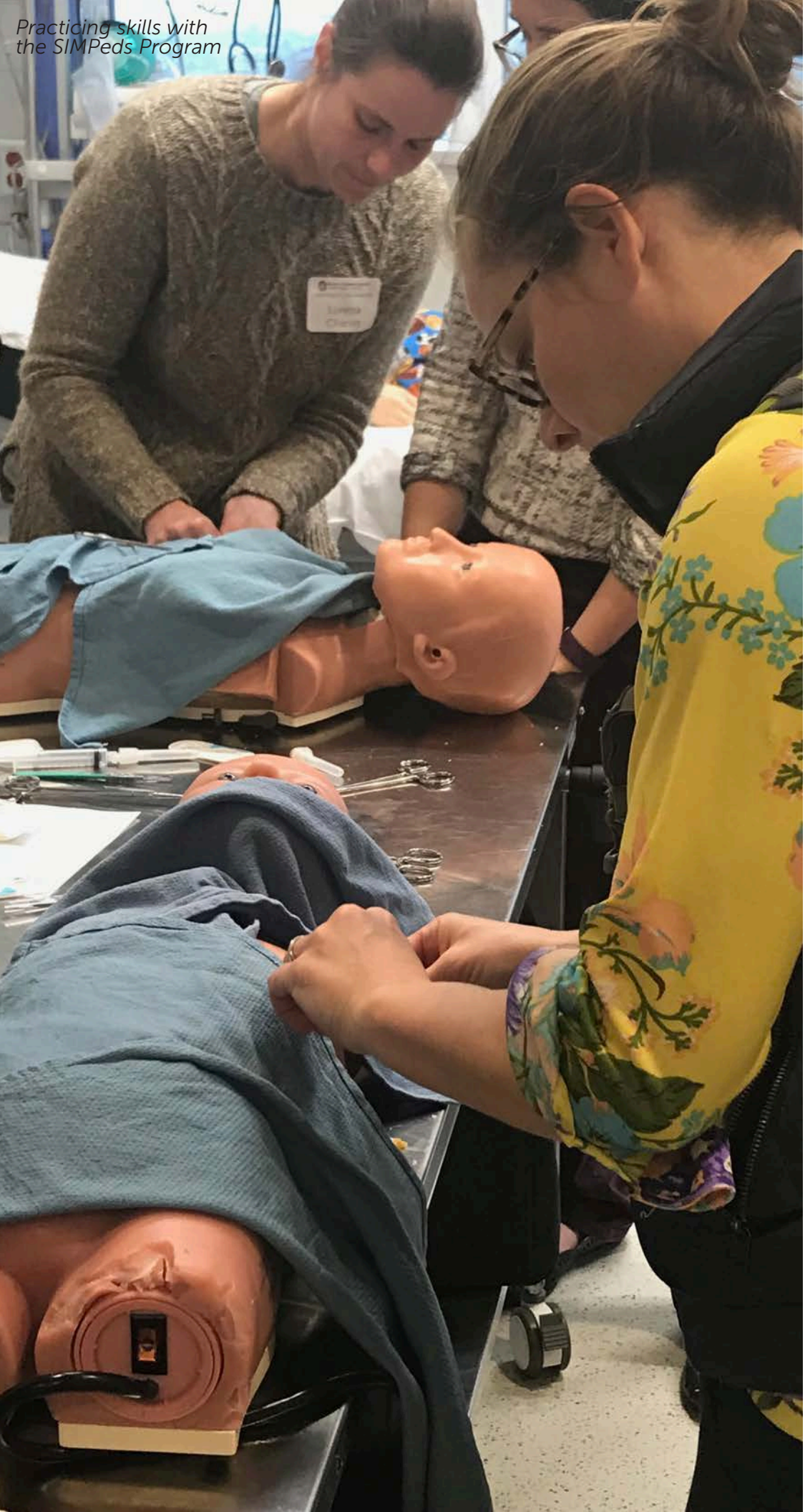
2018 Progress

- Partnered with local institutions to develop an innovative education program that builds local capacity and collaboration for research, fostering a new environment in which it is valued and recognized.
- Developed clinical care delivery programs in areas of severe shortage within India through educational programs, and clinical care team exchange.
- Engaged Indian students across disciplines, including engineering, to introduce global surgery, establishing opportunities to apply their skills through a collaborative process of problem solving and innovation to address the challenges to performing surgery presented by local surgeons and institutions.
- Introduced and drove consultation on new models of healthcare delivery and financing to facilitate increased access to care by enabling collaboration, education, and engagement on value-based healthcare and outcomes measurement.

Support In Action



Surgical gloves in India



Practicing skills with the SIMPeds Program

"Medicine is one of the few high-risk industries where people do not practice prior to game time," says Dr. Peter Weinstock, pediatric intensivist and Director of the Simulator Program at Boston Children Hospital's SIMPeds Program. The SIMPeds Program was created to give health teams a safe practice space to work through simulated clinical scenarios in order to improve their skills in an environment that allows learning without risking patient harm.

For the past 15 years, the SIMPeds Program has honed the concept of scenario-based simulation training, creating amazingly life-like trainers and synthetic patients that look and feel real. "What makes our simulation powerful," says Melissa Burke, the Director of Operations for SIMPeds, "is the ability to provide expert debriefing even when we are using something as simple as a doll to represent the patient. The technology is great and can be helpful in a country with a lot of resources, but we can also have an impact in countries that can't afford that technology."

Through support from the Downs' gift, the PGSSC and SIMPeds programs have developed a train-the-trainer module to train anesthesia providers. Lack of trained anesthesia providers is often a barrier to the safe provision of surgical care. This simulation training program has been implemented in three rural hospitals in India. It has helped medical officers, nurses, and other healthcare providers improve their ability to provide care in surgical emergencies.

Boston Children's Hospital | Simulator Program
Until every child is well



Scene from Guatemala

Nursing-Led Patient Safety

Challenge

The quality of critical care nursing education and patient safety is a broad global challenge.

Where We Started

A multidisciplinary team from Boston Children's partnered with Unidad Nacional de Oncología Pediátrica (UNOP) in Guatemala City, Guatemala, to improve patient safety. Together they created Educación de Cuidados Intensivos en un Hospital de Oncología (the ECHO Project) as a multidisciplinary educational collaborative between BCH's Intensive Care Unit and the Intensive Care Unit at UNOP. The partnership worked to deliver nurse education in pediatric resuscitation and to implement patient safety measures.

Our Impact

Along with other Boston Children's clinicians, nurse Liliana Jimenez, a 2018 Boston Children's Global Health Nursing Fellow, is growing this partnership, adding training on adverse event reporting and patient care initiatives intended to prevent pressure sores. Liliana credits the Global Health Nursing Fellowship's critical training and learning opportunities as positively impacting her ability to help the team scale the initiatives started under the ECHO Project.

Help Us Grow

The development of specialty pediatric care takes time, as does building the capacity of healthcare workers and systems within hospitals. With additional support, this team can scale our collaboration and expand to other priority topics to improve the quality of cancer care for children in Guatemala and our other pediatric cancer programs.

Transfering Expertise

Challenge

Across Sub-Saharan Africa, there is a shortage of pediatric specialists. In Zambia, a country of almost 9 million children, there are no Zambian child neurologists or clinicians with the medical training or expertise available to treat child neurological conditions.

Where We Started

Dr. Archana Patel, from Boston Children's Department of Neurology, responded to Zambia's huge unmet need for epilepsy care with support from the Global Health Program. Seeing the need for child neurology specialists, Dr. Patel partnered with the University Teaching Hospital and, with additional funding from the American Academy of Neurology, to leverage her experience and partnerships in Zambia to expand training of front line providers in the care of children with neurologic conditions. The partnership has expanded to other initiatives in the country, including mentoring and training the first two Zambian pediatric neurologists. Additionally, Boston Children's team members conduct teaching, patient care, and cooperative learning sessions, as well as distance teaching sessions with their Zambian counterparts.

Our Impact

Dr. Patel, the BCH team and local Zambian colleagues are utilizing Boston Children's expertise to improve Zambia's neurologic care. Dr. Ann Bergin and nutritionist Stacy Tarrant implemented a dietary treatment of hard-to-treat epilepsy in a country where few treatment options exist. Of the three patients who participated, one had a 50% reduction in seizures and one became completely seizure free. Based on this success, the two Zambian neurology trainees formed a team with local nutritionists to deliver this multidisciplinary complex care while ensuring its sustainability and growth. This work has gained international recognition. In 2018, Zambian trainee Dr. Lisa Nkole presented this work at the International Child Neurology Conference in Mumbai, India.

Help Us Grow

With additional resources we can train more child neurology specialists and more importantly more frontline healthcare workers like community doctors and nurses to expand access to specialized care in Zambia.

Dr. Patel with trainees at the University Teaching Hospital-Lusaka, Zambia



Boston Children's Hospital
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OPEN PEDIATRICS™

OPENPediatrics is a clinician community site that supports online learning, social collaboration, and access to information on demand. The platform has users in 2,380 hospitals across 145 countries, creating a connected global community of pediatric learners.

OPENPediatrics creates educational videos that cover a range of pediatric care topics, from critical care to nursing to emergency response planning. The peer-reviewed, evidenced-based content fills a void for high-quality open source pediatric education. The content can be customized to provide guided learning pathways that target the needs of the learners with knowledge assessment tests to benchmark progress. The platform offers a social learning feature for users to host conferences, share resources, and have group discussions via video from all corners of the globe.

Dr. Patel received a grant from the OPENPediatrics Program to enhance neurology training for both frontline providers as well as pediatric neurology residents in Zambia. She and her team are creating learning pathways to improve the recognition and management of basic neurologic conditions in children. They hope to further expand their efforts and create a platform for ongoing learning where Zambians treating neurologic conditions can communicate and continue to learn from each other, as well as specialists around the world.

Help us grow

By sponsoring an expansion of this curriculum or another needed area in pediatrics.

Building the Workforce



Challenge

In much of the developing world there are too few or no doctors specialized in providing care for children. Liberia had only two pediatricians for over 2 million children.

Where We Started

In 2010, Liberia, a small West African nation, had only 2 pediatricians trained to care for over 2 million children. BCH partnered with the Liberia College of Physicians and Surgeons in response to this challenge. Together, they developed and run a pediatric training program.

Our Impact

The Global Health Program is partnering with the Ministry of Health on a pediatric residency program to train new Liberian pediatricians. Together with Liberian and West African pediatricians, Dr. Michelle Niescierenko, Director of the Boston Children's Global Health Program, helps run the program that provides training to 10 future pediatricians a year. Since its inception, the program has so far graduated 7 pediatricians, more than tripling Liberia's pediatric workforce. As part of the Liberian residency training program, Boston Children's has implemented a novel point-of-care ultrasound training program. This innovative program brings ultrasound technology to the bedside, not just for children but for all patients. This training will not only improve quality of care, but also make it more accessible and affordable for all.

Help Us Grow

Investment in this partnership supports opportunities to expand training to reach nurses, implement emergency care, implement community nutrition programs and to develop pediatric specialty care. Additional opportunities exist to expand ultrasound training to spread this low-cost technology throughout the country, making it accessible to the whole population.



Pediatric residents in training in Liberia



Public Health Outreach

Challenge

Zambia remains one of the top 10 countries in the world for people living with HIV/AIDS, with approximately 60,000 new HIV infections and 21,000 AIDS-related deaths each year.

Where We Started

Over 90% of Zambians have heard of HIV, but only 39% of people understand the virus and how it is spread, making education an urgent need. With support from Boston Children's Aerosmith Endowment for Prevention and Treatment of HIV, Global Health Program Manager Katy Weinberg partnered with Zambian public health partners and over 100 teens to find out what teens worried about in regards to their risk of HIV. Universally, teens were concerned with the high rate of sex in exchange for items such as phone time and clothes, etc. Armed with this information, Katy brought together Boston Children's Center for Media and Child Health and well-known local pop-artist Ephraim "Son of Africa" Mutalange to create a song and music video with targeted messages intended to spark discussions on HIV and how youths can protect themselves.

Our Impact

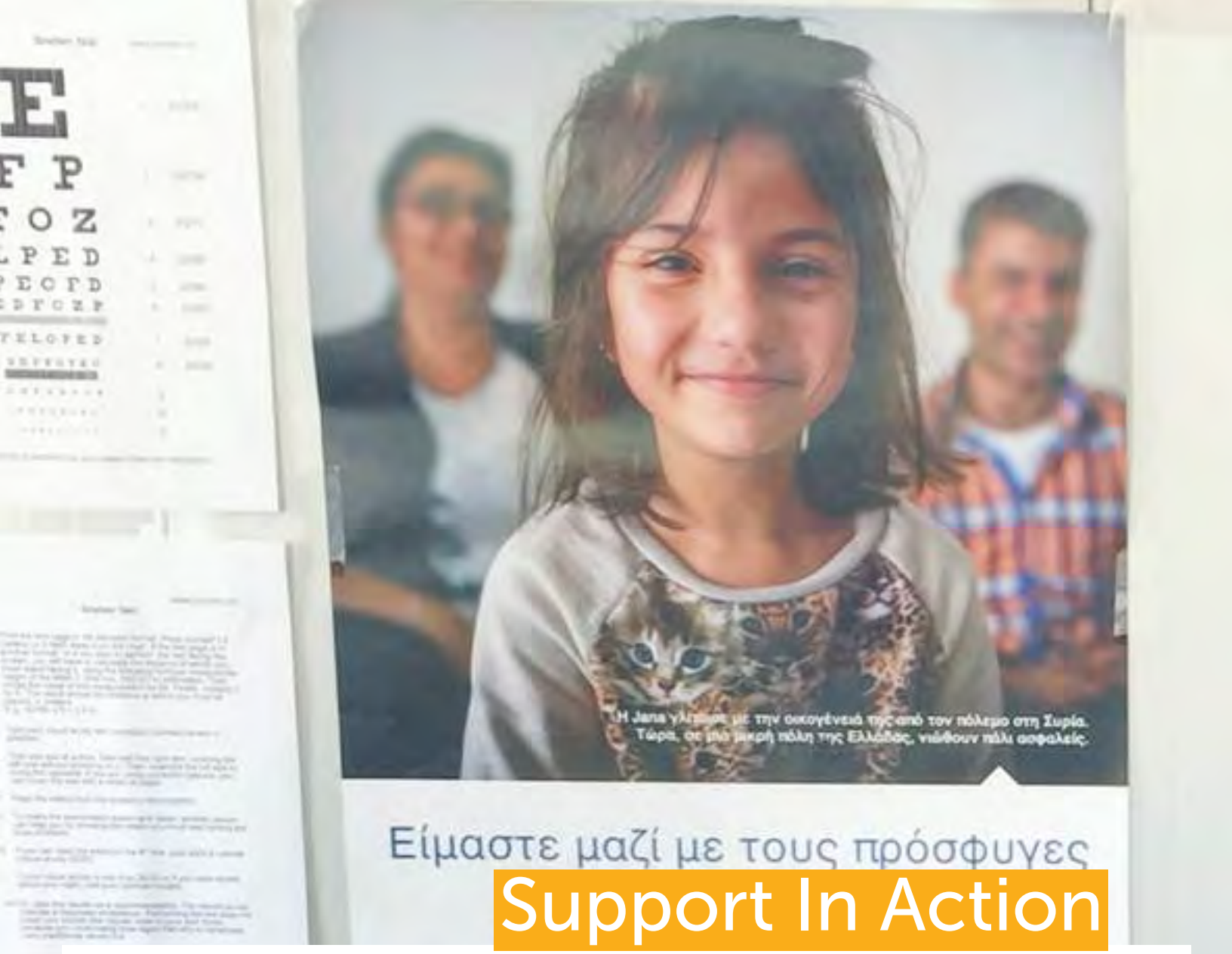
The song and video "Worth More" were launched in August of 2018 through pop-up concerts in townships across Zambia as well as through CD giveaways, a social media campaign, and radio interviews on top radio stations. In a post-release survey, youth successfully understood the song's message "you are worth more than material things." The song also received positive feedback across Facebook, YouTube and radio. Watch here: https://notes.childrenshospital.org/hiv-aids-africa-music/.

Help Us Grow

Music is a powerful and easy way to reach a large audience of teens and adults for health education. With more support, additional songs engaging more genres of music and more local artists could be created and scaled out to other public health topics and countries for education and prevention.



HIV awareness outreach concert, Lusaka, Zambia



Support In Action

The Ryan Family, in honor of their daughter Maggie, helped us grow!

The Maggie Ryan Endowed Fellowship was created in memory of Maggie Ryan, a remarkable young woman (and former intern of the Global Health Program) whose life was tragically cut short in an automobile accident as Maggie drove home after her college graduation. Out of this tragedy, as a tribute to Maggie, her family, parents Ann and Tony and brothers Matthew, William and Thomas created the *Maggie Ryan Endowed Fellowship in Global Health.*

This fellowship allows for an annual fellow to devote themselves to global health program delivery full time.

In 2018, Lexie was able to leverage the flexibility and funding that come with the Maggie Ryan Fellowship to participate in projects, trainings, and clinical care around the globe, including:

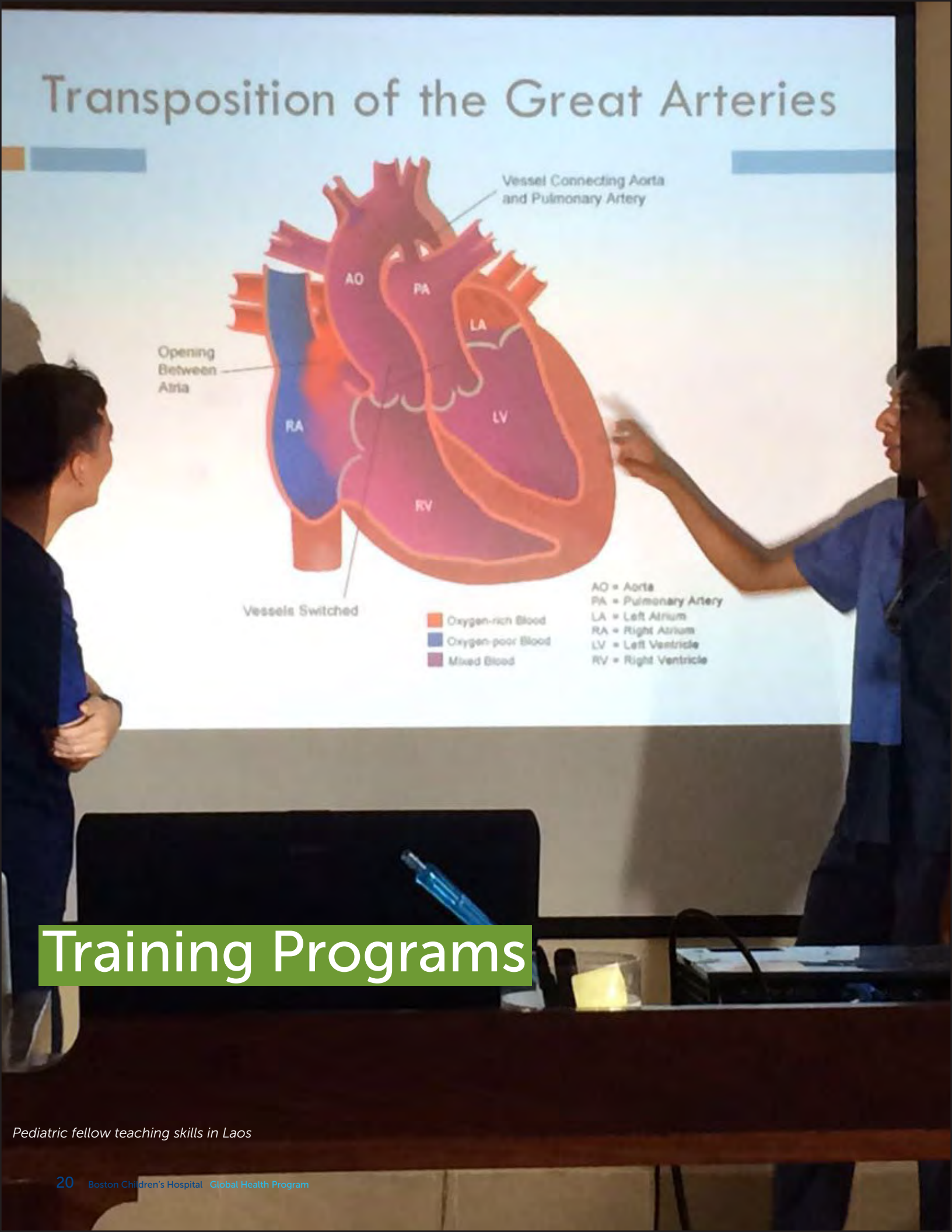
- Travel to Greece, Bangladesh and Lebanon to assist in refugee care and training of medical personnel;
- Hospital systems strengthening and partnership in Laos, Lebanon, and Ghana;
- Disaster response as part of the federal medical disaster team in Puerto Rico after Hurricane Maria.



"As a leading pediatric medical institution, Boston Children's can drive changes in kids' health care globally. But we need more people to **get the work done**. The Maggie Ryan Endowed Fellowship in Global Health gives skilled people, like Lexie, the time and schedule flexibility to get work done"

- Michelle Niescierenko, MD, MPH, Director, Boston Children's Global Health Program

Maggie Ryan Fellow, Alexis Schmid, a pediatric nurse practitioner certified in primary, emergency, and acute care, in refugee camp in Greece



Training Programs

Pediatric fellow teaching skills in Laos

Boston Children's Global Health Fellowship Programs are designed to train future leaders in global child health and support the development of essential child health services in regions of the world with the greatest need. The focus is on training a cohort of clinicians who have the skills and long-term commitment necessary to improve global child health.

Global Pediatric Service Delivery Fellowship

Each year, 6-8 fellows participate in the Department of Medicine's Global Pediatric Fellowship. During this two-year training program, fellows rotate in six-month blocks between a field placement in Haiti, Rwanda, or Laos and a clinical placement at Boston Children's. This fellowship provides fellows with skills-training in global health service delivery, preparing them to work at their partner site. There they provide clinical care, medical education, program development, management, outcome evaluation, quality improvement and implementation of need-driven research.

Global Nursing Fellowship

The two-year Global Nursing Fellowship provides 3 Boston Children's nurses each year with protected time to develop new skills in global health, including leadership, project design, and implementation. This fellowship enables fellows to expand their global experience and advance their efforts in pediatric global nursing.

Global Research Fellowship

The Global Research Fellowship allows research-focused pediatricians to work on new solutions to global child health challenges.

Paul Farmer Global Surgery Fellowship

The Program in Global Surgery and Social Change (a collaborative effort between Boston Children's and Harvard Medical School) includes the Paul Farmer Global Surgery Fellowship. This fellowship trains leaders to further promote surgical care, education, and research pertinent to global surgery. Fellows develop academic, clinical, and administrative skills in global surgery, public health, surgical systems development, and humanitarian aid.



Paul Farmer Global Surgery Fellows with Dr. John Meara

Help Us Grow--Leverage our Impact

Boston Children's takes seriously its responsibility to mentor future leaders in global child health and develop essential child health services in regions of the world with the greatest need. Supporting these fellowships provides funding and protected time for outstanding professionals who are determined to make a practical impact on maternal and child health globally. Fellowships may be created in Pediatrics, Nursing, Pediatric Surgery, Anesthesia, Mental Health or Research or to support our colleagues in developing countries to learn more. Our Global Health Fellows concentrate their efforts on new solutions for priority global health challenges through clinical innovation, delivery of education, response to urgent global needs and research.





Help us grow.

Donate here:

https://globalhealth.childrenshospital.org/









Snapshots from around the world at our project sites; Clockwise from top left: Fellows with Mexican med students; Skills Week-Boston Children's, Lebanon sunset; PGSSC training in India; Zambian Children, Laos scene; Dr. Patel with trainees in Zambia; Zambian woman; Medical transport in India; JFK Hospital Monrovia, Liberia









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