GLOBAL EMERGENCY CARE

2016 ANNUAL REPORT

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Dear friends and supporters,

In 2016, Global Emergency Care accelerated many significant steps forward for Ugandan emergency care development, and in particular for the Emergency Care Practitioner program.

After five years and an enormous amount of effort, both GEC's Diploma in Emergency Care (the ECP program) and the Master in Emergency Medicine (equivalent to a U.S. residency program) gained final approval from Mbarara University of Science and Technology (MUST). The initial comments that were returned for both programs were highly positive, and as the year ended, MUST was working to schedule a site visit for the National Council of Higher Education officials to complete the final hurdle before program implementation.

GEC continued to operate at two sites in Uganda, with ECPs caring for approximately 10,000 patients in 2016. GEC coordinated a short course in emergency care in anticipation of the full diploma course at Masaka Hospital. Six students enrolled in the short course, in which the ECP Trainers highlighted the basic approach to emergency care and imparted new skills, including point of care ultrasound. At Nyakibale, the sixth ECP class began training and we welcome Darius, Sandrah, and Sr. Agatha to the GEC family.

GEC representatives attended the 3rd African Conference on Emergency Medicine in Cairo, Egypt and two ECPs, Hilary Kizza and Glorious Kansiime, represented GEC. Hilary gave a presentation on the ECP program that was very well received by the delegates from all around the world. The need for non-physician emergency care practitioners was a recurrent theme in the keynote addresses and many sessions of the conference. This was a very exciting meeting, as just five years earlier, GEC was one of the only groups advocating for the training of non-physician clinicians.

GEC was honored to have a paper published in the journal Pediatrics in the spring of 2016. The paper documented the lasting impact of GEC's training program. It shows that 80% of children under five had just as low of a mortality rate if they were treated by an ECP alone, versus being treated by an ECP with a trained emergency physician supervising them. Maybe even more importantly, the mortality rate for that sickest 20% of children appeared equal to or better than the care delivered by non-emergency physicians. This paper really highlights the success and impact of GEC's training program.

Also, on a national level, while a new Minister of Health was appointed in mid-2016, the Ugandan commitment to emergency care development remained strong. We are looking forward to 2017 and all it holds for Ugandan emergency care development. As always though, we remain grateful for all of your support. Without the generous support of our donors and funders, none of this life saving work would have been possible.

With our deepest gratitude,

Heather Hammerstedt, Mark Bisanzo, Stacey Chamberlain, Sara Nelson, and Brad Dreifuss
GECC Board of Directors

GEC MISSION

To make lifesaving medical care available to all Ugandans

HIGHLIGHTS

AFRICAN CONFERENCE ON EMERGENCY MEDICINE CAIRO, EGYPT

The 2016 African Conference on Emergency Medicine (AfCEM) took place in Cairo, Egypt. GEC was lucky to have great representation attending the global emergency medicine gathering. The two ECP representatives, Hilary Kizza and Glorious Kansiime, eagerly attended every session possible. Hilary presented to an international audience about GEC's work in Uganda. He was passionate and knowledgeable, and attendees from all over the continent approached him afterwards to learn more about establishing emergency medicine training programs for non-physician clinicians in their countries. While GEC has been using this model for years, this concept is now being recognized by the global emergency medicine community as an important model to utilize existing resources. In fact, each keynote speaker spoke to the future of emergency medicine in Africa and emphatically called for the use of ECP-like clinicians, or non-physician clinicians, as the answer to Africa's emergency care provider shortage.

PUBLICATION OF JAMA PEDIATRICS ARTICLE

In March 2016, Brian Rice, MD, GEC Research Operations Director, and the GEC team published a paper in JAMA Pediatrics showing that training non-physician clinicians – like ECPs - in emergency care showed similar mortality outcomes for unsupervised ECP care compared with physician-supervised ECP care for the majority of patients under five years old. Though physician supervision reduced mortality for a severely ill subset of patients, physicians are not available full-time in most EDs in Sub-Saharan Africa. This outcome shows that the GEC model of training nurses to become ECPs saves lives in children under five and offers a scalable, affordable solution for countries to grow their health care workforce while strengthening their overall health systems.

PERSONAL STORY

DR. OMEED SAGHAFI, VOLUNTEER PHYSICIAN

I am an emergency physician who volunteered with Global Emergency Care as an instructor and physician at Nyakibale Hospital. I have volunteered internationally with several organizations, but I can honestly say that GEC was the paragon of programs. Too many international programs focus on delivering short-term care. As soon as they leave, medications or surgeries that patients become accustomed to are no longer available, logistics fall apart, and a rural village is actually worse off than before the helping hands arrived. This is not the case with GEC. The program focuses on creating sustainability by training ECPs to not only treat patients, but to also teach future ECPs. These ECPs are both eager to learn and eager to teach. I teach residents and medical students in America, but I have never seen anyone so excited to teach and learn as the ECPs in Uganda; they do so as if their lives and the lives of everyone they care about depends on it. The Ugandan students often only ate one real meal a day, but they ate emergency medicine for breakfast, lunch, and dinner. They were either working, teaching, or learning from sunrise to sunset; and they did so with joy and excitement.

The ECPs also provide much-needed emergency care. I once asked a patient who had his leg shattered by a truck what he did in parts of Uganda without emergency care. He said he would go to a clinic and wait to be seen. Sometimes patients at clinics would have to wait for hours or days. It is not uncommon for patients to die waiting in Uganda. I watched the ECPs save an endless number of patients facing imminent death from malaria, traumatic injuries, typhoid, and a host of diseases. With only limited resources, these patients had little chance of survival, and the only thing that saved them was getting to those resources (hydration, antibiotics, closing a bleeding a wound) as fast as possible. The concept of rapid, emergency care which we take for granted in America is not the standard in Uganda. But, GEC is helping make it the standard. ECPs at Nyakibale and Masaka treated 20,000 patients this year. Ultimately, each ECP is expected to treat 40,000 patients in his or her career, meaning for every 25 ECPs trained, 1 million Ugandans will receive high quality medical care that they otherwise would not have received. GEC is creating a truly sustainable system that is changing the way a country provides medical care, ultimately saving lives.

> "The concept of rapid, emergency care which we take for granted in America is not the standard in Uganda. But GEC is helping make it the standard."

THE ROLE OF EMERGENCY CARE

IN THE SUSTAINABLE DEVELOPMENT GOALS

Emergency care has the potential to be a major driver towards successful completion of 10 health-related Sustainable Development Goals (SDGs). The SDGs are a new, universal set of goals, targets, and indicators that UN member states are expected to use to frame their agendas and political policies over the next 15 years. The SDGs follow and expand on the Millennium Development Goals, which were agreed by governments in 2001 and expired at the end of 2015.

As an NGO working in global health and development, GEC strongly supports the SDGs and works to reach the identified targets by 2030. In fact, GEC is in a unique position to contribute to SDG success because our mission to increase access to emergency care can directly improve outcomes for 10 different SDG targets.

Those targets are:

- By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births
- By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
- By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases (NTDs) and combat hepatitis, water-borne diseases and other communicable diseases
- By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being
- Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol
- By 2020, halve the number of global deaths and injuries from road traffic accidents
- Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all
- By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
- By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations
- Significantly reduce all forms of violence and related death rates everywhere

Training ECPs to diagnose and treat acutely ill and injured patients is a horizontal intervention that cuts across many disease-based interventions, like HIV/AIDS, TB, malaria, and NTDs, as well as a wide variety of other public health interventions, like infant and maternal mortality, injuries, road traffic accidents, substance abuse, poisonings, water borne diseases, disasters, and violence. Because emergency care clinicians usually are the first to treats patients with a wide variety of diseases and injuries, the proliferation of specialty trained emergency care clinicians will not only provide essential surveillance, but also improve outcomes in no less than 10 SDG target areas.

ECP SPOTLIGHT

CLEOPHUS TO THE RESCUE

Last month, a 30-year-old man in a motorcycle accident was brought to the Nyakibale Emergency Department. The patient had a femur (thigh bone) fracture and head injury. His vital signs were unstable, with a very low blood pressure from hemorrhaging. The patient was confused and agitated and had a "raccoon eye", concerning for bleeding in his brain.

Cleophus Mugisha, an Emergency Care Practitioner student, stabilized the patient by applying a splint to the patient's femur, elevating his head, giving him IV fluid and a blood transfusion, along with pain medication. Cleophus called the physician on call, and they arranged to transfer the patient to the regional referral hospital 2 hours away for further management of his head injury. The patient's vital signs were improved to allow him for safe transfer.

Cleophus, a first-year trainee in 2016 reports, "Personally, the program has changed my life. I've been able to acquire hands-on skills like repairing lacerations, stabilizing patients, managing emergencies, like shock, asthma, foreign body removal, and being able to do a lumbar puncture. Apart from the hands-on skills, I've been able to acquire skills from the senior ECPs in patient approach and management. I appreciate everything from GEC for the support through education."

BENIFER SAVES A LIFE

A 52-year-old woman, who had been suffering from ulcers for 4 years, developed severe abdominal pain and went to the Nyakibale Emergency Department. She was found to barely have a pulse and had a high fever. Benifer Niwagaba, an Emergency Care Practitioner student, immediately recognized the severity of her condition. He started an IV to give her fluids and performed a bedside ultrasound which showed fluid indicating a bowel perforation due to her ulcers. He called the surgeon on call, gave the patient pain medication, oxygen, and IV antibiotics to stabilize her. The woman was then taken to the operating room where she had her bowel repaired, and she recovered well.

Benifer, a first-year trainee in 2016 states, "Personally I have acquired new skills, like reducing fractures and how to approach critically sick patients. I have gained new skills on how to manage patients from the seniors. I appreciate the energy and effort that GEC is putting on so that the course can be recognized by the government of Uganda. We hope in the future that we can grow in our studies, and we promise to continue working with GEC doing emergency medicine."

FINANCES

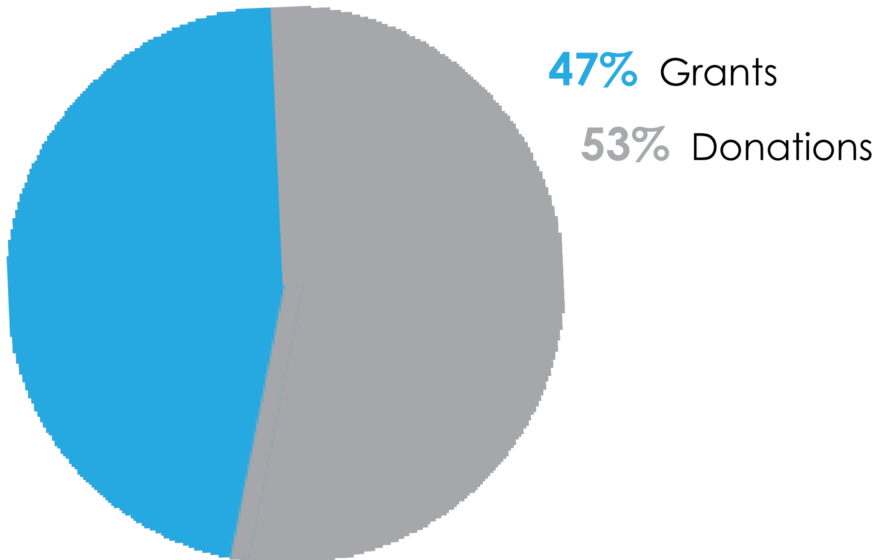
In 2016, Global Emergency Care's expenses exceeded our revenue. This is due in part to a two-year grant GEC received in 2015 to help fund the Masaka program. The entire amount was received in 2015 to cover the expenses for the program in both the 2015 and 2016 fiscal years, so the income is not reflected in 2016.

GEC also experienced a slight drop in donations from individual donors. We continue to work to expand our donor base and overall donation revenue.

$1,971,660

in-kind professional services donated by GEC board, staff, and volunteers

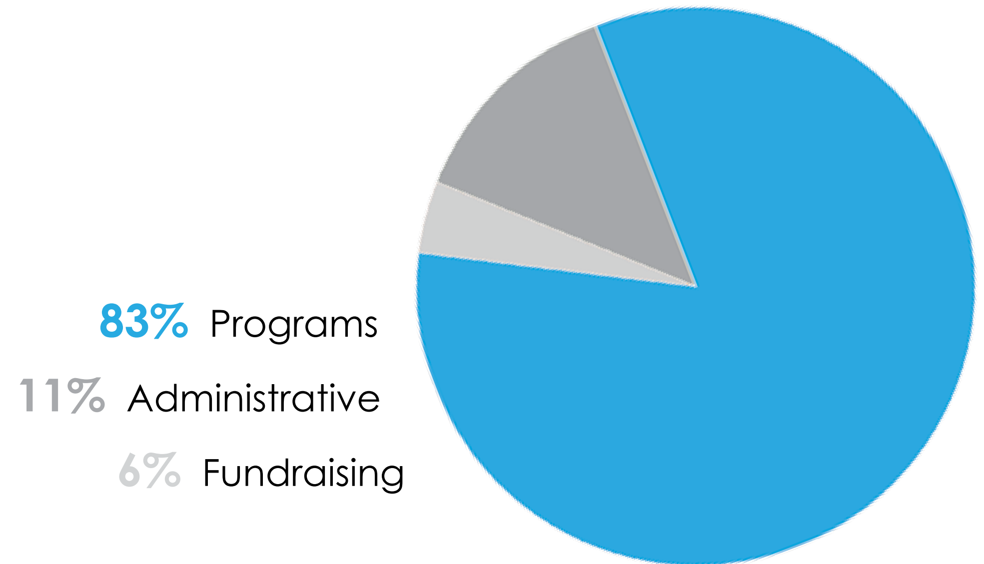
TOTAL INCOME $120,575



47% Grants

53% Donations

TOTAL EXPENSES $153,864



83% Programs

11% Administrative

6% Fundraising

THANK YOU

The accomplishments of 2016 have been a culmination of a decade of hard work and dedication from GEC's ever-supportive foundation partners and our tireless and dedicated volunteers. In 2016 alone, GEC volunteers donated almost $2 million of their time to further our mission. None of our work or our successes would be possible without the support of all of you. Thank you for your generosity, encouragement, and continued support!

2016 FUNDING PARTNERS

HOLMES FAMILY FOUNDATION

FREAS FOUNDATION

2016 VOLUNTEERS

U.S. VOLUNTEERS: Bonni Theriault, Mélissa Langevin, Usha Periyanayagam, Brian Rice, Kathylynnn Saboda, Emily Grover, Ryan Brandt, Ben Terry, Lori Stolz, Elaine Situ-LaCasse, Luke Friedman, Katie O'Brien, Mariah McNamara, Gary Sharpe, Gian Brown, Mark Casella, Brittany Locklin, Sulayman Makalo and Bethany Ross

GLOBAL HEALTH FELLOW: Mariel Collela

U.S. INTERNS: Claire Worley and Crystal Mendoza

UGANDA VOLUNTEERS: Dan Dolan, Brian Rice, Aaron Snyder, Lonnie Sproles, Derrick Nitsche, John Allen Houston, Meg Pelis, Rachael Horner, Amy Stoesz, Christine Huang, Hans Hurt, Meghan Fabrizi, Viral Patel, DeVaughn Peace, Mary Claire McGlynn, Andrew Harkins, Denrick Cooper, Pegeen Eslami, Liz Carter, Tom Avery, Angela Harper, Benjamin Terry, Amy Stoesz, Ashley Pickering, Mike Schick, and Kenn Ghaffarian