A NEW DECADE OF GLOBAL SURGERY

PHOTO BY JONATHAN BORBA ON UNSPLASH AND MAKY_OREL ON PIXABAY
THE SURGICAL SAFETY CHECKLIST (SSC) IS A PATIENT SAFETY TOOL SHOWN TO REDUCE MORTALITY AND TO IMPROVE TEAMWORK AND ADHERENCE WITH PERIOPERATIVE SAFETY PRACTICES WORLDWIDE.

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A NEW DECADE OF GLOBAL SURGERY

February 2020

Dearest Readers,

We enter a new decade, filled with complex political and social challenges. The world, it seems is becoming more polarised, more divided - just as it become increasingly necessary for us to come closer together and face these many difficult challenges as a united people.

However, despite the rising divisions in many facets of political ideology, and economic disparity, there is one gap that continues to narrow - that of access to safe surgery throughout the world.

Through the tireless efforts of many people and projects over many years, surgical care, and indeed the concept of global surgery, is now a recognised movement that is fast gathering pace.

The last decade realised the vast and heartbreaking discrepancies in access to surgical care in the poorest parts of the world. This decade now promises to finally overcome this discrepancy, by bringing healthcare professionals, politicians and government institutions even closer together to finally provide all patients, in every corner of the world, the great surgical care they deserve.

One. Surgery itself faces many challenges in order to remain a thriving member of the global surgery community, but we promise to overcome these barriers and remain a positive force for the global surgery community for this decade and beyond.

Saqib Noor

saqib@one.surgery
Neurosurgery in Papua New Guinea

BEN PRICE INTERVIEWS PROFESSOR ROSENFELD, PROFESSOR OF SURGERY AT THE MONASH UNIVERSITY, A SENIOR NEUROSURGEON AT THE ALFRED HOSPITAL, MELBOURNE, AND HONORARY PROFESSOR AT THE UNIVERSITY OF PAPUA NEW GUINEA
Professor Rosenfeld thank you very much for taking the time to speak with me today.

To begin with, and I am aware you have many titles, but would you mind giving our readers a brief introduction of who you are?

My name is Jeffrey Rosenfeld and I am currently a Professor of Surgery at Monash University and Senior Neurosurgeon at the Alfred Hospital, Melbourne. I am an Honorary Professor at the University of Papua New Guinea, an Adjunct Professor, Department of Surgery, Uniformed Services University of the Health Services, Bestheda, Maryland, which is the Medical School for the United States Military. I am an Honorary Professor Department of Surgery, Chinese university of Hong Kong, and Adjunct Professor in the Department of Electrical and Computer Systems Engineering at Monash University, Melbourne, because of my interest in bionic vision, medical engineering and having founded the Monash Institute of Medical Engineering.

These are my main appointments, but I also have military appointments, and was the former Surgeon General (Reserves) of the Australian Defence Force and am currently the Colonel Commandant of the Royal Australian Army Medical Corps.

I graduated from the Melbourne Medical School in 1976, and completed my surgical training at the Royal Melbourne Hospital, Melbourne. I actually trained as a general surgeon and completed my FRACS in general surgery and my Edinburgh fellowship in general surgery as well, but I did become very interested in neurosurgery during my fellowship training and then completed the FRACS in Neurosurgery.

You have been heavily involved in training neurosurgeons in Papua New Guinea, and you mentioned you are currently appointed as an Honorary Professor of Surgery, University of Papua New Guinea, how did you initially become involved in PNG?

My main work has been in PNG, but I have also travelled to Timor, Fiji and the Solomon Islands to also assist these countries. I first travelled to PNG in 1986, and said to myself I would return every year, and I have done that and spent a couple of weeks there at a time.

While I was a general surgery registrar, one of my rotations was a 6-month placement in Port Moresby, PNG at that time. I also had the privilege of working in Goroka and Lae because I had to relieve the surgeons who were on vacation. I was able to perform a lot of major surgery that I would not be able to back in metropolitan Melbourne. Often the pathology was far more advanced and much more ‘tropical’ in scope. For example, draining liver abscesses and draining pyomyositis. I also managed severe neurotrauma. Overall I had a tremendous experience in PNG.

In the end I said to myself, ‘I really love working in PNG and I really love the people’, and I could see that they needed a lot of help, and particularly with neurosurgery. I felt I could offer a this help as they did not have a neurosurgeon.

I teach the medical students basic neuro-anatomy and neurophysiology, and clinical neurosurgery. I teach the residents and registrars, and give lectures to the consultants and grand rounds to the entire medical staff. I usually see a number of interesting cases during the week, and try to take photos during the surgery if I operate on these patients.
I then present these at grand rounds and show that this is your hospital, these are your patients and these are the conditions that you have, here are some of the features of that specific condition and here are the things to look for to diagnose them, and this is how it can be treated. The staff get enjoy this because it is not someone coming to them from a developed country to show advanced, high-resource dependent techniques in surgery, but it is someone using their equipment with PNG hospital staff, which they can then carry on.

The key objective is to transfer the skill base and build the capacity, rather than just going in and coming out without leaving much [knowledge or skills] behind.

The reason I have been able to do this is through the generous support of the Pacific Islands Project (PIP) based at the College of Surgeons in Australia (Royal Australian College of Surgeons). To me, this is one of the best uses of Australian foreign aid that there is, because it is funded by the Department of Foreign Affairs and Trade. What they have done is to give enough money for specialist doctors and nurses to travel to these South Pacific island nations which all need help building their surgical capacity. A surgeon will usually travel with a small team including ward nurses, and technicians, radiologists and medical administrators on occasion to try and improve these other medical and nursing capabilities as well, but most of it is surgery including orthopaedic, cardiothoracic, paediatric, ENT and plastic surgery. The latter has its own program called ‘Interplast’ and performs large numbers of cleft lip and palate procedures as well as burns scar surgery and other deformity correction.

This has been a wonderful program for me to be a part of, and as the neurosurgery coordinator for a number of years. PIP also has other Australian and New Zealand neurosurgeons who have gone to these countries to assist.

In addition to personnel, you need the resources, the hospital, the anaesthetic equipment – ketamine has been a major advance in anaesthesia in the developing world as a lot of work can be performed under ketamine sedation instead of full general anaesthetic. Many factors apart from surgery itself will need to be considered to improve access to surgery in the developing world.

What inspired you to continue returning to PNG? Was there a particular incident that made the deficit of neurosurgeons very apparent, or was it the culmination of the 6 months?

There are certain cases I saw, for example a young lady with a very large acoustic neuroma who had multiple cranial nerve palsies, was very ataxic and was clearly going to die soon. This is a completely benign tumour which can be cured with surgery. I have seen patients with pituitary tumours who are going blind, and these are also completely treatable tumours and vision can be saved.

I don’t expect general surgeons to perform these operations, but these highlight why I feel we do at least need a couple of neurosurgeons in PNG who can perform these more complicated operations. This is what we are currently trying to achieve.

We could continue in PNG with general surgeons performing neurosurgery, that would work for many patients, but there are some conditions that require particular expertise such as some microsurgical skills. For instance, many brain tumours require a neurosurgeon to perform the surgery, and very few general surgeons would possess those skills.
When I teach general surgeons, my effort is not to train them to become neurosurgeons. It is to up-skill them to have a range of basic neurosurgery that they are able to perform.

We did train a general surgeon there to become a neurosurgeon however, and his name was Dr William Kaptigau. In fact, he developed a neurosurgical unit at the Port Moresby General Hospital, and he developed a great clinical audit program. The results were published in the World Journal of Surgery, and highlights what one surgeon is capable of achieving in a developing country and the results one can obtain with passion, leadership and skill. In fact, the results he obtained for head injury outcomes were almost as good as you would see in an advanced hospital in Australia.

In Australia we have approximately 1 neurosurgeon for every 120,000 people, but in PNG they have 8 million people and no neurosurgeons. We have to think; how can we possibly redress that deficiency?

The recent work from a group of the Lancet Commission on Global Surgery has quantitated the burden of disease and estimated the deficit of surgeons currently in particular specialities and the numbers needed. The deficit is so great that there is no realistic means by which the world can train the number of neurosurgeons required, particularly in Africa and South East Asia. The only way around this, in my view, is to train general surgeons to perform basic neurosurgery. It has got to the stage where we are unable to even train enough general surgeons in basic neurosurgery, so the question is can you train medical technicians or nurses to perform some of the basic operations?

I read recently that PNG has their first neurosurgical trainee, Dr Esther Apuahe. Not only is she female but she has a dream of establishing a fully functional neurosurgical unit; this must make you incredibly proud of the nation and provide some reassurance that your legacy will endure once you retire from this line of work?

Esther is currently the only trainee training in Australia on the Rowan Nicks Scholarship of the RACS which covers full accommodation and travel costs, based in Townsville.

There is another neurosurgeon by the name of Dr Benjamin Thomas, who is wanting to continue neurosurgery there [in PNG], and he will hopefully receive a scholarship as well.

When these two surgeons have finished their training, I think PNG will have a good basis for a neurosurgery service that can handle more complex cases. It is fine for Australian surgeons to visit, but we do need to establish domestic surgeons who will remain in PNG. I think this can be achieved in the coming 5 years.

I myself have been very fortunate because I have had experience working at both extremes of medicine. I work at the cutting edge of neurosurgery and research in various areas, but have also worked at the other extreme, such as my military deployments to Africa, the Middle East and in the Pacific which have allowed me to expand my surgical reach. This has given me a wider and deeper perspective of surgical needs, and what can be achieved with very basic neurosurgical training.
You mentioned that you have worked throughout the Pacific, the Middle East and Africa, and I wanted to get your thoughts on whether you feel clinicians have a duty to extend the scope of their practice overseas and not limit it to the city they work in?

That is the ideal – it really is to have a surgeon who is prepared to work pro bono in underprivileged environments. I would say it is our duty to help those less fortunate and if we can spare some time to help those in such environments then that is a tremendous way of giving something back to society and the world.

I see this as part of my mission in life. By writing my book I hope to have a greater effect than simply training a few people, through ‘training’ a lot more as they gain knowledge without ever meeting me. That has been my goal to have a force-multiplying effect as well as to have a direct effect on the people I meet.

Along the way I have helped a lot of sick people, saved lives and prevented disability, which may have occurred without my having been involved. But it is a tremendous privilege and pleasure to be able to do this.

My single regret I suppose is that I have only been able to help relatively small numbers of patients in this way, but by having the force-multiplying effect I hope that I am able to help many more people.

What has been your proudest moment working in PNG thus far?

Being able to develop the neurosurgical training program with the head of the department of surgery, Associate Professor Ikau Kevau, and Professor David Watters. Prof Kevau runs the surgical training programs in PNG. Prior to this they had orthopaedic, ENT and several other specialties represented in their training program but not neurosurgery. Developing this training program and knowing it will endure after I have retired from this line of work is very rewarding.

Is there a particular anecdote, encounter or story you would like to share?

There are so many, but I won't forget the first patient I received in Goroka. I was there as the relieving surgeon, and had not had much experience in neurosurgery, but the first patient I received was an elderly lady who had been attacked by a young male in her garden. He assaulted her with an axe to her the head. She presented with a severe open depressed fracture in her fronto-parietal region. I did everything I could for her but unfortunately she ended up dying. That was certainly a challenge for a young registrar looking to find their feet on the first day. Unfortunately her injury was just too severe to survive.

The other case I remember was when I was called out to a patient with post-partum haemorrhage, in a very remote village. I was flown there in a fixed wing aircraft because it was a surgical emergency. On arrival the patient was severely anaemic and shocked. She had a retained placenta and the haemorrhage was ongoing, but unfortunately we did not have any blood transfusions available. I was unable to gain venous access in her arms so had to insert a femoral venous line, which was a challenge, and we began giving her travenous fluids.
I then had to manually extract the placenta and try to stop the bleeding. I was able to achieve this but she had lost so much blood that she died of severe shock.

This was an absolute tragedy as it was a young women who died of a totally preventable illness, but this is what happens in remote parts of the developing world. Young women die during childbirth, and after childbirth. Unfortunately I arrived there too late, and it wasn’t enough.

I read recently that nursing staff have been trained in Ethiopia to manually remove the placenta in post-partum women with retained products in remote regions where doctors are unavailable. These people have already saved the lives of many young women.

This is a similar concept to the ‘barefoot doctor’ in China after the revolution, whereby people were trained as technicians to perform basic surgical procedures in rural China. The World Health Organisation has defined a list of basic surgical procedures which can be benchmarked for the capacity of a system to deal with surgical emergencies. This is how surgical capacity is judged in the developing world, and the aforementioned initiatives may assist in meeting this need.

**Professor you also have research interests in neurotrauma; is there any overlap between your work in PNG and this academic interest? Did this spark further interest to continue returning to PNG?**

I am working with some other neurosurgeons to define treatment pathways which are practical for LMICs. Many of these countries cannot afford ICP monitors, brain oxygen monitors, long stays in the intensive care unit (ICU), and so they cannot achieve the same degree of traumatic brain injury management but despite this, they often achieve good results.

The big question at the moment is whether you can use decompressive craniectomy (DC) as a substitute for ICP monitoring and ongoing ICU management? This is what many surgeons in LMIC are doing where DC is being used as a primary treatment as opposed to a secondary treatment after medical management has failed. We are currently looking at developing algorithms around this to better improve management, and how you can manage patients without ICP monitors.

The other factor is the decision making around palliative options which are not as developed in LMICs, and this is something that needs to be explored further. It is related to religion and culture, but also family, doctor and staff expectations, and the law of the land. Often doctors will have to do everything they can to keep the patient alive for all patients, but this means the patient suffers by lying in a disabled state on the ward. We need to do better at avoiding this outcome. Doctors in these countries tell me that we can’t not treat someone because the family expects full treatment.

You have written a book, titled ‘Neurosurgery in the Tropics: A practical approach to common problems’; tell us what inspired you to write this book and how PNG influenced your decision to write a textbook on tropical neurosurgery?

The book was written with Professor David Watters, who is a general surgeon originally trained in Edinburgh but who is a global surgeon having worked in Africa Asia and PNG.
The reason we wrote that book was because there were no written resources available to surgeons working in the LMICs which focused on neurosurgery. Surgeons were able to read books written in and targeted for developed countries, encyclopaedic textbooks of neurosurgery that is, but there is no way these books would have much relevance to a developing country environment.

Other resources, such as the courses developed by the World Federation of Neurosurgical Societies, again have the same problem in that they host 10-20 experts in neurosurgery from around the world who teach but it is like learning neurosurgery in an advanced country. The focus is on very advanced concepts and techniques such as clipping aneurysms and removing difficult skull base tumours using microsurgical techniques. These have very little relevance to the developing world, and for the doctors there learning to perform basic neurosurgery, it is not a great method of improving standards of neurosurgical practice in developing countries.

We have aimed to write this book specifically targeted at general surgeons, nurses and emergency doctors in hospitals in LMICs, so that these clinicians can learn to diagnose and treat patients with neurosurgical problems and to perform neurosurgical procedures with very basic equipment and achieve good results. There are many procedures within neurosurgery that are fairly straightforward, such as inserting shunts and treating patients with neurotrauma including acute epidural or subdural haematomas, or correcting a spina bifida or an encephalocele in an infant, or draining a brain abscess, which can all be achieved with very simple instruments and straightforward techniques that can be taught to a generalist. This can make an enormous difference to the quality of life of the injured or those with these conditions.

Many of these conditions can be dealt with so that the patient’s life is saved or their quality of life is greatly improved, so they can return to work and support their family or continue on through their childhood to become productive adults.

Without that basic surgery and basic knowledge, these unfortunate people will die or suffer unnecessarily. For instance, a frontal encephalocele is a terrible deformity in a young child because it spoils their appearance and causes them to become an outcast within their community and their entire life ruined. If you can treat that deformity and give them a decent cosmetic result, then you save of life without the need to go to the extreme of transporting them to a major paediatric hospital in Australia.

The first edition of the book is now out of print, but the second edition has just been published. It includes many relevant advances in neurosurgical practice since the book was first published in 2011.
Finally, do you have any words of advice for individuals considering or hoping to become involved in similar positions in their clinical career?

Programs do exist where it may be possible for medical students and junior doctors to become involved, but these are hard to find. Medical schools offer overseas electives, and if this is the case with your medical school then I would advise you to travel to other countries to develop a connection with these LMICs as a student prior to graduating as this is often a great time to begin. I would encourage medical students to do this if possible as long-lasting relationships can be forged early on.

Travelling to LMICs as a resident doctor is becoming increasingly difficult, as few placements are available these days and you may have to take time off during a vacation. A potential downside to travelling to LMICs is the feeling that visiting students or doctors take the place of local students and residents/registrar, which limits access to theatre and exposure to cases, as this can detract from the learning experience of the local personnel. There is a delicate balance to find between visiting and local staff, but it must be achieved.

For senior staff wanting to gain exposure to LMIC settings, it certainly can be done later in one’s career. These specialists need to be given an orientation to working in LMICs which includes the environment, the culture, local expectations, and potential treatment options, which are very different from Australia or other developed countries. A change of mindset is required. Particularly once you acknowledge that you as a visiting clinician will go and leave but your treatment outcome is long-lasting.

Exemplifying this is a patient with burns contractures, who, provided the contractures do not recur, usually have a tremendous improvement in their quality of life after a single surgical procedure. Drainage of a brain abscess or insertion of a VP shunt are other neurosurgical examples.

Professor Rosenfeld thank you very much for your time.
IS THERE A HUMAN RIGHT TO SURGERY?

OneSurgery interviews Birgit Van Hout, the regional representative for Europe at the UN Human Rights Regional Office For Europe
In the midst of war and mass migration, what responsibility do governments have to provide adequate healthcare to migrants?

The Universal Declaration of Human Rights of 1948, in its article 25, stipulates that everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control. Motherhood and childhood are entitled to special care and assistance. If you read this article in combination with article 2 of the Universal Declaration, according to which everyone is entitled to all the rights and freedoms set forth in the Declaration without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status, the logical conclusion is that governments should provide adequate healthcare to migrants.

This interpretation has been confirmed by the UN Committee on Economic, Social and Cultural Rights, which has clarified that all people under the jurisdiction of a State should enjoy the right to health, even when their situation in the country concerned is irregular. This interpretation is derived from the general principle of non-discrimination: protection from discrimination cannot be made conditional upon having a regular migration status in the host country.

[1] With determinants we mean food and nutrition, housing, grounds of discrimination, gender considerations, and social and cultural norms that impact the right to health for certain persons or groups.
Conversely, any differential treatment on grounds of nationality or migration status is only permissible if it does not amount to discrimination. Such differential treatment must be in accordance with the law, pursue a legitimate aim, and be proportionate to the aim pursued.

Based on this authoritative interpretation by the Committee, depriving certain groups of people from access to health care can constitute a human rights violation when it is discriminatory or disproportionate to the aim pursued.

Despite the protection afforded by human rights law, some groups risk being left behind. In reality, certain obstacles prevent migrants from enjoying the right to health. This puts their physical and mental well-being at risk and eventually drives up the cost of health care as for lack of treatment, these persons may end up in the emergency room. On the other hand, including migrants in health care carries benefits for the whole community as a whole. Not only does it have a positive impact on public health, but also addressing health problems early on lowers costs for the entire health care system.

What are some of the reasons to be optimistic in relation to refugee and migrant and refugee health?

The UN Human Rights Regional Office for Europe recently documented promising practices by local authorities to facilitate access to health for migrants [2]. Cities like Amsterdam, Barcelona, Bari, Eindhoven, Frankfurt, Geneva, Ghent, Oslo, Trondheim, Utrecht, Vienna, and Utrecht are coming up with creative and innovative solutions to overcome the various barriers that prevent migrants from accessing the right to health.

Some cities have established municipal health systems to provide treatments that the migrants cannot access through the national system or undertaken a campaign to inform migrants and health staff of their legal entitlements. Others have adopted simplified administrative procedures or made treatments affordable through a dedicated fund to cover care for irregular migrants or by providing support for non-governmental organizations treating migrants. The Italian Region of Puglia allows irregular migrants to register with general medical practitioners.

In September, our Office hosted a panel in Geneva,[3] with the participation of the World Health Organization, where some of the promising practices from cities in Europe were presented. We hope that other local authorities and eventually more national authorities will be inspired by these promising practices and follow their lead.

What are some of the challenges in ensuring adequate healthcare to migrants and refugees?

One of the main challenges is still to ensure migrants’ access to healthcare. Apart from legal restrictions that often restrict access to emergency treatment only, migrants, especially those in irregular situations, may encounter other...

[2] Promising local practices for the enjoyment of the right to health by migrants

[3] A recording of the panel can be viewed at
https://www.facebook.com/europeohchr/videos/427248904582216/
practical obstacles in their enjoyment of the right to health. Irregular migrants may be unable to meet administrative requirement such as proof of residence or a social security number. In some cases, the lack of documentation may force patients to pay the full cost of medical treatments. They may face linguistic and cultural barriers or xenophobic attitudes. In many cases, health staff and migrants lack information on migrants’ health care entitlements. Also, one of the main reasons for which migrants refrain from seeking medical help is the fear of being reported to immigration authorities when approaching public health facilities. Firewalls, i.e. measures to strictly separate immigration enforcement activities from public services, can address this fear. Firewalls are designed to ensure that immigration enforcement authorities are not able to access information regarding the legal status of individuals who seek assistance at medical facilities, schools and social service institutions. Fortunately, numerous States are putting in place firewalls to prevent human rights violations.

Are there any particular issues around human rights and access to affordable surgery in particular?

The twin human rights principles of equality and non-discrimination are premised on the recognition that all human lives have equal value. Hence, the human rights-based approach (HRBA) is a starting point for guaranteeing equal surgical care or access to surgery as part of the right to health. The inclusive nature of the HRBA seeks both to prevent and to address inequalities. When it comes to surgery, a HRBA involves elements such as personal autonomy, beneficence, non-maleficence, confidentiality and justice.[4] The notion of justice in medicine seeks the equitable distribution of healthcare resources. In the context of access to affordable surgery, justice is particularly important.

As a highly specialized field of medical services, surgery is expensive. This underscores the importance of achieving universal health coverage so that everyone can afford surgery that is essential for life or quality of life, whether preventive, promotive or curative. Also, surgery requires well-functioning hospitals; this in turn leads to the need to put whole care systems in places where such facilities are not accessible.

The importance of access to health services and affordable surgery in particular was also underlined in a ruling by the European Court of Human Rights in Strasbourg. Although the Court did not expressly affirm the right to surgery as such, it concluded hospital authorities had failed when making necessary surgery conditional upon the payment of a financial deposit. In Mehmet and Bekir Şentürk v. Turkey, the Court examined the case of the first applicant’s pregnant wife who visited a university hospital complaining of persistent pain. She was examined by a team of doctors, who found that the child she was carrying had died and that she required immediate surgery. She was then allegedly told that a fee would be charged for her operation and that a deposit of approximately EUR 1,000 had to be made. Since the first applicant did not have the financial resources, the emergency doctor arranged for the wife to be transferred to another hospital, but she died on the way. The Court found that the requirement of an advance payment for the surgery had served as a deterrent for the patient, causing her to decline treatment. Such action was considered a denial of access to appropriate emergency treatment and the State was found in breach of its obligation to protect the patient’s physical integrity.

The International Covenant on Economic, Social and Cultural Rights [5] also requires States to provide the “highest attainable standard of physical and mental health.” This means that States shall ensure the essential levels of each of the rights enunciated in the Covenant. Accordingly, this could be an argument made for considering access to essential surgery within the right to health. Surgery should not be viewed as being in a different category than other treatments: it is also part of the “health goods, facilities and services” envisaged under the right to health. Thus, surgical care should be addressed as one of the key elements of achieving highest attainable standard of health.

What role has UN Human Rights played in ensuring that migrants and refugees are able to access healthcare?

Over the last years, UN Human Rights has contributed to a better understanding of the normative content of the right to health of migrants and advocated for its implementation. In 2014, the Office launched a publication on The International Covenant on Economic, Social and Cultural Rights

migrants in irregular situations that sought to help policymakers, national human rights institutions, civil society, lawyers, judges and migrants themselves to understand the scope and content of the right to health of migrants in an irregular situation and to challenge common assumptions about their entitlements.

More recently, UN Human rights led the development of the Global Migration Group’s Principles and Guidelines on migrants in vulnerable situations [6], which offer practical guidance on the protection of the most marginalized and excluded migrants, including through the realization of their right to health.

UN Human Rights has also undertaken human rights monitoring missions to different regions and countries of the world to speak directly with migrants about their experiences and to report on their situations, including challenges related to their access to healthcare in the context of transit, borders and immigration detention.

Over the past two years, UN Human Rights has actively engaged with States in the development and implementation of the Global Compact for safe, orderly and regular migration, including as a member of the new UN coordination structure on migration– the UN Network on Migration.

The Global Compact is the first intergovernmentally negotiated agreement under the auspices of the United Nations that cover international migration in all its dimensions, including in relation to access to healthcare and essential services. It shows a recognition of need for an inclusive and comprehensive approach to the protection of migrants’ rights. The Global Compact also has significant synergies with the 2030 Agenda for Sustainable Development.

In conclusion, I would like to plead for advancing the right to health through multi-sectoral approaches. Let’s leave no one behind and start with persons and groups in the most precarious, marginalized or vulnerable situation. That is what human rights are all about.

[6] Principles and Guidelines, supported by practical guidance, on the human rights protection of migrants in vulnerable situations.
UNITED BY IDEALS AND IDEAS

A MOBILE APP DEDICATED TO GLOBAL SURGERY
Mohamed Kahna, a trainee surgical instrumentalist from University Tunis El Manar writes about the power of music in the operating room.
The operating room is a special part of the hospital, hidden in a restricted zone away from the noise of other departments. In fact, the operating theatre complex has a very different structure compared to conventional services. It is has its own dress code, a maze of interconnected rooms and corridors, indeed, even its own air circulation. It’s an unknown and mysterious place for patients that leads to multiple emotions: from simple worry to fear, from anxiety to panic attack.

The operating room still causes anxiety and apprehension in many patients today, which can lead to a refusal of care or difficult working conditions, thus creating a situation of tension within the healthcare team and with the patient. It therefore appears necessary to set up better conditions and relaxation methods for patients and caregivers in order to optimize care and minimise stress. It is within this framework that music therapy falls, the benefits of which have been demonstrated in the recent scientific literature.

A forty-year-old pregnant woman undergoes a caesarean section at the maternity and neonatal center in Tunis, she is blind and very anxious when she sits on the operating table and starts crying without saying a word. I am a trainee instrumentalist preparing my operating room with instruments and operating fields. I want to take into account the feelings of this patient so I decided to relax the woman with music. I put on her headphones with a little classical music and then we start the operation with the surgeon.

The anesthesiologist notices that the patient’s vital signs become normal: the respiratory rate, the heart rate and the blood pressure gradually decrease towards normal values. I would be very happy when I see the patient’s smile, she will no longer be anxious.
The surgery ends and I bring the baby to his mom, still listening to music during her surgery. I am incredibly satisfied. Since that day, I have always worked with music therapy to relax my patients before starting surgery.

Currently, I am in the process of finishing my project "the contribution of music therapy to the operating room" by creating a mobile application connected with earphones or headphones on the operating table contains musical extracts with all genres to satisfy patients and fight anxiety and stress. I feel proud to be a person who gives joy to my patients by paying attention to his morale and physical health as well as participating in the progress of the hospital in my country Tunisia.

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ASSESSMENT OF THE PROGRESS OF SURGICAL DEPARTMENTS AND CHALLENGES IN SOMALILAND

DR HASSAN ALI DAOUD
INTRODUCTION

Somaliland has emerged from a recent conflict that caused the vast majority of skilled surgeons to flee to neighboring countries. This is not the only problem that Somaliland is facing, naturally the country shares many characteristics with other post conflict zones, suffering from inadequate infrastructure, shortage of healthcare workforce, insufficient supply of equipment and health facilities and finally the lack of an overall health care system that adequately regulates the service delivery.

Somaliland thus faces many challenges in the surgical field. Surgeries are costly, and incredibly difficult to access. The poor often can not afford the procedures and even if they can, the risk of grave complications as a result from the surgical procedures is especially high among them. However, many a time even the rich have no access to an adequate quality of surgical care.

For the past 27 years the larger part of surgical procedures has been performed without the presence of any certified surgeon. The only available practicing surgeons are in fact general practitioners taking up the heavy task. Clearly, the term ‘neglected stepchild of global health’, used to refer to global surgery by many experts of the global health society is especially applicable in Somaliland.

With the growing population, the development of sophisticated diagnostic imaging and the establishment of more and more hospitals, the needs for qualified surgical personnel including certified surgeons, anesthesiologists and OR nurses are extremely high. Somaliland is a young country and the first medical graduate only obtained his degree in 2007, however the field of medical professionals (also consisting of OT nurses and nurse anesthetists) is growing.
Methodology
Both a quantitative and qualitative approach were used. The article is the result of the interviews of 10 health professionals. The interviewees included surgeons, a surgical practitioner, a nurse anesthetist, OT technicians, hospital managers and hospital managers of 3 different public hospitals.

Results
"There is some improvement in terms of knowledge, equipment, anesthesia, presence of few Intensive Care Units. In 1990s, there were no officially trained anesthetists, but first group of nurse anesthetists were trained in 2013. Still we are missing trained OT nurses, enough operating rooms, some of the basic equipment’s like bronchoscopy, cystoscopy, and other diagnostic modalities. Anesthesia machines are available most of the regional public hospitals but the anesthesia team are lacking the knowledge of how to use it." as said by Dr Shugri Dahir, Surgical Resident at Edna Adam Hospital.

Gradual development of surgical services:
1990-2000: General Surgery/OBS
2000-2010: Orthopedics, ENT, and Gynecological Procedures

"In Somaliland, due to a lack of certified surgeons, there are many different health care professionals who are involved in surgery. Furthermore, junior doctors are frequently working without senior supervision. This all results in high numbers of malpractice which can have grave consequences and even lead to death. Even though there are many nurse anesthetists, only a few of them are educated to perform pediatric or geriatric anesthesia."
Gaps

In Somaliland, surgeries that are most frequently performed are surgeries in the following specialties: General surgery, OBS/GYN, orthopaedic surgery, urosurgery, ophthalmic surgery, and ENT.

The following operations involve surgeries that Somaliland is unable to perform: cardiac-thoracic surgeries, neurosurgeries, maxillo-facial surgeries, joint replacement surgeries, complex trauma surgeries and most of pediatric surgeries. This forces patients to leave the country and seek help elsewhere. However this journey can be hazardous and patients may lose their lives on the way. One of the biggest challenges related to surgical equipment, reported by hospital administrators was the fact that hospitals have been using the same equipment for over 25 years.

More advanced equipment like CT scanners and MRI are only accessible in two regions of Somaliland. These major hospitals that do have access to better equipment such as Hargeisa Group Hospital (The largest referral hospital country) cannot cope with the high patient demands resulting in extremely long waiting lists.

Opportunities

The government officials reported the existence of some surgical campaigns done by foreigners or NGOs who support Somaliland hospitals. These include obstetric fistula repair, smile operations, hydrocephalus shunts, club foot repair, and some eye surgeries.

Available training in the country

Nursing Anesthesia Program - Degree in Nursing Anesthesia are provided by Al-Hayat Teaching Hospital and Edna Adan Teaching Hospital since 2013.

Surgical Residency in the Country - The first and the only surgical residency started on September 2018 at Hargeisa Group Hospital with the collaboration of University of Hargeisa and Turkish University.

Conclusion

The study has shown that although there is some progress in the surgical departments of Somaliland, this progress is happening very slowly due to insufficient planning of infrastructure, lack of a health work force plan and poor prioritizing of training. Despite all these limitations there are some tangible improvements in the surgical field.

Recommendation for the future

· Improving infrastructure and equipment
· Surgical training including residency specialization and anaesthesia
· Health workforce plan adaptation and regulation.

Dr Hassan Ali Daoud is an intern Doctor from Amoud University and a member of the Incision International Team. He is an avid Campaigner for global surgery, maternal health, and health for all.

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CHIROPRACTIC INVOLVEMENT IN GLOBAL HEALTH

EMIL ZHALMUKHAMEDOV
The burden of spinal diseases contributes to overall global disability, economic hardship, morbidity and even opioid misuse. There are many surgical contributions to the global initiative of improving spine health. However, there are not so many participating chiropractic doctors who are involved in this agenda.

Not only can chiropractic care drastically improve outcomes for certain spine and neuromuscular diseases, but it can also save thousands of dollars to participating organizations worldwide.

The global healthcare initiative around the world aims for one particular goal, and that goal is to keep nations of low and middle-income countries (LMICs) healthy. Within the sphere of chiropody, there are three main areas of global focus: the healthy ageing, opioid misuse and women and children’s health [1].

Besides these areas of focus, chiropractors may have a role to play in surgical conditions and post-surgery rehabilitation. Unfortunately, most of the time chiropractic doctors are never involved nor considered in these round-table discussions; and perhaps it is time for the chiropractic community to establish their own voice as healers in the global health.

In this paper we are aiming to showcase how chiropractic doctors can bridge the gap on global healthcare spend, and outcomes that could lead to better patients’ health and improved lifestyle.
Financial considerations for surgical vs. non-surgical treatments

Historically, many spine-related medical missionary trips to LMICs were done with surgery in-mind. However, non-surgical way of treatment patients with spine diseases has never been actively brought up by chiropractors. In this unique situation, chiropractic community actually have a winning agenda that can tremendously improve not only health of LMICs patients, but also provide a cost effective and collaborative environment worldwide.

Certainly, surgical interventions do bring great results, however, those results come with costly preparation and added semantics.

With any advanced surgeries in LMICs - there are several main concerns with local and visiting physicians:

1. Is there any available equipment for required spine surgery and how much does it cost to bring it to the visiting country?
2. How much money needs to be allocated in order to address postoperative care and complications?
3. Can local physicians provide an efficient continue of care postoperatively in local settings when visiting doctors depart?

Out of three mentioned above points, two of them has to do with allocated finances and one with local surgeons' competencies. In addition to that, another ethical consideration should be brought up, which is concerned with local physicians' preparations, cultural biases [2] and sometimes - even intimidations. It’s not a surprise why some local physicians might be intimidated by visiting surgeons.

However, some local surgeons may not be able to catch up to the performed procedures or simply don’t know what to do in certain scenarios. This brings us up to another point, where advanced education maybe far superior for the visiting country’s healthcare capability.

Chiropractic treatment as an affordable option.
While surgical interventions do provide great outcomes, chiropractic doctors could easily address certain spine and neuromuscular diseases.

Below we provided several options why chiropractic adjustments are cheaper and more efficient way of treating patients at large:

1. Chiropractic care does not require costly equipment for a successful treatment of patients with certain spine and neuromuscular diseases.
2. The spine operating rooms need a specialized team and bulky equipment (e.g C-arm, CT, MRI, navigation system etc.) [4], which is not always available for transportation between countries or affordable to have.
3. Due to minimal requirements for spinal adjustments by chiropractors – it’s becoming a viable option for treating population at large. While surgical intervention can provide care for a single patient at a time, chiropractors can provide a bulk of that work non-operatively with less time per patient for certain diseases.
4. Exchange of adjusting/treating techniques does not require a costly education vs. operating technique.
5. Due to non-invasiveness of chiropractic procedures, chiropractors can monitor progress of local doctors through telemedicine or simple phone call.
Permanent mark and long lasting relationship

As we mentioned earlier healthy ageing, opioid misuse, women and children’s health is taking a priority in global health. While primary care physicians traditionally cover these concerns, most of the mentioned above topics could be easily integrated in chiropractic care worldwide; as chiropractors are trained to treat pediatric as well as adult patients effectively.

The research findings from Rand health publications showcased that alternative medicine is growing and people use alternative medicine more often than primary care providers; interestingly enough, more than half of alternative medicine visits are associated with chiropractors [3]. The chiropractic approach in treating neuromuscular and spine diseases always goes without using any medications. This kind of approach can drastically eliminate not only opioid misuses globally but locally as well, as opioid crisis has already reached alarming rate in major cities of the United States.

Another beneficial option of adding chiropractic care to the global health arena is cost-effective teaching and technique exchange rounds. While many surgical techniques take significant amount of time and require special environment, chiropractic technique exchange and education rounds could be easily integrated in any given hospital and requires minimal equipment such as chiropractic adjusting table and x-ray machine -which most of the hospitals house already. This easy hospital set up can potentially improve lives of thousands at fraction of surgical intervention cost in LMICs [5].

Conclusion

Global healthcare experts are constantly challenged by demand for medical professionals’ help worldwide, in order to effectively address the ever-growing need for a quality medical care in low and middle-income countries. A good amount of scientific research has been published throughout the world on traditional medicine and how it can help, however non-traditional medicine has been neglected in the past.

In the new era of evidence-based chiropractic medicine, chiropractic doctors can now bridge the gap in treating more than dozens of patients in a single visit to LMICs and provide a holistic approach to healing the body and establishing a trusting relationship between local physicians and chiropractic doctors.

Great examples are the University of Buffalo and University of South Florida Neurosurgery departments – they both utilize full time doctors of chiropractic in order to extend their rehabilitation services to the patients. It is now become a very critical situation to have a single, unified patient-centered approach for faster recovery. In the growing area of concern about global health, chiropractic doctors should actively participate in negotiation and round-table talks, as value for a good chiropractic care can no longer be mystified.

REFERENCES

One.Surgery aims to provide a high quality, interactive, and 100% free online course dedicated to global surgery education.
The field of global surgery is rapidly expanding, with more interest from a wide array of healthcare professionals throughout the world and an increasing amount of educational material offline and online in relation to the topic.

One.Surgery aims to present the first (100%) free online course dedicated to the study of global surgery, accessible to all students and healthcare professionals throughout the world. All learners will have free access to course material from any location with no hidden costs.

Using our online platform, we have designed a feature rich course with interactive presentations, multimedia support (including audio and video) and a selection of assessment tools including online questions and feedback. The course will be fully accessible thought all multimedia devices including mobile phones - an internet connection is all that is required.

Our structured syllabus aims to cover the fundamentals of global surgery - from the current challenges of accessing safe surgical care, to the solutions and projects that are making a difference - as well discussing the ethics of clinical care and research studies in the field.

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