ISSUE 1 | JUNE 2018

*VOICES OF SURGERY*

*5 BILLION VOICES*

A NEW PUBLICATION DEDICATED TO GLOBAL SURGERY
5 BILLION VOICES LACK ACCESS TO SAFE SURGERY. MAKE THEIR VOICES HEARD TODAY.

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FEATURING

Treating Tumours in Cambodia

Dr Tho Ly describes the challenges he faces in overcoming sarcoma in Cambodia.

The Importance of a Logbook

Saqib Noor describes the critical value of a logbook as One Surgery launches a new free online service.

Global Neurosurgery and Beyond

An exclusive interview with Dr Kee Park, a neurosurgeon, WHO consultant and Paul Farmer Global Surgery Scholar.

The Five Billion Voices of Global Surgery

Dominique Vervoort describes the current concepts of the global surgical movement.

The Anaesthetist Behind the Mask

Dr Radharikrishnan, an anaesthetist and writer in India gives his thoughts on improving safer surgery.

Students, Surgery and Friendships

Volunteering, even for a short time, can result in a lasting and meaningful impact.
June 2018

Dearest Readers,

Undergoing a major surgical procedure is one of the most daunting times of our lives. Amidst the suffering of the disease and the uncertainties of surgery, we place our trust and faith in surgical teams to deliver the outcome that we and our loved ones dearly hope for.

Surgery, however, is not a uniform event. The variables in achieving surgical success differ wildly, from team to team, from hospital to hospital, from country to country. The discrepancies between surgical care being delivered across the globe is stark, with a vast proportion of the world’s population in a state of surgical neglect.

There is now an urgent and growing movement to address this imbalance and improve surgical care worldwide. Within this movement, there is an inspiring chorus of voices singing together in an attempt to tackle the greatest surgical challenge of our generation.

One Surgery believes these voices deserve to be highlighted - from surgeons to anaesthetists, from nurses to allied carers, from patients to professors and from politicians to industry experts. We hope these inspiring and deserving voices will be heard by and shared with as many people as possible.

With love always,

SAQIB NOOR

saqib@one.surgery
Five billion people—five out of every seven human beings—in the world lack access to safe surgical and anaesthesia care. With over 17 million preventable deaths every year, lack of access to surgery imposes higher mortality than any disease. Moreover, operable conditions make up a big part of the global burden of disease, with an estimated 28-32%. Even though 313 million surgeries take place every year, only 6% of these are reserved for the poorest third in the world. In contrast, 74% of all major surgeries takes place in the richest third of the world’s population. Nevertheless, until recently, the international community barely batted an eye for what we collectively call “Global Surgery”.

In 1980, in his address “Surgery and Health for All” to the 12th biennial World Congress of the International College of Surgeons, former Director-General of the World Health Organization (WHO) Halfdan Mahler brought the global lack of access to surgical care to the attention of the world through the memorable words written by Dr. William Gunn: “The vast majority of the world’s population has no access whatsoever to skilled surgical care and little is being done to find a solution. I beg of you to give serious consideration to this most serious manifestation of social inequity in health care”. Nevertheless, this moral call for action did not bring the needed paradigm shift in the 80s, 90s, and early 2000s, as surgery remained consistently considered as too expensive and too complex to scale up on a global level.

In 2008, Harvard Medical School infectious disease specialists Dr. Paul Farmer and Dr. Jim Y. Kim (current President of the World Bank Group) published a non-surgical view of “global surgery” with their paper “Surgery and Global Health: A View Beyond the OR”. The paper coined surgery “the neglected stepchild of global health”, becoming the most quoted words in global surgery, calling for increased
attention and awareness among surgeons and policymakers about surgery as a vital component of global health.

In 2014, the cost myth hindering surgical upscaling was debunked, opening the way for more serious attention for the matter. Caris E. Grimes et al. published “Cost-effectiveness of Surgery in Low- and Middle-income countries: A Systematic Review” in the World Journal of Surgery, proving the favourable cost-effectiveness (dollars spent per DALY averted) of basic surgery in low-resource settings compared to other public health interventions, such as oral rehydration therapy, breast feeding promotion, and anti-retroviral therapy for HIV. This led to the conclusion that simple surgical interventions, both life-saving, life-changing, and disability-preventing, ought to be integrated in health policies and be accessible at the district level.

2015 proved to be a pivotal year for global surgery. The Lancet Commission on Global Surgery (LCoGS) mapped the global state of access to surgical and anaesthesia care, which they published in their report “Global Surgery 2030: evidence and solutions for achieving health, welfare, and economic development.”, providing the international community with the needed rationale for addressing global surgical care. Moreover, the WHO and its 194 Member States acknowledged the importance of addressing the global state of surgical systems to promote better health, well-being, and economic growth. During the 68th World Health Assembly in May 2015, the resolution WHA68.15 “Strengthening Emergency and Essential Surgical and Anaesthesia Care as a Component of Universal Health Coverage” was adopted,
Dissecting the 5 billion people without access to surgical care when needed, four essential components are necessary to grant an individual timely access to quality care. As defined by the LCoGS, access requires physical availability in a timely manner, presence of the necessary capacity of material and human resources, with sufficient quality and safety, and financial risk protection protecting people from being pushed (further) into poverty.

As a result, disparities arise between and within countries, as specialists and resources concentrate in urban and economically stronger areas. For example, in East Africa, there are only 2.5 fully trained surgeons per million population, compared to 56.8 per million in the United States of America. Afghanistan has only 9 anaesthesiologists for 32 million people, whereas the Central African Republic recently lost its last anaesthesiologist, leaving 8.9 million inhabitants without physician anaesthesia providers. Lastly, Africa holds only 3% of the world’s 500,000 obstetricians, contributing to the global (preventable) maternal mortality rate of 300,000 women during childbirth.

To bring this memorable point in time to the attention of social media, InciSioN – International Student Surgical Network started Global Surgery Day on May 25th 2015, which has grown since its inception.

In 2017, the 70th WHA marked another big step towards achieving safe surgical care for all, with multiple stakeholders (WHO, international organizations, and civil society) further drawing the attention to global surgery. Zambia was the first country to announce their National Surgical, Obstetric, and Anaesthesia Plan (NSOAP) – a framework for integrating surgical care in a country’s health agenda - which was incorporated in Zambia’s National Health Strategic Plan for 2017-2021. Realizing that health systems strengthening cannot take place without addressing surgical systems, other countries are following, with the recent NSOAP by Tanzania and the international and highly successful NSOAP workshop for Ministries of Health by the WHO Emergency and Essential Surgical Care (EESC) and Harvard Program in Global Surgery and Social Change (PGSSC) as landmark events.

Cost-effectiveness of surgery in low- and middle-income countries compared to non-surgical public health interventions. From “Cost-effectiveness of Surgery in Low- and Middle- income countries: A Systematic Review”
Poor countries not only lack surgical groundwork; they are also subjected to disparities in its distribution. Bigger cities monopolize health care and, in many places, only the richer people can afford medical interventions. Haiti, for example, saw up to 1,400 maternal deaths per 100,000 births in some areas, solely due to the lack of ability to perform caesarian sections, whilst areas that were able to perform them had similar mortality rates as the United States. It’s exactly those situations that serve as major calls for moving national health system funding from out-of-pocket user fees to financial risk protection through universal health coverage, established through general taxation and insurance models.

Many more people do not seek care at all, or decide not to pursue surgical treatment as advised, because they cannot afford the costs. The burden of catastrophic expenditure for surgery is highest in LMICs and, within any country, comes down the most to poor people. Considering the crucial importance of access to safe surgical, anaesthetic, and obstetric care for all, the need of pushing Global Surgery on the global agenda is ever so high. Universal health coverage will prove to be vital in achieving these goals, which is why nations and international leaders need to be held accountable for current health system gaps. If we are to achieve Health for All by 2030, inclusion of safe surgery and anaesthesia care as essential pillars of UHC is indispensable; if not, we will never go beyond partial health for some.
WHEN THERE'S NO PLACE FOR THE SCALPEL, WORDS ARE THE SURGEON'S ONLY TOOL.

PAUL KALANITHI
TREATING TUMOURS IN CAMBODIA

Dr Tho Ly describes the challenges he faces in overcoming sarcoma whilst working at the Children’s Surgical Centre in Phnom Penh, Cambodia.

ARTICLE BY CHRISTINE JACOBSON
Dr Tho Ly is one of the happiest doctors I know. There is an optimism in his laughter that can be heard every morning and a positiveness in his attitude that is hard not to be energised by. And yet Dr Tho Ly has dedicated himself to the treatment one of the most difficult and heartbreaking diseases in Cambodia.

Dr Tho Ly qualified from the University of Health Sciences in Phnom Penh, finishing his medical studies in 2002. For the past seven years, he has been working at the Children's Surgical Centre (www.csc.org), a small charitable hospital providing free surgical treatment to all impoverished Cambodians.

During this time, Tho Ly has been focused on developing a musculoskeletal tumour service, helping those patients, young and old, who present with advanced and debilitating swellings on their arms and legs.

"It's difficult", Tho Ly says. "Patients present to us very late, with large tumours and we do not have all the modern day treatment options".

Tho Ly nonetheless remains undeterred and dutifully explains everything he can to his patients and offers what is available.

"Most patients are sad, they know the Children's Surgical Centre is the last resort for them and often the thought of an amputation scares them a lot", Tho Ly explains. "There are sad stories all the time. Even last week a young man, with a wife and three children, presented with a huge tumour on his knee. We diagnosed a synovial sarcoma but the patient refused surgery. He explained he had a job and could not afford to lose it, as he returned to his village despite our explanations."

However, Tho Ly has been having success recently, as he proudly shows me his excel spreadsheet of a growing number of cases that have been successfully treated.

Tho Ly discusses most of his cases using the teleconference platform i-Path (http://ipath-network.com) and has local and international support from pathologists. The Children's Surgical Centre has monthly video conference calls to colleagues in Germany as they debate the latest biopsy results and treatment strategies.
"The patients at CSC probably get the best sarcoma treatment in my country"

"I can provide chemotherapy now!", Tho Ly beams, explaining in animated excitement about his drug regimes. "I can't get all the latest chemotherapy, but I can at least give patients some hope of cure now. I study about the regimes every evening to improve my knowledge".

Although oncologists in the country do offer some formal services, the treatment at the Children's Surgical Centre is free and Tho Ly feels its the best option for anyone in the country who cannot afford care elsewhere. He understands the difficulties for the patients and has created a patient education video explaining all the side effects of the treatment. He also gives regular lectures in the morning to the nursing staff at the hospital, ensuring they are aware of the patient's needs and what to observe for.

Tho Ly believes with further training about tumours, and with international help, the situation will slowly improve in Cambodia.

"Don't you ever feel sad?" I ask.

"I just want to ease the suffering of my patients", Tho Ly thoughtfully replies, before lighting up into the happy smile that we have all come to love.

**CHRISTINE JACOBSON** is the stakeholder relations officer at the Children's Surgical Centre, Phnom Penh, Cambodia.
As healthcare providers, surgeons and anaesthetists, we spend countless hours over many years studying our craft. From text books, lectures, tutorials and researching latest evidence based medicine, we become increasingly knowledgable in the vast expanse of medical academia. However, our craft of surgically treating patients is also learnt through hours of practical activity, developed through apprenticeship, guided by mentors and our own personal experiences. And despite all that we study in the textbooks, our individual surgical and anaesthetic experiences significantly guide our ability to treat patients well.

We all train in this art in different ways and although there maybe similarities in training, as individuals, we all have been moulded slightly differently. A logbook, akin to a diary, allows us to keep records of our practical learning and reflect upon all we have experienced - a new procedure we observed, a new technical tip we learnt, a competency we developed. Dutifully recording the procedures we have been taught and on how many occasions, the complications we have reflected upon, and what we have learnt from our mentors allows us to continually develop as clinicians. Ultimately, a well kept logbook defines our entire practical learning experiences and is arguably the most valuable learning tool for anyone providing surgical and anaesthesia services.

*"By watching the master and emulating his efforts in the presence of his example, the apprentice unconsciously picks up the rules of the art, including those which are not explicitly known to the master himself"*- Michael Polanyi
However, not all logbooks are created equally, coming in various forms and sizes, from paper based records, to simple entry spreadsheets, to more complex online systems and mobile applications. Each logbook has different features and nuances. Indeed, some more established surgical and anaesthetic training programmes require trainees to maintain a mandatory logbook, often coming at a substantial cost to the trainee to use. And in many parts of the world, such logbooks are not accessible or affordable.

Furthermore, although many logbooks lovingly tabulate our records, there are few that have been designed to truly maximise the educational value - to analyse our training experiences, to pull the memorable cases we learnt from the most (that often become a distant blur) and to guide our future development.

As part of its academic suite, One.Surgery has created a bespoke free electronic logbook, available free to all clinicians across the world. It has been designed to be as user friendly as possible, yet maximise the significant educational potential of a logbook, including features needed but often missing in more established, fee based logbooks. We hope to continue developing the system into a leading educational tool, especially to those in low income countries with limited access to established training programmes.

Saqib Noor is an orthopaedic surgeon and editor of the magazine, Voices of One Surgery
THE ANAESTHETIST BEHIND THE MASK

AN INTERVIEW WITH
DR ROSHAN RADHAKRISHNAN

Dr Roshan Radhakrishnan is an anaesthetist in India. He is an award winning author and a dedicated blogger, writing on his website, GodYears.net. He is an advocate for safer surgery worldwide.

Dr Ankit Raj took the opportunity to ask him some questions about his writings and thoughts on global surgery.
Q: Dr Roshan, thank you for joining us at One.Surgery. You describe yourself as a doctor who wears many masks - an anaesthetist, an author and an observer of the world! How did you come to wear so many masks?

Masks have a lot to do with it, ironically. By nature, I used to be an introvert. Even in college, I was the guy writing the scripts for cultural events rather than the one on stage. Staying behind the curtains back then was probably the first mask in a sense that would later extend into the blogging field where I got to speak out my mind through a website. In a way, being an anaesthesiologist also allows me to do what I want to do - relieve pain - while once more staying hidden on the other side of the drapes!

Being a published author too has its origins from the blog, to be frank. Years of blogging and storytelling with feedback from readers across the country helped hone the art of writing and gave me a good idea of how to deliver a twist in the tale or make the reader care for my characters. The proof is in the pudding, as they say - for the first 30 years of my life, I never had a published short story. In less than a decade since, I have had 24 published, including winning both Season 1 and 2 of Write India, India's largest literary contest.

Q: It has been described 5 billion people in the world are without access to safe surgery whilst many others face catastrophic financial hardship to access surgery.

Have you had any patients facing similar difficulties?

Too many. I - we, including my colleagues - have seen too instances where lack of access and financial inability have been decisive factors in the outcome.
Patients who've collapsed from shock after ruptured organs while transporting them from native villages to cities, literally thousands who've been unable to pay the bill and have cried in the aisles of hospitals. It breaks us down, inch by inch. I know there is no perfect healthcare system across the world but I cannot believe that leaders of various countries cannot make affordable, if not free, healthcare the main priority. The best of innovation in healthcare is useless unless it can actually reach those who need it most.

Q: Your recent project, Heroes of Kindness, describes real life stories that restore your faith in humanity. Do you have any inspiring stories of acts of kindness within the operating theatre?

I've seen doctors who've performed miracles in the operation theatre with their persistence when all around them have lost hope. I've seen doctors perform CPR for an hour and bring patients back from the dead. I've seen doctors pay for the food and medicines of patients and their children.

To me, you are all capable of being Heroes of Kindness.

Q. In your famous blog post, you describe the increasingly difficult conditions of working as a doctor in India. In many countries, the ratio of surgical teams to patient population is dire. How would you advise surgical teams in such austere environments can cope with the pressure?

All the good will and selflessness of surgical teams will come to nought unless there is support from the governments. At the end of the day, these doctors are working inhuman hours in ungodly conditions with threadbare facilities at their disposal - this is not sustainable.

I tend to be a 'Team Doctor', so my primary concern remains the early burnout of talented and good-willed surgeons when faced with such bad conditions. It may not be a popular opinion but I will always ask them to do as much as they can but not more.
"The surgical list will never end but you need to remember that you are human in the end.

You have a vital skill which you need to ensure lasts. We need these surgical teams to last for decades instead of breaking down prematurely."

Q: What do you feel are the most important next steps to obtain universal surgical access across many parts of the world?

Compassionate leaders at the helm of various countries matters. People who are farsighted and realize the importance of beginning projects that may not be completed in their tenure but understand the value of it for their people.

More efforts must be made to convert primary care centres into secondary and secondary care centres into tertiary. All of it boils down to money, in the end. And that money has to come from the public healthcare sector for it to be affordable and accessible to the people.

Governments, especially in India over decades neglect the public healthcare sector in their speeches and promises because they feel that the returns of investment aren't worth it. I ask you, how can a healthy country ever be a poor return of investment?

Q. Without anaesthesia, there is no surgery. What do you feel is the responsibility of anaesthesia to implement and improve safer surgery worldwide?

The first documented surgery was in Benaras in 600 BC. The first documented successful anaesthesia was in Boston in 1846 AD. For 2400 years, patients cried and even died on the tables as they felt the pain of each slice. Today, I can block your left hand so that surgery can be performed there even as you browse through social media with your right. This is how far we've come.

Safer anaesthesia for me for the future depends on access to equipment and the ability of the anaesthesiologist. Basic monitoring matters, especially considering a large part of the world still struggles to have access to these equipments. With it, even when I've literally taken your breath away under general anaesthesia, I can monitor your heart beat for beat, your lungs and every gas that enters it, your awareness, your fluid status and every vital that matters.

Training anaesthesiologists across the world
to stay up to date with modern equipment, safer drugs and newer techniques is something I always advocate.

From personal experience, I might add that even being a part of specialist social media groups are of a huge help here as I can now participate in the management (and discussion) of a complicated case with the best doctors from across the world, learning from them and also sharing my two cents. This truly matters because most anaesthesiologists may be alone in the operation theatre and unlike the previous generation, this one now has the wisdom of doctors across the world at their fingertips.

Q. We believe the stories of the heroes behind the global surgical movement are as important as surgery itself. As a writer and doctor, which do you feel is the most powerful tool to affect positive change, the pen or the scalpel?

I am going to go out on a limb here and say ‘the pen’. There have been brilliant physicians and surgeons who have saved tens of thousands of patients in their lives and yet, the fact is that people never considered how magical their efforts were. And sadly, somewhere along the way, the people's ignorance turned to apathy, then resentment and now anger and violence against doctors.

Yes, there are black sheep in our profession but look at all the instances of violence and frankly it is never them who get beaten up. For the crimes of the guilty doctors, innocent ones across India are wearing the scars today. Unlike what idealists may say, that image will not change 'merely' by being a good, dedicated doctor inside a hospital.

Doctors need to come forward and speak their minds out on forums that matter, be it public stages or social media. You are here because you were intelligent enough to get through over 20 gruelling subjects and then some.

"Believe me, you have a voice that matters. You have a voice that can catch the world's attention."
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STUDENTS, SURGERY & FRIENDSHIPS

by Thomas Cosiano Mbise and Florence Van Belleghem

Thomas, a nurse in Tanzania and Florence, a medical student in Belgium describe the lasting friendship they have developed since meeting at the Meru District Hospital, Tanzania
"Hi, I am **Thomas**. I work as a scrub nurse in the Amini Momela Health Centre. Whilst I studied, I also volunteered at the Meru District Hospital, where I met my friend, **Florence**"
**Thomas:** Furthermore, instruments for surgery are scarce so after one procedure the operation team must wait until the instruments are again disinfected and sterilized to start a new procedure.

**Florence:** When I arrived in the hospital, Thomas helped me get to know the hospital and the customs in Tanzania. Throughout the month, we became friends. On our last days, Thomas and a friend of his took us on a hiking trip to his village, a wonderful trip to a beautiful place. While hiking Thomas and I talked about the conditions in which nurses and doctors must perform medical care in Tanzania.

**Thomas:** Tanzania is divided in zones. Arusha is one of the four parts of the Northern zone. 1.5 million people live in Arusha. However, in the whole Northern zone, there is only one hospital with specialists occurs (the Kilimanjaro Christian Medical Centre), so all surgeries that need specialists are to be sent to this hospital. Furthermore, these four regions also depend on one hospital for essential equipment like defibrillators, monitoring machines and ventilators, Anaesthesia equipment is also scarce, which is another major challenge.

**Florence:** Sadly, after one month I had to say goodbye not only to a fellow caregiver, but also to good friend who taught me my first words of Swahili, who guided me around in Arusha, who took me on a hiking trip and who even let me taste some of the local food prepared by his mother. Luckily it wasn’t a real goodbye.

Now, almost a year later, we still keep in close contact. Our friendship that developed perhaps means even more than last year, as we now understand what an international friendship can offer. You see, Thomas is starting a project of his own and having some friends abroad creates opportunities. Concerned about the problematic situation in Tanzania and passionate about bringing adequate healthcare to his own village, which is 45 minutes away from the nearest hospital, Thomas is currently taking the first steps to build a healthcare post near his village - a care institution which will carry the name **IKUNDA**, Meru language for love and affection.
Follow us on Twitter and join the conversation!
https://one.surgery
THE INCISION GLOBAL SURGERY SYMPOSIUM (IGSS2018)

LESSONS LEARNED FOR COLLABORATION IN GLOBAL SURGERY

WRITTEN BY FLORENCE VAN BELLECHEM (BELGIUM), FALKE VAN WINCKEL (BELGIUM), HANNE GWOREK (BELGIUM), JOSÉ CHEN (PORTUGAL), SARA A.M. ALAM ELDEEN (SUDAN), MEGAN STILL (USA).

CONTRIBUTION BY GODFREY SAMA PHILIPO (TANZANIA)
On the first weekend of May, more than 200 specialists, residents, and students from 50 different countries were gathered for the first InciSioN Global Surgery Symposium (IGSS2018) in Leuven, Belgium. InciSioN, the students’ surgical network comprised of over 2800 members in 70 countries, is an international group of people, different in terms of background and culture, but united behind the same ideas and goals: access to safe and adequate surgical and anesthesia care for everyone, wherever and whenever needed.

It consists of medical students, residents, and young doctors who unite for the purposes of advocacy, education, and research in the field of global surgery. Amongst the speakers at the symposium were experts involved in global surgery in all its fields, including surgeons, residents, anesthesiologists, nurses, obstetricians, and students from all around the world to inspire an equally varied audience of like-minded people.

One of the main themes of the symposium was collaboration. All healthcare professionals, but also many non-healthcare professionals, are indispensable in providing safe and quality surgical care across the globe. As future surgeons, anesthesiologists, and obstetricians, we believe in teamwork and interdisciplinarity as pillars to building global surgery. Nurses, health technicians, social workers, and other health workers play a major role in providing the best attainable surgical care.

Therefore, it is imperative to work together and actively collaborate with these healthcare professionals to develop joint statements and to collaborate on campaigns, capacity building, and community intervention activities.

Global surgery as part of global health is still in its infancy stages. Events like IGSS are therefore the perfect place to expand the network and collaborative efforts of those working to attain global surgical equality.
One has the opportunity to exchange experiences to better understand the challenges encountered by peers in other countries. By bringing people together from all over the world, we can work on solutions for these problems, make our voices heard, and have a greater impact.

International symposiums are also imperative for the continuation of impactful, accurate research. It gives the opportunity for eager surgical trainees and students to meet and collaborate with global surgery mentors to develop partnerships and bridge the generational gaps between those who have worked in the field and those who wish to implement change on a broader context, but may be tied to certain locations for training purposes. Additionally, these events give mentors and global leaders the chance to discuss their work and expand involvement across places they may not have the chance to reach otherwise. For example, students at IGSS heard talks about the Global Surg3 and Global PaedSurg international collaborative research efforts, and many went back to their home institutions and put together research teams. The symposium was the perfect platform to expand these data gathering efforts, and students now have the chance to participate in truly global research and better understand the importance of obtaining high-volume, representative data from all parts of the world.

Surgical care is a fundamental component of health care, yet support and funding for this essential treatment paradigm is still largely elusive in many global health platforms. As a part of universal health coverage, every patient must be able to receive safe, affordable surgical and anaesthesia care when needed, but there are still many barriers to this goal, including deficits in infrastructure, equipment, workforce and education. At IGSS, attendees learned about practical, attainable goals to address these issues. They heard
from leaders in the field who have implemented their own innovative interventions, leaders in policy to understand what is being done on a global level, and newcomers to the field to hear about the next steps and ways to get involved at a local level. As global surgery expands as a field, it is imperative to continue to meet together to ensure the involvement of all important players and work together in unison as opposed to the fragmented, isolated solutions seen in the past. As healthcare providers, we should make global surgery our common goal. Working together, we will be able to eliminate the inequality.

**Personal experiences**

**Sara:** Last December, I attended a Global Health Course in Sudan, where I heard about global surgery for the first time. Intrigued, I did some research and eventually landed on Incision and the inspiring quote: “Nobody should be pushed into poverty for needing surgical care”.

Unfortunately, I was too late to receive a travel scholarship, but there was still time to submit an abstract. After doing so, I was luckily accepted for poster presentation. And so, my journey to IGSS 2018 started.

IGSS2018 was a wonderful opportunity to introduce myself to a different culture and expand my communication circle. At the conference, I was amazed by the diversity and enthusiasm of the like-minded attendees. The power of young people should never be underestimated or neglected— we can change things. I noticed how everyone had the same goals of providing access to safe surgery, anaesthesia, and obstetric care, and we were all inspired and encouraged by the stories and examples that were given during the conference. Initiatives often start small and locally, but they can grow and really implement change.

IGGS2018, with all its passionate speakers and attendees, really inspired me to work on a better future in my home country and thus prevent people from being pushed into poverty due to surgery.

**Hanne:** Last year, I and two friends went to Tanzania (Arusha) for a month to contribute as a volunteer at a local district hospital. My interest in global health only grew during this adventure. When I saw the event of IGSS in Leuven on Facebook, I immediately bought some tickets. This was an amazing experience. It was the first time, as a student, I could listen and learn from experts in the field of global surgery. During and after the symposium, I met a lot of like-minded people, with whom I’m still in contact. Because of these connections, I’m able to do my part to improve global health.
GLOBAL NEUROSURGERY AND BEYOND

Dr Aliyu Ndajiwo, an aspiring neurosurgeon in Nigeria discusses the future of global neurosurgery with Dr Kee Park, a neurosurgeon currently working at the Program in Global Surgery and Social Change, Harvard Medical School.
THE YOUNG GIRL HAD FALLEN A YEAR AGO AND GRADUALLY BECAME PARALYZED. AFTER EVALUATING HER WITH A CT AND PHYSICAL EXAMINATION, IT WAS CLEAR THAT WE WOULD NOT BE ABLE TO DO ANYTHING FOR HER.

If she had access to a surgeon who knows how to care for spine fractures before she became paralyzed, she might still be walking. The saddest part was when the mother asked if her daughter could be left in Addis Ababa because she has three other children back home and she cannot care for her disabled daughter anymore. This is when I realized that more than access to medical care but poverty is a great social injustice.

Q: Do you think the Global Surgery 2030 goals are achievable and what do you feel are the greatest barriers in achieving them?

The aspirational target set by GS2030 is for 80% of the world to have coverage of essential

Q: Dr Kee, it’s a pleasure to have your voice with us at One.Surgery. You have been dedicated to global surgical projects for many years and been an inspiration to many younger surgeons. Which voices have influenced you the most during your career?

Two quotes come to mind. The first is from John F, Kennedy: "For of those to whom much is given, much is required." I believe his inspiration is from the Bible, "For of those to whom much is given, much is required" can be found in Luke 12:48. The other is from Martin Luther King, who stated, "of all the forms of inequality, injustice in health care is the most shocking and inhumane."

Q: What has been the most difficult personal moment for you thus far when dealing with challenges of surgical inequality?

While I was working in Ethiopia, a mother had brought her 10 year old daughter for evaluation. It had taken them over two days to get to Addis Ababa.
surgical and anesthesia services. In my opinion, we will not achieve that goal by 2030 unless we change the trajectory dramatically. Surgical missions and twinning of institutions are important but are inadequate. We need governments to act boldly and set national targets and strategies to achieve them. We need to fund the drivers of policy development such as the WHO and increase advocacy efforts to dramatically increase the rate of scale up.

Q: You have a wonderful project engaged in the Democratic Peoples Republic of Korea (North Korea). What are your feelings of the diplomatic breakthroughs occurring currently?

I hope that an era of peace can begin on the Korean peninsula. There have been too many lives lost and opportunities squandered. I am very excited for the upcoming summit between the US and DPRK and for the prospect of increased humanitarian assistance for the people of North Korea.

Q: What does Global Neurosurgery mean to you?

It is not so much about how to perform neurosurgery better, but rather about how better to deliver neurosurgical care to all who need it, wherever and whenever.

Q: Could you please tell us how the Global Neurosurgery Initiative started and what do you think is the future of this wonderful initiative?

It was a natural progression from the realisation from my work in Ethiopia and Cambodia that the disparities in neurosurgical care are profound. Of course, the release of the Lancet Commission on Global Surgery report in 2015 was a turning point for me. I am not sure I would be doing what I am doing if I had not read the report. The future looks very promising. The fragmented work of many amazing neurosurgeons and groups have come together, we are being asked to speak more and more at international meetings on Global Neurosurgery, and there is an explosion of research articles with Global Neurosurgery as a theme.

Q: You have worked in countries such as Ethiopia and Cambodia in the past. Could you share with us some of your best memories during your time working in those countries?

I loved working in both countries. As for my Ethiopian colleagues, when I was in Maputo, Mozambique last December for the COSECSA Exams as a neurosurgery examiner, three of the 10 examiners were my former residents! That was amazing. The Cambodians have been delightful to work with especially on publishing papers using locally collected data on TBI (traumatic brain injury) and TSI (traumatic spine injury). You may know that most published literature in neurotrauma originates in high-income countries yet the burden is mostly in LMICs, we need to reverse this proportion.

Q: If you had to choose between dedicating yourself to one location and developing a clinical service to an undeserved population over 20 years of your life, or work in a less clinical role, capacity building projects in 20 locations over the same period, which would you prefer?

As a surgeon, I love to operate. However, the
field experience has given me a depth of understanding that is rare in the policy/programming arena. At this point in my career, I find that I am much more useful providing input in policy/programming. I do miss operating!

Q: What role can organizations such as the World Health Organization (WHO) and the World Federation of Neurosurgical Societies (WFNS) play in improving access to safe Neurosurgical care?

The WHO has a mandate from the WHA resolution 68.15. The issue is that it is largely an unfunded mandate. Despite the challenges, Dr. Walter Johnson has been able to dramatically move essential surgery and anaesthesia forward by breaking down silos within the WHO, promoting National Surgical Obstetric, and Anesthesia Plans. The WFNS is committed to improving neurosurgical care in the developing world. It has created a foundation, training programs, equipment donation programs. I can only hope that their efforts will be amplified and complemented by the Global Neurosurgery movement.

Q: Technology is making the world smaller, bringing people closer together. What technological breakthroughs are you most excited about in the sphere of global surgery?

The ability to collect and transmit data without requiring human entry presents an almost limitless way to evaluate patterns of behavior and utilization. As we struggle with poor quality data in LMIC vis a vis surgical, obstetric, and anesthesia care, we should look at technology to leapfrog to efficient and meaningful data collection.

Q: What advice would you give to a medical student or surgical trainee in low resource part of the world to develop their skills, given the high workload of patient need and reduced learning opportunities?

Get educated in how to do research well, this can be done formally at schools or even now through online modules. Then partner with someone with experience to conduct research with locally collected data. You will learn so much in the process even if you don't get published. Get exposure to public health, talk to your ministries of health or World Health Organisation offices for an internship. There are now scholarships for WHO interns from LMICs. Join student groups like INCISION and share knowledge and experiences among with each other. Find a mentor.

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OURS IS A CIRCLE OF FRIENDSHIPS UNITED BY IDEALS

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