Journal of the
Association of Surgeons of Great Britain and Ireland

Number 55, Summer 2019

A Message from the President

Mr Iain Anderson

I am delighted to introduce an excellent and far-ranging Journal which I hope you'll find a bit of time to look through during some summer downtime.

A big thanks to all the contributors and particularly to Vassilios Papalois, our editor. He combines this role with a busy transplant job and a few other things too! Guest editor for this edition is Professor Julio Mayol, Professor of Surgery in Madrid, a surgeon with a social media presence which is insightful and entertaining and who is Secretary of the BJS Society. Thank you to Professor Mayol and his team for their leading edge contributions on Value Based Surgery. Not sure what that is? Take a look (from page 40)!

In fact, the range of articles and content in this Journal is remarkable, much like the Association's meeting in Telford in May, which turned out to be extremely popular and well received. The venue was excellent and facilitated a meeting of colleagues young and old, from many back grounds, sharing active and actual problems of every day surgical practice. We owe a big thanks to Mark Cheetham, our local organiser and host and to all the speakers. The programme covered an amazing breadth and depth and achieved two of the Association's aims – allowing colleagues to meet and discuss and sharing specialised knowledge among the generalists which we all have to be. The meeting theme, Coping with Complications was encapsulated in Professor Jaime Landman's outstanding MacEwen Lecture. He described eloquently several different facets of complications from how we should measure complications to how we and our patients feel about them and how our own responses can contribute to burnout. We still risk under-estimating the impact of complications on our colleagues and on our patients - something to take away, perhaps? We had hoped to let you link to the video of his talk but unfortunately this was lost. His article on page 14 is a great summary.

There are articles following for all tastes but maybe I could draw your attention to Eunice Minford's article on page 67 which highlights behaviour changes we can all think about and also to the CORESS reports on page 86. It is always preferable to read about the mishaps of others and lessons learned than to get you and your patient in the same position!

Finally, do take a look at the winning photos from our competition (from page 70).

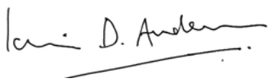
Now the Association is busy planning our Centenary meeting in Glasgow on June 10 to 12 which should be superb. Those 100 years have indeed seen astonishing advances and we will balance a little bit of celebration of the past with some serious looking forward - the theme will be Future Surgery. Professor Des Winter will be speaking about who we are, where we've come from and where we might be going - a talk not to be missed. Of course, we will have multiple leading contributors and sessions around current practice and more detailed information will

appear later in the summer.

ASGBI has also announced its autumn one day meeting on Emergency Surgery - in Leeds this year on 19th November – with priority places at heavily discounted rates for ASGBI members. Have a look at the programme on our web site.

Finally, ASGBI is playing its part in lobbying about the current Pensions issue. Many colleagues and most hospitals have been significantly affected. We are in the process of writing jointly to the Secretary of State. If you have a vignette of the effects of the annual allowance on patient care and are prepared to share it then please get in touch.

Best Wishes,



Mr Iain Anderson
President, ASGBI

Contents of the Journal of the ASGBI

Number 55, Summer 2019

A Letter from the Editor

Professor Vassilios Papalois, ASGBI Director of Communications and Informatics

Dear Colleagues,

Welcome to the summer of 2019 issue of the e-journal of the ASGBI!

As of this year, we have introduced three issues of the e-journal:

- the spring pre-Congress issue that aims to introduce the key themes of the ASGBI Congress and also to offer opportunities for networking and building collaborations during the Congress,
- the summer issue with articles that reflect on and analyse the topics that were discussed and debated at the Congress, using this as spring board to generate ideas and projects for the ASGBI,
- and the winter issue with articles reflecting on the work done by the ASGBI during the year and paving the way for the next year.

We are most grateful to all ASGBI members, collaborators and friends for contributing a plethora of excellent articles that allow us as of 2019 to publish three robust issues per year. We aim for even more in the future!

In this issue, I am sure that you will enjoy reading the articles related the ASGBI Congress that took place from the 7th to 9th of May 2019 in Telford. The theme of the Congress was “Coping with Complications” and was characteristic of the ASGBI’s clear strategic aim to deal with real issues of real surgeons in real life. The feedback was excellent and I believe that there are two words that express the spirit of the Congress: interaction and connectivity. Delegates enjoyed talking, debating, exchanging ideas and working with each other and, furthermore, the Congress was a great platform for the ASGBI to enforce existing collaborations and build new ones. I am sure that you will see all this embedded in the excellent articles related to the Congress.

We are also truly delighted to have in this issue as our Guest Editor Professor Julio Mayol who led a team of world class authors in introducing the hot topic of “Valued Based Surgery”. Professor Mayol is a truly dynamic surgical leader who is paving the way for constructive innovations in modern surgical practice. The articles that Professor Mayol and his co-authors have put together, introduce a very refreshing and thought provoking approach to surgical practice that I am sure will generate a lot of constructive discussion. We are very grateful to Professor Mayol and all the authors in the section for their really great work. The bar in the section of the Guest Editor is getting higher and higher!

We are already preparing the Guest Editor section for the next two issues. Please also e-mail us with your ideas as to what you would like to see in this section in the upcoming issues.

In the summer issue you will also enjoy truly insightful articles from the winner of the ASGBI Moynihan Fellowship and the ASGBI Bursaries as well as robust reports related to Emergency Surgery, creating a supportive environment in surgery, our Women in Surgery initiative and our international initiatives and collaborations. Last but not least, we have another great section related to art and surgery with great pieces of photographic art by the finalists of this year’s ASGBI photo competition - I believe that we have proved the point that surgeons can be great artists as well!

As we have reported in the previous issue the Communications and Informatics Committee joined forces with the Education Committee chaired by Mr Chris Lewis and very proudly we launched in Telford the pilot module of our e-educational platform. The pilot module was very well received and based on the feedback we give us, we are planning the development of more modules in the months ahead of us. Please keep in mind that access to the platform is offered to ASGBI members only. It is also most important to highlight that anyone of our members can propose and lead the development of a module and formally get the credit for that. We are open to your ideas and proposals!

Finally, we need to express our great enthusiasm for the celebration in 2020 of the 100 years of the ASGBI! Our Congress in Glasgow will be the main event for those celebrations and will keep us focused on our great prospects for the future. We would also like to invite you to send us articles, short stories, pictures etc related to your personal experience in the ASGBI and also related to your aspirations for the future of our great Association. We would like to include them in our publications and social media accounts.

As always, I would like to express my sincere gratitude to the members of the Communications and Informatics Committee for their hard work and to Ms Vicki Grant, the top class Communications and Events Manager of the ASGBI who has done (as always!) a fantastic job for this summer issue!

We hope that the summer issue of the e-journal will be a pleasant companion during your summer holidays (and beyond!) and we would be most grateful to have your comments and ideas regarding its content and format. It is your e-journal!

Enjoy reading!

Have a restful summer!

COMMUNICATIONS AND INFORMATICS COMMITTEE

PURPOSE

The Committee discusses how to use technology, informatics and social media in an optimal way to engage with both members and those interested in general surgery and the work of the Association. We discuss what information is pertinent to our audiences and how is best for them to access it. Overall, we aim to promote and encourage member engagement and networking amongst surgeons of all levels and specialties.

WHEN WE MEET

The Committee meets on a monthly basis via teleconference, and regularly communicates via email. We also meet face to face at least once per year, usually during the International Surgical Congress.

MEMBERS

The Committee is chaired by Professor Vassilios Papalois who is the Association's Director of Communications and Informatics, and includes ASGBI members and two members of the Secretariat.

GET INVOLVED!

If you feel you have something to contribute, and would like to join the Communications and Informatics Committee, please email Vicki Grant (**vicki@asgbi.org.uk**) who is the administrative point of contact with a short statement of interest, as well as a bit of information about who you are!

COPING WITH COMPLICATIONS

ASGBI 2019 INTERNATIONAL SURGICAL CONGRESS
7TH – 9TH MAY 2019

Congress Review

The ASGBI International Surgical Congress held in Telford in May 2019 was a great success and attracted 800 delegates over the three days, with over 392 subsequently providing valuable feedback, which we have reviewed carefully.

I want to thank Baljit Singh for his hard work during his tenure as Director of the Programme and look forward to taking the reins for the future congresses.

In terms of positive feedback, the opening afternoon keynote sessions were highly rated by most attendees and the educational update sessions continue to be popular. The four eponymous College lectures continue to deliver high quality, enjoyable presentations and we would like to thank the Royal Colleges for their continued support.

The Oral Poster presentations continue to be a work in progress. These are a very popular format and will continue, the main criticism this year being that the area available for presentations was too small. This is something we'll be able to rectify in 2020 as we have allocated considerably more space to the Eposter area. We are also planning to create two distinct areas; one for poster viewing and one for poster presentations.

We are pleased that the catering exceeded expectations this year and congratulate the Telford team for all their efforts.

We introduced new sessions this year that focused on advice for newly qualified consultants, work-life balance, wellbeing and planning for retirement. We were delighted see that these sessions were well attended, and we'll be reviewing the format and content for future congresses.

Mr Christian Macutkiewicz
Director of Scientific Programme

Social Programme

Congratulations to the 2019 winners of the Annual Golf Competition

St Andrew's Quaich - Grant Harris
President's Putter - Josh Clements

Gala Dinner

The 2019 Gala Dinner was held at the RAF Cosford Musem Club. Attendees enjoyed a fabulous evening surrounded by the Museum's collection of aircraft.

During the dinner President, Iain Anderson presented Honorary Fellowships to three of our international guests; Professor Michael Cox, Professor Nicolas Demartines and Professor Sharon Stein (pictured below).

Thanks to all who attended and made it a memorable and enjoyable evening.

Journal of the Association of Surgeons of Great Britain and Ireland, Number 55, Summer 2019
ASGBI CONGRESS 2019

COPING WITH COMPLICATIONS
ASGBI 2019 INTERNATIONAL SURGICAL CONGRESS
7TH – 9TH MAY 2019

Prize Winners

We are pleased to announce the 2018 Prize Winners.

Moynihan Prize Winner 2019

The Moynihan Prize, of £1,000 plus a medal, is the Association's most prestigious scientific award, and is presented to the author of the best short paper delivered in the Congress Moynihan Prize Session.

Neutrophil-Lymphocyte Ratio (NLR) predicts response to neoadjuvant chemotherapy in oesophageal carcinoma (OCA)
Presenter: Arfon Powell

John Farndon Prize Winner 2019

The John Farndon Prize of £500 endowed by the BJS Society, for the best paper published in the BJS arising from an abstract presented at a previous ASGBI Congress, was awarded to the following paper:

Systematic review of the prevalence, impact and mitigating strategies for bullying, undermining behaviour and harassment in the surgical workplace.
Mr David Riding

Wiley/BJS Audio-visual Prizes 2019

The winners of the 2018 first, second and third prizes, sponsored by the BJS Society and Wiley are:

First place - £300
NHS Anti-Workplace Abuse Campaign
Produced by: Eunice Minford

Second place - £200
Laparoscopic pancreatic necrosectomy, Roux-en-Y pancreaticojejunostomy, cholecystectomy and common bile duct exploration.
Produced by: Lee Creedon

Third place - £100
pomVLAD: Near real-time reporting of risk-adjusted morbidity outcomes - interpreting the variable life-adjusted display
Produced by: James Bedford

ASGBI Intercollegiate Examination

The Association's Prizes for outstanding performance at the Intercollegiate Examination in General Surgery have been awarded to:

Mr Jason Ramsingh – May 2018
Mr Mark Taylor – September 2018
Ms Zoe Barber – January 2019

Short Papers of Distinction

Abstract Title: Pathological response and toxicity from perioperative FLOT chemotherapy for oesophagogastric adenocarcinoma: Early UK experience from the North Midlands cancer network
Presenter: George Bouras

Abstact Title: Discharge complications in post-operative patients: Can this be improved by implementing the Discharge Decision Optimisation Checklist (DDOC) protocol?
Presenter: Christine Bojanic

Abstract Title: How many patients who have undergone an emergency laparotomy attended A&E with related symptoms in the 8 weeks prior?
Presenter: Luke Zhu

NELA Prize

Abstract Title: Co-relation between clinical assessment, CT and intra-operative findings in emergency laparotomy. Is it time to rethink the algorithm?
Presenter: Varun Patnam

International Bursaries

The 2019 International Bursaries, for overseas trainees to attend the Congress, were awarded to:

Tharanga Gamage, Sri Lanka
Sponsor: The Surgical Foundation

Mugisha Ntiyonza Nkoronko, Tanzania
Sponsor: The Surgical Foundation

Oladele Olasunkanmi Situ, Nigeria
Sponsor: Mr Jonathan Pye

We were delighted that Professor Averil Mansfield CBE opened the 2019 Congress for us. A Past President of the Association, first female Professor of Surgery in the UK, past President of the BMA and a former vascular surgeon, Professor Mansfield is an outstanding role model who continues to challenge us.

Synopsis of Opening Address

Professor Averil Mansfield

Berkeley Lord Moynihan conceived the idea of this Association and when commenting about his professional life said that "*it has all been great fun and I would willingly have it over again*".

The first three meetings of the Association received a detailed critique by Rickman Godlee and he said that the opening address should be quite short –

"*the concentrated quintessence of the President's wisdom*"

This is a precis of my attempt to provide a Past President's wisdom in the opening address.

In the beginning the development of the association was based on the observation by Lord Moynihan in a letter written in 1936 to George Gask that

"*Surgeons in one town know little or nothing of surgeons elsewhere*"

"*A surgeon from Manchester had never, so far as I could hear, visited an operation theatre in Leeds, nor had ever been asked in consultation*."

He also made the remark that it was "*not infrequent to have to listen to disparagement of one surgeon by another; and jealousies, openly expressed, were too often heard*".

So, have we almost a century later made inroads in those two areas?

I was struck when I moved as a consultant from Liverpool to London by how little was known about the Liverpool surgeons by those in London.

Even later I would be amazed by the disbelief of trainees in London that it was worth considering a future in the Provinces. And yet those who did make the move did not regret it.

My own relationship with the Association was a close one which I valued highly. It became even closer when I married one of the members and we became the Association of Surgeons! I made some contributions and I benefitted greatly.

When Malcolm Gough phoned me to say I was to become President I was astounded.

Malcolm Gough [now in his early 90s] embodies much of what this association is about, and we have him to thank for the development of intercollegiate activities and for the collaboration with other specialties.

And so, we have survived indeed prospered as an Association for well nigh a century. We have developed techniques that could not have been contemplated by our forebears even in their wildest dreams.

But could we do better?

Have the behaviours which troubled Lord Moynihan vanished, or do they linger on?

Are we providing the support and encouragement for each other and most particularly for the young that is desirable?

I have my concerns and I admit that they are based on the totally unscientific understanding gained by my invited visits around the country to meet and speak to students and young trainees over the past couple of years.

And my concerns are not without validity.

There are three bodies that look at our behaviours:

RCS Invited Reviews
NHS Resolution [formerly National Clinical Assessment Service]
The GMC

All three responded to my request for information.

Around 15% of surgeons will be complained about to the GMC and 5.9% investigated leading to 0.6% who will be sanctioned or warned.

Complaints about behaviour constitute over 40% of the whole and this is roughly the same in all groups of doctors.

In the past 16 years there have been 579 surgeons referred to NHS Resolution because of behavioural issues. These issues are many and include aggressive behaviours and poor team working. But the greatest number concern communication with colleagues.

In the 2019 RCS Report 'Learning from Invited Reviews" there were concerns about individual behaviours in 54%.

These include:

blaming others

isolation etc.

One paragraph struck a chord:

...some of the qualities an individual will have relied on to become a highly trained autonomous surgical professional – for example strong, independent decision making- can be magnified and manifest themselves in personality traits that create a negative atmosphere.

Similarly, in the area of leadership they highlighted problems such as a "them and us" mentality, being overly dominant, a leader without followers etc.

So, there is room for improvement across the profession.

Of course, we need to be self-confident and decisive. But we also need to ensure that the next generation of surgeons is not deterred by our behaviour.

We need to ask ourselves whether our behaviour could in some way be part of the reason for the fact that applications for posts more or less match the number of posts. This concern was supported by Victoria Twigg's work while she was National Medical Directors clinical fellow at RCS England.

It seems that a surgical career is not the highly competitive zone of former years.

There is no doubt in my mind that there is not the support for the trainee of today as there was in my day. Acquaintances are fleeting between trainee and trainer. Peer group support is fragmented.

When things go wrong there can be a feeling of isolation.

Providing that supportive camaraderie is still possible it just takes more effort.

Providing that support for both juniors and seniors in the emergency context, the subject of this conference, where control can be lost, and confidence shattered is even more necessary.

My message is that we need to support our juniors and that we need to see good behaviour as desirable and as well taught as is good technique

In the words of Moynihan, I would certainly do it again, but I am not sure that this is true of the new generation of trainees. We could change that.

Professor Averil Mansfield on stage in Telford with Opening Session Co-Chair Ms Sonia Lockwood

Jaime Landman, the RCPSG Macewen Lecturer gave an excellent lecture encapsulating the theme of the Congress 'Coping with Complications'.

Surgical complications: patient, surgeon and global perspectives

Jaime Landman, MD, FRCS(Gl), Professor of Urology and Radiology, Chair, Department of Urology, University of California, Irvine

The history of surgical complications and malpractice issues dates back at least four millennia. The first documented code of law from Babylonian king Hammurabi mentioned surgical complications and their ramifications, stating, "If a physician operate on a man for a severe wound with a bronze lancet and cause the man's death, or open an abscess in the eye of a man with a bronze lancet and destroy the man's eye, they shall cut off his fingers." Clearly, as long as there have been surgeons, there have been complications and modern medical malpractice punishments may even seem comparatively insignificant!

The public's expectations from surgeons were originally low. Without anesthesia, antiseptic technique or antibiotics, expectations of death, largely from sepsis, were high. With the introduction of more modern techniques including anesthesia in 1846 by Dr. William Morton and Mr. John Collins Warren, antiseptic techniques in late nineteenth century by Mr. Joseph Lister and antibiotics in 1928 by Sir Alexander Fleming, patient expectations began to rise. Indeed, Sir William Macewen engendered his reputation as a leading physician in August of 1888 at the Royal College meeting in Glasgow Scotland when he presented outstanding neurosurgical results in a series of patients in which he applied novel antiseptic technique learned from his hero Lister and new physiology recently learned by Broca and others.

Since this time, patient's expectations have continued to rise. Looking at science fiction writing and movies as clear indicators of future expectations, contemporary books and films of this genre rarely include physicians. Patients are brought by medical technicians to pods where the technology instantly heals of all ailments without any complications. While this expectation is unrealistic in the contemporary era, looking at the history of complications does strongly suggest that we may not have done all we should to this point in time.

Indeed, until the last few years, most clinical series were riddled with subjective descriptions of complications that were not stratified in any sort of systematic manner. Terms such as major and minor complications had no clear definition, but were standard practice. In 1992 Mr. Pierre-Alain Clavien, Professor and Chair of the Department of Surgery at the University Hospital Zurich presented his first effort to define and classify negative outcomes. He differentiated complications from sequela and failures. The first iteration of the Clavien reporting scheme was largely based on how complications were treated (Clavien et al., Surgery 1992 111(5):518). Over a decade later, in collaboration with Mr. Daniel Dindo, and Nicolas Demartines, fellow guest lecturer at this meeting, Clavien published a modified and refined strategy; refining the grading of life-threatening complications with long-term disability (Dindo, Clavien et al., Ann Surgery 2004 240(2):205).

It should be quite shocking to most surgeons that we did not as a profession have a well-defined language to share complications until Clavien had created his system. In 2009 Clavien published on the impact of his system and noted that there had been a dramatic increase in the world's literature in the uptake of the Clavien-Dindo reporting system. Additionally, he noted that half the studies at that time utilized the system and that two thirds of studies had eliminated the traditional vague terms such as minor and major complications (Dindo et al., Ann Surgery 2009 250(2):187).

One of the most interesting findings in the most recent evaluation of the Dindo-Clavien system was that there remained very significant differences in the interpretation of complications between patients, nurses and physicians.

Indeed patients felt that for each Clavien grade the complications were more severe. Nurses felt them less severe and surgeons considered the complications the least severe. While post-operative complications may now share a common language, there remain some clear differences in the dialects spoken by different populations.

Concerning classification of complications, despite the fine work of Clavien and his collaborators, we still have a long way to go. To date, there remains no common language for the classification of intra-operative complications. The lack of a classification system results in the clear squandering of opportunity as in contemporary practice we clearly will have under-reporting and diminished ability to learn from intra-operative adverse events. While intra-operative complication classification systems have been introduced (Peponis et al., Surgery 2018 164:525), they remain largely ignored in the world's body of literature.

The culture of any given population is described as the customs, arts, social institutions, and achievements of a particular nation, people or other social group. When it comes to surgical culture, there are many outstanding features that have benefitted patients for centuries. However, there are aspects of contemporary surgical culture that remain very challenging and have limited opportunities for reduction in surgical complications.

Surgical culture is steeped in a deep tradition of hierarchy. This culture has resulted in diminished outcomes such as in the case of Elaine Bromiley, a healthy young woman who died during and elective otolaryngology procedure after multiple failed attempts at intubation. In this case, the nurses reported that they possessed the situational knowledge to prevent her death, but did not intervene as a function of the hierarchal chasm that existed between nurses and physicians. In fact, in 1999 an NHS study revealed that 38% of health care staff experienced episodes of bullying. While it is also clear that a non-hierarchical environment leads to sub-optimal and unsure leadership, strict hierarchy diminishes a team's performance.

In 2015, a Canadian study beautifully demonstrated the degree to which surgical hierarchy remains a challenge. In a study of Canadian anesthesiology trainees, a "new faculty member" (in reality an actor) engaged the trainees in a high fidelity simulation (Bould MD et al. Can J Anesth 2015, 62:576). The patient was a Jehovah's Witness with strict instructions to avoid blood transfusion. During the simulation, the faculty member directed the students to transfuse the patient. The trainees largely gave the blood. Using a validated advocacy scale to determine strength of the challenge against authority, the majority of the trainees failed to mount any form of effective challenge to the faculty member's order for the inappropriate care.

The challenges of a hierarchy are not unique to surgery. In the 1970's, the ill-fated United Airlines flight 173 was doomed due to the culture of hierarchy existing among cockpit crew. Due to landing gear issues, the flight circled Portland airport. Although gently warned by his engineer regarding their low fuel status on multiple occasions, the captain ignored the information and the plane fatally crashed into a suburban neighborhood.

Flight 173 was not just considered a statistic; airlines did not tout the remarkably small number of planes that were falling out of the sky (complication rate) as might occur in surgical practice. In response to this tragedy, the airline industry changed multiple practices. The accident engendered the concept of cockpit resource management which later evolved into crew resource management. The airlines thus created training in which a gentle hierarchical gradient existed between senior and more junior staff members. The focus on good communication, situational awareness, problem solving, teamwork, and decision-making transformed the airline industry. Indeed, captains can currently be disciplined if they fail to listen to the concerns of their co-pilot regardless of seniority.

Additionally, the airline industry instated technological changes which improved safety. The airlines introduced what is currently well known as the “black box” which records all conversations in and around the cockpit as well as recording many flight metrics. While now universally accepted as a norm, the black box was initially met with resistance by flight personnel.

Recently a group in St. Michael’s in Canada realized a “surgical black box.” The device is the size of a laptop computer and records almost everything that occurs in the operating theater including video of the surgical suite, all conversations, room temperature and sound, as well as other metrics. The device is intended to demonstrate where errors take place and improve patient safety and outcomes. The opportunity to save healthcare dollars is also possible with diminished complications and perhaps greater efficiency.

In a pilot study in cardiac bypass surgery, the device demonstrated that 84% of errors occurred in the same two steps of the procedure. Training can then be instituted to help teams master these two steps, and future research will determine if the device shows value. Intuitively, the concept of positive (non-punitive) oversight is very appealing. However, to most it will not come as a surprise that just like the early days of the aviation industry, the surgical black box will meet significant resistance from surgeons, anesthesiologist and surgical teams.

Remarkably, there is very limited data on the patient and surgeons’ experience with complications. Concerning patient response, studies consistently demonstrate that patients experience fear as their primary response. There is often fear of pain, not resolving the complication, and that the management of the complication will not end. Sadness, anxiety and frustration are also common responses. Ironically, patients often feel personal guilt for their complication; fearing that they are somehow responsible for the poor outcome.

Management of complications is all too often not a focus of medical education, and yet is so very important in the patient experience. While there is a tendency to want to stay away from patients after a surgical complication, the surgeon should be encouraged to demonstrate to the patient and their family just how much they care. Increased presence with rounding several times a day, investing time in careful listening to all the patient’s concerns and close follow-up are critical to optimizing the patient experience during and after a complication. Obviously, it is also critical for the surgeon to do everything possible to optimize the clinical scenario; bring every clinical resource to bear, and understand that the patient is usually the more afraid / anxious party in the relationship.

Regarding surgeon response to complications, there is very little literature addressing the situation. In fact, a recent literature review reflects only nine series (Srinivasa et al., JAMA Surgery (On Line 3/27/19). Most of these articles are self-reported surgeon experience, but they typically reflect four emotional themes: anxiety, guilt, sadness and shame. One of the most shocking and non-intuitive findings of these studies is that there is no significant difference between the emotional response of junior and senior surgeons. Indeed, it is believed that chronic exposure to the challenges of complications is responsible for significant burn out and depression among surgeons.

After complications, positive surgeon coping mechanisms include speaking with colleagues, friends and family, exercise, artistic endeavors and support groups. Sadly, less than 5% of surgeons use support groups and almost none seek professional help. Negative coping mechanisms include tacitly dealing with complications without discussion, alcohol and substance abuse, and reluctance to seek help, which is likely a function of fear, negative perception on competence or strength.

Surgeons should understand that guilt, anxiety, fear and sadness are normal responses and are a reflection of their deep caring for their patients. It is important for surgeons to do everything possible to optimize their own personal condition; bringing every resource to bear. Surgeons should not be afraid to take time off when they believe their professional performance will be sub-optimal.

As individuals, we should identify and utilize constructive coping mechanisms (exercise etc.) and avoid maladaptive mechanisms (alcohol / substance abuse). In high-risk industries such as law enforcement, there are often strict protocols that activate when adverse or challenging experiences occur. Standardization of such protocols in surgery could help optimize surgeon and patient experiences and outcomes.

Surgical experience and culture has resulted in vast improvements in surgical outcomes. However, only recently have we begun to rigorously stratify and classify complications. Indeed, intra-operative complications remain a classification challenge. As surgeons, we must look to other high-risk professions to see how they have overcome challenges. Aviators, law-enforcement, the military, energy companies and others have developed protocols for better communication and management of challenging scenarios. There is great opportunity for better management of complications and even avoidance of complications by incorporation of novel ideas.

Few surgeons fail to feel anxiety when called to deal with cardiothoracic trauma. The RCSEd lecture layed out the optimal approach for general surgeons

Cardiothoracic trauma for the surgeon on the spot

Tim Graham, Sir Robert Shields Lecture

RTAs, falls, stabbings and low velocity gun injuries are the commonest cause of chest trauma in the civilian population. Thoracic trauma in association with severe head or abdominal injuries is a predictor of increased mortality. Blast and high energy gun wounding are the main mechanisms of thoracic wounding in military injuries and civilian terror attacks.

Civilian blast injuries and high energy woundings with semi automatic weapons cause non anatomic multiple injuries with a high mortality especially in a frailer less robust civilian population.

The scale of the incident and casualties will determine the outcome and likelihood of survival for individuals.

Decision making in the management of all thoracic injuries is key and diagnosis by exclusion of fatal and other significant injuries is vital. Optimal care needs to incorporate timely transfer and pre hospital care, appropriate insertion and management of chest drains, early haemostatic manouevres with damage control resuscitation and surgery as required.

Clinical assessment should precede imaging with CT scanning. The management of these patients will be influenced by the environment in which they are treated and the expertise and equipment available – the 3Es.

Surgeons should be trained for and prepared to undertake emergency thoracotomy which should be a bilateral anterior approach (clamshell). The aim of surgery is to control and correct the pathophysiology by relieving tamponade, rapidly controlling haemorrhage, controlling massive air leaks and preventing contamination – an emergency laparotomy of the chest.

Surviving chest trauma patients under the care of general services with retained haemothoraces, persistent air leaks and extensive rib fractures should be referred for specialist cardiothoracic opinion.

Chest Trauma Statistics

- Over 25% trauma deaths attributable to thoracic injury
- A factor in further 25% of deaths
- Appropriate early surgical intervention will reduce deaths
- Majority need resuscitation and simple drainage but a *significant number* may require surgery

GS on the spot - Damage control in the chest - principles :

- Relieve or exclude tamponade
- Rapidly control haemorrhage
- Control of massive air leak
- Prevent contamination
- Physiological not anatomical surgery
- Laparotomy in the chest

Journal of the Association of Surgeons of Great Britain and Ireland, Number 55, Summer 2019
ASGBI CONGRESS 2019

The aftermath of a never event

Mark Cheetham BSc MSc Cert Med Ed MD FRCS
Consultant Surgeon and Care Group Medical Director
Shrewsbury and Telford NHS Hospital Trust
Email: Mark.cheetham2@nhs.net

Introduction

Never Events are defined as "Serious Incidents that are wholly preventable because guidance or safety recommendations that provide strong systemic protective barriers are available at a national level and should have been implemented by all healthcare providers."[1]

The concept of Never Events was introduced into the NHS from the USA in 2008. Since then there have been several refinements and additions to the list of Never Events. In operative surgical practice there are three categories of never events:

1. Wrong site surgery
2. Retained foreign body
3. Insertion of wrong prosthesis.

The introduction of the WHO Safer Surgical Checklist[2] and the subsequent introduction of the 5 Steps to Safer Surgery[3] both improved the focus on patient safety in operating theatres and strengthened the defences against the occurrence of never events. However despite this the reported incidence of Never Events in England has continued to rise over the last 10 years. Because of the concern of regarding the continued occurrence a multidisciplinary Never Events Task Force was set up which published a report in 2014[4]. As a result of the Never Event Task Force Report, a series of National Safety Standards for Interventional Procedures (NatSSIPs)[5] were developed and healthcare providers are mandated to develop implement their own Local Safety Standards for Interventional Procedures (LocSSIPs).

Investigating a Never event using a Human Factors Approach

In my own organisation we recently reported a pair of Never Events in theatres comprising a retained surgical swab following a tonsillectomy and a wrong sided operation for a hip fracture. These incidents were investigated by a surgeon and a patient safety advisor. The principles of human factors were used to investigate both these events. The SHELL conceptual model was used to explore factors potentially involved in the two incidents. The SHELL model, which was originally developed in aviation, looks at various factors in the work place (software, hardware, environment and liveware). The SHELL model puts particular emphasis on the interactions between two factors, for example the L-H (Liveware-Hardware) interface would examine the interaction between people and equipment within the workplace and the L-L (liveware – liveware) interface would examine interactions between people.

Figure 1: the SHELL model of human factors (modified from Hawkins and Orlady, 1993)[6]

S	Software	Policies, Procedures
H	Hardware	Equipment
E	Environment	Temperature, humidity, lighting
L	Liveware	People
L	Liveware	People

The investigation was also broadened to examine the latent conditions experienced and created by the relevant clinical teams. A blended approach to the investigations was taken using a variety of methods including memory capture of people involved in the incidents, review of local polices and guidelines ("work as imagined") and observational studies in the work place ("work as done"). Importantly the investigation examined the working practice of the surgical teams both in operating theatres and also in the preoperative environment. The investigations highlighted the following factors as contributing to the risk of occurrence of never events:

- Non-adherence to local policies for taking consent and surgical site marking
- Poor environment for the trauma meeting
- Distractions and interruptions in the operating theatre complex
- Deficits in training and orientation to theatres for all staff
- Difficulties in displaying radiographs in theatres

As a result of these two incidents we have created a local action plan to improve training for staff in consent, site marking and theatre etiquette. The poor working environment for the trauma meeting and IT issues hampering display of x-rays in theatres have been corrected. A working group is addressing distractions and interruptions in theatres. A longer-term programme to train staff in human factors and essential safety procedures in theatres is in progress

Psychological Safety

Amy Edmondson is a Professor of Leadership at Harvard Business School who has carried out extensive research on teams and their effectiveness. In her post-doctoral research, she examined different healthcare teams in the USA from the perspective of team functioning and patient safety. She found counterintuitively that hospitals with high levels of team functioning reported more incidents of patients harm than did lower functioning teams. Subsequent research demonstrated that higher functioning teams discussed and reported failure more and this lead to her work on psychological safety. According to Edmondson, "psychological safety is a belief that one will not be punished or humiliated for speaking up with ideas, questions, concerns or mistakes." Psychological safety is important in surgical teams in two ways. Firstly people who work in teams with a high levels psychological safety are more likely to speak to prevent an error or patient harm. Secondly teams with high levels of psychological safety are more likely to talk about and learn from errors thus addressing the latent conditions which may allow errors to progress and cause patients harm. In her recent book "The fearless organization"[7] Edmondson discussed three ways to improve psychological safety which can be deliberately applied to surgical practice (see Figure 2).

Figure 2. 3 ways to improve psychological safety in a team (adapted from Edmondson)

	Framing the Work	*Model fallibility*	*Embrace the messenger*
Examples of reinforcing behaviours	*-explain that the work is inherent uncertain and even dangerous* *-discuss uncertainty and levels of operative difficulty during the team brief*	*-discuss mistakes and errors* *- ask for reminders* *- participate fully in preoperative checklists*	*-thank people who speak up* *- discuss people's concerns and either act on them or explain why they are not valid* *- participate in debriefs at the end of theatre lists*

Just Culture

Conventionally we think of a no-blame culture or a blame culture. In a blame culture, the focus is on identifying and punishing people who have failed to comply with rules and who are believed to be at fault. In a blame culture, people will be afraid to speak up and opportunities for individual and organisational learning are lost. Conversely, in a no-blame culture, its "all the system" and this can lead to poor levels of responsibility and accountability. A "just culture" takes into account human error and balances learning with accountability and patient safety[8].

"Trying to increase discipline and accountability in the absence of a just culture has precisely the opposite effect. It destroys morale, increases defensiveness and drives vital information deep underground. It is like trying to revive a stricken patient by hammering him on the head with a mallet" Matthew Syed[9].

The Just Culture Guide developed by NHS Improvement[10] can be used to systematically examine the events after an incident to assess what actions should be taken. It asks a series of questions to assess whether a health professional intended to cause harm, had any health issues, had foresight, acted as another person would do in the same circumstances and whether or not there were any mitigating circumstances. This tool is designed to guide decision-making after the investigation of any safety incident including a never event.

Conclusion

Surgical teams are part of a complex socio-technical system and surgeons (like other humans) make errors. There are well defined systems and processes which are designed to catch errors before they cause harm to surgical patients. There is an important impact of events outside of the theatre environment on the safety of patients undergoing surgery. When investigated patient safety incidents, there is a danger in taking a reductionist approach which may result is inappropriate blame being laid at the door of people who have failed to comply with safety procedures. Taking a more holistic approach by using principles of human factors will create a deeper understanding of the events and maximise the organisational and individual learning. The importance of developing a just culture and of increasing psychological safety within surgical teams is emphasised.

References

1. Never events list 2018, NH Improvement, January 2018. https://improvement.nhs.uk/documents/2266/Never_Events_list_2018_FINAL_v5.pdf (accessed 19th June 2019)

2. Implementation manual WHO Surgical Safety Checklist 2009, World Heath Organisation, Geneva, 2009

3. National Patient Safety Agency. Five Steps to Safer Surgery. London: NPSA; 2010. 'How to Guide'.

4. Report of the NHS England Never Events Task Forces, NHS England, 2014https://improvement.nhs.uk/documents/922/sur-nev-ev-tf.pdf (accessed 19th June 2019)

5. National Safety Standards for Invasive Procedures (NatSSIPs), NHS England, 2015, https://www.england.nhs.uk/wp-content/uploads/2015/09/natssips-safety-standards.pdf (accessed 19th June 2019)

6. Hawkins, F.H., & Orlady, H.W. (Ed.). 1993." Human factors in flight"(2nd ed.). Avebury Technical, England, 1993

7. Edmondson A, "The Fearless organisation", Wiley, London, 2019

8. Dekker S, "Just Culture", Routledge, London, 2016

9. Syed M, "Black Box Thinking: Marginal Gains and the Secrets of High Performance: The Surprising Truth about Success", John Murray, London, 2015

10. A just culture guide, NHS Improvement 2018, https://improvement.nhs.uk/documents/2490/NHS_0690_IC_A5_web_version.pdf (accessed 19th June 2019)

Congratulations to our prize winners!

Future Plans

Director of the Scientific Programme, Mr Christian Macutkiewicz

In 2020 we will be celebrating our 100th year and looking forward with “Future Surgery” as our theme for the Congress.

Our Centenary congress is taking shape in what I hope will be a hugely enjoyable and celebratory event. We have taken note of sessions that rated highest with you and the topics you would like to see in the 2020 programme. We aim to involve trainee groups more in future and I will be writing to each trainee group to engage with me to plan future sessions and ideas.

The Centenary congress will include looking back at the history of surgery, where we currently are what future direction we will be looking at. There is a fantastic line up of national and international speakers and we will be calling on their experience in cancer care, technical innovations and latest guidelines in surgical care. We have collaborations with all the Royal Colleges to bring current and future leaders to speak to the congress on current hot topics relevant to practice today and are finalising an inspiring lecture from an international athlete on teamworking in high pressure situations and who proves that traditional barriers are there for the breaking. More details soon.

The congress will also feature many Centenary celebrations and prizes and pull together World leading authorities in their fields on future developments in Surgery. The Gala Dinner will be in the magnificent Merchant City of Glasgow and will be a fitting highlight in the social programme where I hope many of you will see old friends, make new ones, and forge collaborations for future work.

We hope to see you and your teams in Glasgow for as we celebrate our Centenary from 10th - 12th June!

Best wishes and enjoy the Summer!

SAVE THE DATE

Future Surgery
ASGBI 2020
INTERNATIONAL SURGICAL CONGRESS
10 - 12 JUNE 2020
GLASGOW

FRIENDSHIP AMONGST SURGEONS
1920 2020
100 YEARS
ART & SCIENCE OF SURGERY

SCIENTIFIC PROGRAMME COMMITTEE

GET INVOLVED!

The Scientifiic Programme Committee is recruiting two members to join the Committee.

The Committee oversees the programme of the annual International Surgical Congress to engage with both members and those interested in general surgery.

WHEN WE MEET

The Committee meets on a quarterly basis and regularly communicates via email.

MEMBERS

The Committee is chaired by Director of the Scientific Progamme, Mr Christian Macutkiewicz and membership representation from a range of interest groups.

If you feel you have something to contribute, and would like to join the Committee, please email Vicki Grant (**vicki@asgbi.org.uk**) the administrative point of contact, with a short statement of interest.

BEST NEW SURGICAL INNOVATION AWARD

The Association of Surgeons of Great Britain and Ireland (ASGBI) is delighted to partner with the National Institute for Health Research (NIHR) Surgical MedTech Co-operative (Surgical MIC) to offer the prestigious *Best New Surgical Innovation Award*, which will run in conjunction with the ASGBI 2020 Congress and our 100th year anniversary celebrations.

This award will provide the recipient with a £10,000 grant to support prototype development, proof-of-concept work or early feasibility tests for new surgical technologies. In addition, this is an opportunity which will provide you with high-level access to NIHR expertise and its innovation pipeline to advance your project.

The final deadline for applications is 17.00pm on Friday 31st January 2020. Reviews will be conducted on an ongoing basis to ensure that submitters have sufficient time to provide further information and clarifications where necessary.

About the NIHR Surgical MIC

The NIHR Surgical MIC are one of eleven MIC's funded by the NIHR to act as a centre of expertise that focus on clinical areas of high morbidity and unmet need for NHS patients. They are hosted by the Leeds Teaching Hospitals, the second biggest healthcare provider in the UK, working closely with the University of Leeds, a leading UK University with strengths in biomedical research. The NIHR Surgical MIC has the knowledge and expertise to provide:

- Clinical insight
- Potential market evaluations
- Access to clinicians
- Commercialisation support
- Public and patient involvement
- Patient-centred design
- Early phase evaluation

IMPORTANT DATES

Deadline / Date	Activity
31st July 2019	Online submission site OPEN for 'Best New Surgical Innovation Award'
31st January 2020	Deadline for full applications
31st March 2020	Shortlisted candidates invited to present at the ASGBI 2020 Congress
10th-12th June 2020	ASGBI 2020 Congress

For more information, please visit
www.asgbi.org.uk/awards

Association of Surgeons of Great Britain & Ireland

2019 MOYNIHAN TRAVELLING FELLOWSHIP

ABOUT

The prestigious Moynihan Travelling Fellowship, up to the value of £5,000, is available annually by open competition to Specialist Registrars towards the end of higher surgical training or Consultants within five years of appointment at the closing date of application. The Fellowship is intended to enable the successful candidate to broaden their education and to present and discuss their contribution to British and Irish surgery overseas. It is not appropriate, however, that the award be used as part-funding for an off-service year of training.

CONDITIONS & HOW TO APPLY

The Fellowship is open to ASGBI members and non-members; however, if a non-member is successful in getting the Fellowship, then they will be required to become a member of the Association. Candidates must be residents of the United Kingdom or Republic of Ireland and they should be engaged in general surgery or in one of its specialties

A full curriculum vitae should be submitted giving details of all past and present appointments and publications, together with a detailed account of the proposed programme of travel, costs involved and objectives to be achieved during the Fellowship.

PROCESS

Short-listed candidates will be invited for interview by the Association's Executive Board. The Board will pay particular attention to originality, scope and feasibility of the proposed itinerary. The successful candidate will be expected to act as an ambassador for British and Irish surgery and should be fully acquainted with the aims and objectives of the Association of Surgeons of Great Britain and Ireland and its role in surgery.

After the Fellowship, the successful candidate will be required to provide a written report of their Fellowship for inclusion in the Association's Journal, and to address a future ASGBI International Surgical Congress. A critical appraisal of the centres visited, together with an assessment of how the experience will enhance future personal and professional development, should form the basis of the report.

Applications should be submitted, by 17.00 on Friday 27th September 2019 by email to bhavnita@asgbi.org.uk

2020 INTERNATIONAL BURSARIES

A number of international bursaries are available to provide support to surgical trainees from poorly resourced countries in the development of their training, by giving them the opportunity to spend two days in a UK hospital and to attend the Association's 2020 International Surgical Congress.

Each bursary is worth £2,000 and includes:

- Up to six nights' accommodation
- Three day registration for ASGBI's 2020 International Surgical Congress in Glasgow
- £20 per day subsistence allowance
- £800 towards travel expenses (reimbursement of receipts)

The 2020 Congress will take place from **10th - 12th June** inclusive at the SEC, Glasgow. Bursary winners will be hosted in a hospital or Trust local to the conference for one or two days prior to/after the Congress.

Applications should consist of a Curriculum Vitae, with two supporting written clinical references, and a covering letter, describing why you wish to attend the Congress and the ways in which you hope to benefit, before **Friday 7th February 2020**. Any Trainee in a specialist training programme in General Surgery in a poorly resourced country is eligible to apply.

Applications should be submitted to bhavnita@asgbi.org.uk

Deadline for applications: Friday 7th February 2020

SPONSORING AN INTERNATIONAL BURSARY?

The Surgical Foundation's programmes are renowned for their quality and, as a result, are highly sought after, and the Foundation is actively seeking external sponsorship of bursaries – or part of a bursary – so that this valuable programme continues to thrive. Your generous support will go a long way to help a fellow surgeon who has fewer opportunities for training and development than in this country. Should you – or your Travelling Club or Regional Surgical Society – decide to sponsor or contribute towards a bursary, you will, of course, be kept involved in the entire process. The bursary can be 'named' or kept completely anonymous if you prefer, and you will be invited to present an award to your sponsored trainee(s) at a ceremony held during the Association's Congress next May.

For further information, please contact Bhavnita Patel at bhavnita@asgbi.org.uk

2019 ASGBI International Bursary Winner Report

Tharanga Gamage, Sri Lanka

"It was an experience of a life time!!!" No other words to describe the six-day stay in the UK, attending the ASGBI Surgical Conference 2019 and the two-day hospital visit. This opportunity was provided by the ASGBI's bursary for the surgical trainees in the developing countries.

I arrived in Telford city on the 6th of May evening. After a warm welcome and a good night rest we attended the three-day surgical conference which was held in the International Centre in Telford. I had the opportunity to listen to some amazing lectures and discussions on surgical complications during the conference. The best discussion was on surgeon's psychology when he/she faces a complication and making use of a support system to help him/her cope with it. So many important topics were discussed and new evidence presented on various fields including surgical emergencies in pregnancy, enterocutaneous fistulae, splenectomy in trauma...etc.... When I posted the new concepts and evidence I learnt during the conference on the social media groups among the trainees in my country, it generated a very stimulating discussion.

During the conference I met a number of surgical trainees from UK and we had some thought provoking discussions which made me start a new research project after returning to Sri Lanka. One of the best experiences was to try the Da Vinci robotic simulator at the conference.

There aren't many females in the surgical field in Sri Lanka. The number has been increasing since recent years and most of us are in the early stages of the training. I could meet some of the leading female surgeons from the UK and the USA. Listening to their stories and how they overcame the hardships was very inspiring and encouraging.

I had the opportunity to share clinical experiences from my country and listen to similar, as well as totally different clinical scenarios, with respect to types of diseases, the stage of presentation and management from the developed part of the world. Even though all three of the bursary winners were from developing countries, when we discussed how we manage different clinical conditions in our settings, we realized that there was so much to learn from each other. It stimulated me to think of various ways of managing the same clinical problem in different settings.

The visit to Shrewsbury Hospital was a new experience where we could join the surgical ward rounds with Dr Adam Farquharson and Dr Mark Cheetham who were very welcoming and helpful. We observed a laparoscopic anterior resection and also some endoscopies being done. There were new practices which I have observed and am planning to incorporate to the practice in Sri Lanka. I really appreciate the time and effort spent by the consultants to communicate the management plan with the patients.

The Gala dinner was one of the most memorable experiences in my life. I felt privileged to be there. We spent a wonderful evening with some of the well-known, leading figures in surgery and enjoyed a lovely dinner in the Air Force Museum, which was a spectacular location.

I am extremely grateful to the ASGBI and the Surgical Foundation for giving me the opportunity for an experience of a life time. Special thanks to Ms Bhavnita Patel and the team who arranged a very comfortable stay for all of us and made us feel special throughout the stay.

2019 ASGBI International Bursary Winner Report

Mugisha Ntiyonza Nkoronko, Tanzania

Introduction

Between 5th and 12th of May 2019 as a bursary winner I had an opportunity to visit the UK for the first time. I travelled from Kilimanjaro International Airport via Doha Qatar to Heathrow terminal Four. These were preceded by an application process for the bursary and thereafter my UK Visa. Through constant communication between me and the ASGBI Manager, things went smoothly even in times of difficulty. I had to travel by bus and train to Telford via Birmingham New Street and was exposed to the well organized UK public transport. This report aims to answer key questions that are expected by bursary organizers. Apart from the three days of surgical congress (Coping with Complications), I had an opportunity to visit a UK hospital in Shrewsbury for an extra two days. Below are the key answers to make a detailed report.

Tell us a bit about you and your background? (This is to get a sense of who you are and what drives you?)

I am Dr. Mugisha Ntiyonza Nkoronko a Surgical trainee from Arusha, Tanzania the land of Zanzibar and Kilimanjaro with an unforgettable experience of the wild beast and cultural tourism, East Africa. A General Surgery resident at the College of Surgeons East, Central and Southern Africa (COSECSA). I was born 33 years ago on the eastern bank of Lake Tanganyika (where Dr. Livingstone died). I grew up in rural Tanzania and got educated in the public schools around and passed to join the Kilimanjaro Medical University College at the foot of Mt. Kilimanjaro for undergraduate training in the field of Doctor of Medicine. I spent six years of Training in Moshi town Northern Tanzania, the home of Kilimanjaro Mountain. I joined the college of Surgeons COSECSA for the five-year training program at Arusha Lutheran Medical Center. Currently, I am the husband to Vera and a father to two beloved children Von. Aislinn-Chimpaye and Don-Einstein. Part of my mission statement is to research, teach and practice surgery in Africa. with keen interests in surgical leadership, Global surgery and innovations.

What made you want to be a surgeon?

Throughout my life, I have been enjoying what the surgeons do to the extent of wanting to become a Surgeon even before becoming a medical Doctor the interest of becoming a surgeon came through three experiences:-

1. As a rural chap once witnessed the surgical procedure of Separating Craniopagus twins that were telecasted by BBC and CNN, then the wish to become a surgeon matured in my mind.
2. A terrifying lifetime family encounter, I remember when I was six years old my father sustained a severe head injury after falling from a height and lost consciousness and remained in coma for a couple of weeks in a small district hospital. He recovered after six months but remained with a seizure disorder. It took five years to diagnose him with Epidural hematoma and a General Surgeon drained the hematoma, he had to travel more than 1,000km just for this and he is well, seizure free to date and retired from Public service last year.
3. When I was in Medical school I observed that every disease in Africa was treated by Surgeons, Be it complicated Diabetes Mellitus ended with surgeon offering Debridement or amputation, the same was typhoid fever ended with perforation being sealed by surgeons, TB ending up with Chest tubes and Pneumonectomy, Rheumatic fever required Valvular replacement. Name any disease whether communicable or non-communicable definitive therapy has some form of surgical intervention. Leave alone trauma but surprisingly even worm infestation may require surgical therapy to relieve the intestinal obstruction. With this Fact and the current trend of health seeking behavior of of Africans I thought to become a surgeon will add value to the life and health of mankind.

What are the challenges that you've faced on your journey?

No pain no gain; in life challenges are inevitable and throughout of my journey, I have been meeting a number of hurdles of which I viewed as opportunities to become a better person and challenge my existence on planet earth. Being a first born with the ill health of my father I missed a mentor, but survived and kept self-esteem high up the roof, poverty made me to the public education where there were not enough learning infrastructures including teachers but I overcame it. Funding my university education was another challenge that I wanted even to quit university, but I also managed through with difficulties. Again studying in an African University's teaching hospitals is a challenge of a lifetime since some of the things you could have to imagine because they are not there and you graduate without them. In the Surgical training, I am challenged through unavailability and if available with limited skills, on laparoscopic surgery, cancer surgery, and other basic surgical facilities and infrastructure. Last but not least, the patient who may refuse surgical care due to ignorance and poverty. The main thing that I am proud of even today is I didn't despair, I changed a challenge to something better. I once applied even for this bursary and missed but I never give up, and this is the secret of this perspective.

Why did you apply for the bursary?

I identified areas where I needed to strengthen myself and required to work hard to improve and become better, therefore I had to look for an opportunity to expose my self to the state of the art surgical facility or environment, also to get involved with Global surgery initiatives. UK surfaced on top of the list because of close collaboration between RCSI, ASGBI, and RCSEd, Getting funding to the UK is not a joke when I saw the International bursary scheme with the goals of exposing Surgical trainee from LICs I was moved to apply for a second time. I was motivated by other ASGBI bursary winners and the difference they demonstrated. Thanks to those who made the bursary scheme available because it answered my areas of interest just in one week at least.

What have you learned through your visits to the hospital? Will you take some of that learning with you into your future work?

The health system that exists in many African countries, includes a cocktail of postcolonial adjustment and the recent development. A lot of things do not happen the same way they do happen in the UK and other developed nations. Visiting Shrewsbury hospital for two days was another moment while in UK. From the infrastructure, a healthy system that exists, surgical specialization, ambulatory surgical services, laparoscopic surgeries done, to the organization of surgical services filled my mind as I walked from one place to another. We enjoyed the observership guided by Mr Cheetham. It is imperative truth that a number of great lessons have been taken home. The valuable memory will never be erased and will add up to the package of surgical care to all who will come to my desk. A little adjustment will be required and customization is important to fit my environment and culture.

What was the best thing about the Congress for you? Why?

The congress was an exciting moment, as a surgical trainee from Africa, I noted the highest level of organization. Things were on time, well arranged and friendly, the Congress was attended by mostly surgeons from the UK, I was exposed to state of the art paperless congress. Surgeons with their specialization were friendly and easily shared with me their own experiences. The presentations from renown world-class experts were current and well researched, adequately presented and discussed with a number of take-home messages.

I was also exposed to exhibitors and for the first time in life I was able to see a robot and simulate robotic surgery, the cultural diversity and technology advancements made me enjoy the Congress.

What will you share from your experience? Who will you share this with?

Sharing is the best way of transferring the knowledge and skills from the UK to Tanzania, I have started to share and I will continue sharing with the fellow surgical trainees, patients, hospital staff, friends and colleagues from nearby universities.

I will share about the opportunity of becoming a Bursary winner, the lessons learned from the Congress, the experience gathered from a hospital visit and exposure to the tech advancements showcased by exhibitors.

Have you made some new contacts / new networks through your experience here?

Yes, indeed some important contact has been generated, for future partnership and collaboration. From these contacts I hope to get more exposure to the UK health system, surgical practice and leadership. This contact creates a platform for future engagements. I am looking forward to keeping these contacts and many more to come for the healthy relationship between the UK and Tanzania.

Conclusion

I extend my sincere appreciation to the organizers of the Bursary Scheme, this is a commendable endeavor that you should keep doing for the entire existence of ASGBI. The scheme offers an opportunity of a lifetime, planted seeds of better surgical care that will germinate and bring out good fruits. I know I will be coming again to the UK for a number of things in the future but had it not been for ASGBI the first visit would be impossible. Once again Asante Sana (thank you so much) and God bless you.

2019 ASGBI International Bursary Winner Report

Oladele Situ, Nigeria

My journey to the 2019 ASGBI conference in Telford began like an idea and an appealing suggestion. There was an electronic flyer of the conference put up on my department's social media page which was ignored by almost all residents because it either sounded too far-reaching or because trainees were not in the General Surgery unit. For me, that was the golden opportunity I have been waiting to see how surgical life is outside the confines of my hospital and country. It was an opportunity to expand my horizons and reach for the apparently impossible. A chance to learn something new, share ideas and make new contacts. The Surgical Foundation bursary award made my dream come true.

I am a 6th-year resident (just completing my 2nd year of senior residency in General Surgery) at the National Hospital Abuja, Nigeria. I am aspiring to be a surgical oncologist and a physician-scientist with an interest in breast surgery and clinical cancer research. I had my undergraduate medical degree at the College of Medicine, University College Hospital, University of Ibadan. I am currently the chief resident in the surgery department, the National Hospital. I have a passion for teaching, innovation, and mentorship.

I hope to be an oncoplastic breast surgeon and a clinical investigator in cancer research. Oncoplastic breast surgery is a rare skill in Nigeria but the demand for it is getting higher by the year.

Being a surgeon has not always been what I dreamt of being as a child (I thought I would have been a physicist with NASA). However, the art of relieving the human suffering through invasive interventional skills became what I have loved to enjoy from the hands of surgical teachers that do it best. These courageous doctors infused with me with their drive during the medical school. Surgery is a perfect blend of art and science. I'd rather "go in and see" what the problem is than "wait and see" what the problem eventually would turn out to be. I guess all surgeons have a little bit of impatience that make then great at their work.

The road through my training has not always been a rosy one. In fact, I have had more hurdles and failures than a success story. The most challenging part for me as a young surgeon is the unprecedented amount of physical exertion, long hours and unending on call-duty hours it takes to do the work. It often leaves me fatigued and on the brink of giving up severally. Reading is fun but the time to focus and do research work is rarely available.

Another major limitation to my work is the paucity of mentors to guide me on how to achieve my dream and motivate me. I am often left to grapple through the dark and bump through my frequent failures till the day I might be lucky to get to my dream. Some colleagues just literally talk me down, reminding me of how disadvantaged I am. I have attempted severally to take up an MSc course in Translational Clinical research or cancer science. However, its either I am unsuccessful with my application or not able to save up enough funds to pursue one when the admission finally comes in. So, I just read the literature about what I hope to learn someday and apply myself to what I am currently doing.

The ASGBI conference was very organized and coordinated. This year's conference would be my first international conference and the farthest I have been from home. I find the use of the program app very invaluable and user-friendly to follow the fast pace of the presentations.

I find the conference venue very comfortable as well and each speaker very stimulating and articulated as they give their talk. Some talks were very relevant to my clinical exposures back at home and I made sure I asked questions about how to overcome certain challenges I face in my practice.

One of the first thing that struck me during my interaction with the conference participants was the level of awareness of the trainees in attendance. They were very grounded in their chosen areas of specialization and are keenly involved in research. That gave me the challenge to want to be better than I am now and improve to an acceptable international standard particularly in the area of research so I can also present my studies in reputable journals and conferences.

I have learned a lot about possible treatment options and guidelines but the majority of them are out of my reach in Nigeria. My center is lacking behind in certain modern facilities and technologies that allow for safer outcome. Furthermore, the method of training does not allow for early super-specialization and patient pooling for residents and this deters large case exposures and high level of dexterity as a trainee. Therefore, I really appreciated the fact that the speakers spoke from their current evidence-based practice and reassured me that the research published is practicable at least outside the confines of my home.

I was able to walk around the advertisement stands and I find the technologies and services on display very fascinating. I was delighted to see the Da Vinci robot for the first time in real life and I sure was grateful for the opportunity to try my hand on the robot simulator which I find very easy to use and like laparoscopy.

I made new contacts at the conference. My fellow awardees and I have become international colleagues and friends, probably for life, for exchange of ideas. I was also able to meet other colleagues and a few Nigeria trained surgeons who now practice surgery in the UK. They made me feel at home. I would love to thank Mr. Clive Quick for his fatherly advice on training in surgery, Dr. Abraham Ayantunde for his warm reception and Mr. Christopher Lewis for his succinct account of the history of Telford and Shrewsbury.

The conference dinner was the most outstanding moment for me during my short stay. It was a life-changing moment to see the distinguished principals of the Royal Colleges of England and Edinburgh and sit with them on a table. What else could I have asked for a source of motivation in my budding career! These noble men were warm and very receptive and discussion with them was enriching. It was indeed a great honor to give a short speech at the dinner and I'll forever be grateful to the Surgical Foundation for giving me the platform. In addition, the venue of the Royal Air Force Museum chosen for the dinner was classy and I had a nice time appreciating the engine relics.

I would like to appreciate Mr. Cheetham, Adam and Manel for hosting us at the Shrewsbury Hospital. It was exciting to experience first-hand what surgical health service in the NHS looks and feels like. I was able to see the protocol of care and appreciate the difference in the disease spectrum they see compared with mine in Nigeria. The hospital was relatively small but very busy. I enjoyed my interaction with the consultants and trainees. I have learned a few things and already making some changes in my patient interaction and management on my return to work in Nigeria.

Finally, the people of Telford were warm and friendly. I loved the fine meadows and I soon adapted to the chilly weather. I frequently took walks and went around the parks to see the life of the locals. I was able to attend a balloon festival on the eve of my departure to Nigeria. These are memories I will forever cherish captured in delight and with thankfulness to the Association of Great Surgeons of Great Britain and Ireland.

International Development Committee Update

Tan Arulampalam, Chair
International Development Committee

Greetings from the International Development Committee, which is undergoing a renewal of late as we enter our hundredth anniversary year. I am delighted to take on the role of Chair and must first and foremost thank Mrs Judy Mewburn for her tireless hard work and energy running the Committee as my immediate predecessor. Judy has retired from the IDC, but as with all our respected colleagues we will be calling on her for words of wisdom in the future.

The IDC has an important role within the Association of Surgeons of Great Britain and Ireland (ASGBI) and The Surgical Foundation, the latter being established in 2008. The Surgical Foundation is the charitable arm of the ASGBI. The IDC is part of the ASGBI and will help deliver the Vision of the Surgical Foundation.

Our Vision

To reduce unnecessary deaths and suffering from surgical problems arising in low and middle-income countries.

Our Mission

To train local teams of doctors and other healthcare workers to be able to provide safe surgical services appropriate to the needs of their countries.

To this end we are seeking to encourage, support and collaborate with surgeons at all stages of their careers to disseminate knowledge and skills throughout the world with a particular focus on low and middle income countries. Our aim is to build an active working group to coordinate these activities and establish an infrastructure to facilitate the various work streams. I believe that working closely with other societies and charitable groups will ensure that much of the hard work done by each does not need to be repeated and will help reduce costs.

Fundraising is an important part of this work and we appeal to our members to come forward with suggestions to help raise the essential funds to support these valuable projects. Importantly, we feel that this must be done in a sustainable manner with transparency and accountability to those who give so generously. We also want to ensure that the work and projects continue well after the end of the visits. We also believe that this should be a two way process for the surgeons in each community where there will be learning and sharing of ideas from those visiting and those hosting.

On an equally positive note I was delighted with our session at the Annual Congress this year. We opened with an inspirational talk on Operation Hernia by Mr Nigel Richardson who shared his recent experience. He highlighted the value to both the surgeon and the communities that were served. Professor Michael Cox from Sydney shared a very moving account of his first trip on the Mercy Ships project. He demonstrated the difference in this work as opposed to a visit to a fixed hospital facility. Mrs Debbie Gooch, Miss Rachael Clifford and Miss Veena Surendrakumar along with Mr. Andrew Miles spoke passionately about their work in Jaffna, Sri Lanka. Their trip showed how important the team (nurse, registrars and senior consultant surgeon) is and the utility of registrars in delivering surgical courses. Finally Ms Stella Smith gave a fascinating insight into the work in a trauma unit in South Africa and the various hurdles getting to work there as well as the rich rewards she gained. We finished the session with some fascinating, moving and inspirational insights into life as a trainee abroad by our three bursary winners. They spoke of the poor access to healthcare, the poverty that remains a major challenge throughout the world and the consequences of warfare.

Andrew Miles led an RCS England visit to Jaffna and was accompanied by Ms Rachael Clifford and Ms Veena Surendrakumar (both surgical registrars) and Mrs Deborah Gooch (advanced scrub practitioner). The team delivered Basic Surgical Skills, Core laparoscopic skills course and Care of the critically ill patient. Mr. Miles is returning in the Autumn of 2019.

Debbie Gooch setting up basic surgical skills (suture simulation on a banana)

Ms Rachael Clifford (Surgical trainee) dismantling a “beetle”

Debbie Gooch helping instruct two surgeons using a “beetle” laparoscopic simulator.

Report form the Surgical Section of the Union of European Medical Specialists - Spring 2019

John Moorhead, Vice-President of the Surgical Section of UEMS

The Spring meeting of the Surgical Section of the UEMS was held in Istanbul, Turkey on Friday 5th and Saturday 6th April. The meeting was hosted by the Turkish Surgical Association.

Our hosts gave us an overview of surgery in Turkey. With a population of approximately 80 million they have 175,000 doctors and hope to increase the number to 200,000 by 2023. Currently they have 76 medical schools. Turkey has 5596 general surgeons with only 282 of these female. 3775 of the surgeons are members of their Association.

Of those training in surgery 5 to 6% are foreign, mainly from Russia and Azerbaijan. These foreign trainees don't get paid and have to be supported by their families. A significant number of all trainees do not complete their training with around 15% dropping out each year. As in many other countries surgery has become less popular. Violence against doctors is common with around 2 murdered by the relatives of patients each year.

Surgical residents spend 5 years training in a single surgical unit. During this period they only have to complete 400 operations and this figure includes 150 major cases. They did admit that the standard of surgical training was low. We were told there is no structured educational program and although they do have an exit exam this is not compulsory. After completing the training program trainees have to spend two years working where the government sends them before they can apply for jobs elsewhere.

We were advised that a Surgical Board was set up in 2000 with the aim of organising a proper curriculum, logbooks, a structured educational program, training the trainers and exams. The Board continues to struggle with these plans as the Ministry of Health has not bought in to their ideas.

Professor Malin Sund, from Sweden, presented some of the findings from her recent survey on Women in Surgery. 26 countries contributed to this survey.

Across Europe the top three specialities chosen by female trainees were:

1. Breast.
2. Plastics.
3. General Surgery.

Women cited 4 main reasons for them having difficulties in surgery:

1. Attitudes of male colleagues.
2. The incompatibility of combining surgery with family life.
3. A lack of good childcare.
4. A lack of female role models.

The study did show a difference between perceptions and experiences with a similar picture across Europe. Between 60 and 70% of women felt discriminated against with 10 to 20% having considered leaving surgery.

Her presentation generated a lot of discussion and raised more questions than answers. One significant question was: "*Why is it that in Sweden where the working week is short, childcare plentiful and with many female surgeons, these surgeons appear to be as unhappy as the other female surgeons across Europe?*" Other questions were:

"*Is it a generational issue?*"

"*Are young male surgeons equally unhappy?*"

This study should be published shortly and I think some careful thought will have to be given about what conclusions can be drawn from it. It was suggested that a survey of young male surgeons should be done as well as it might also demonstrate similar levels of dissatisfaction.

Professor Kockerling, from Berlin, with strong support from the European Hernia Society, presented a case for Abdominal Wall Surgery to be defined as a subspecialty. The proposal was for all abdominal wall hernias to be included in this. The proposal was passed though not without some objections. Will this new subspeciality become fashionable in the UK? If it does what will become of "General Surgery"?

Frederic Dubas, from Switzerland gave an update on the development of a European Curriculum for Core Surgical training. With input form most countries this has progressed very well and the efforts of his working group are continuing. It is clear however that for this to ultimately succeed support from the European Parliament will be essential for it to be rolled out across Europe.

Survey on current practices: NICE Guidelines Surgical site infection: prevention and treatment

The updated NICE guidelines "Surgical site infection: prevention and treatment" were published in April 2019.

In this context, we are interested in better understanding current practices.

Together with BD, we are asking members to complete the question-questionnaire: **https://www.surveymonkey.com/r/YHHN58H**

BD

Value Based Surgery

Introducing our Guest Editor Professor Julio Mayol

We are delighted to announce that Professor Julio Mayol is the Guest Editor of the Summer Issue of JASGBI.

Julio is a general and colorectal surgeon and currently serves as Chief Medical and Innovation Officer at Hospital Clinico San Carlos, Madrid and Professor of Surgery at Universidad Complutense de Madrid.

He leads the Innovation Unit at Instituto de Investigación Sanitaria San Carlos and serves as Trustee and Vice-president of the Fundación para la Investigación Biomédica del Hospital Clinico San Carlos.

As a corresponding member, he is the current chief networking officer of the Royal Academy of Medicine of Spain, with responsibility for connecting stakeholders and increasing the social capital of the institution.

In 2018, he became President of the Spanish Society for Surgical Research, which is a BJSS strategic partner. He has been a member of the BJSS Council and has been Secretary of the BJS Society since 2018.

He served on the International Relations and Giving Back committees of the Society for Surgery of the Alimentary Tract, USA until May 2019.

Julio sits on the Editorial Boards of the Journal of Gastrointestinal Surgery and the World Journal of Gastroenterology and serves as Social Media Editor for the European Journal of Anatomy.

In 2018 he launched #SoMe4Surgery, a Twitter community devoted to connecting all those interested in advancing surgery (surgeons, researchers, healthcare professionals, and patients) through a global conversation that leads to collaborative projects:
@juliomayol
@me4_so.

Contributors

Sir Muir Gray

Sir Muir Gray is a Consultant in Public Health in Oxford University Hospital NHS Trust and a professor in the University of Oxford's department of Primary Care Health Sciences.

He is also a Consultant in Public Health for www.ukactive.com.

Muir has worked in the Public Health Service in England since 1972. He has carried out a number of tasks in that time, for example the development of the National Screening Committee.

He is developing Better Value Healthcare, whose mission is to publish handbooks and development programmes designed to get more value from health care resources in England, and worldwide.

He is the author of Sod70! and with Diana Moran the joint Author of Sod Sitting, Get Moving.

Luis Sánchez-Guillen

Luis Sánchez-Guillen is a colorectal surgeon in the Colorectal Surgery Unit at the Hospital General Universitario of Elche, Alicante. He is also Associate Professor of the Department of Pathology and Surgery at the Universidad Miguel Hernández of Elche. He received the 2016 European Coloproctology Fellowship of the Asociación Española de Coloproctología, which he spent at University Hospital "La Fe", Valencia, Spain.

At present, he serves as member of the Cohort Studies Committee and Guidelines Committee of the European Society of Coloproctology (ESCP) and member of the Minimally Invasive and Innovation Committee of the Asociación Española de Cirugía (AEC).

Arfon Powell

Arfon Powell is a Wales Clinical Academic Track (WCAT) trainee in the Division of Cancer & Genetics, Cardiff University. He graduated MB ChB (University of Aberdeen) in 2007 and completed junior surgical training in Glasgow. Research studies looking at the relationship between cancer-related inflammation and genomic instability culminated in the award of a PhD (University of Glasgow) in 2016. In 2013 he joined the Wales Higher Surgical Training programme in General Surgery. His current research interests include developing biomarkers for predicting response to chemotherapy in oesophagogastric cancer.

He was the recipient of this years Moynihan Medal at the ASGBI International Congress.

Contributors

Mansh Chand

Manish Chand is Associate Professor in Colorectal Surgery and Director of the Advanced Minimally-Invasive Surgery Programme – University College London, Consultant Colorectal Surgeon, University College London Hospital and Professor of Surgery – Apollo Hospitals, India.

After completing a 1st Class BSc in Neurosciences from Kings College London, Mr Chand graduated from Royal Free Hospital London with MBBS (Hons) and subsequently went on to teach Anatomy and Physiology at Oxford University. He remained an Honorary Neurosciences tutor at Balliol College, Oxford for a further 5 years during which time he completed his Basic Surgical Training through Kings College Hospital London. Whilst completing Higher Surgical Training through the Wessex training scheme including the prestigious Basingstoke Hospital he gained a PhD from The Royal Marsden Hospital and Imperial College working with the MERCURY Study Group.

Currently, Mr Chand leads an innovative research group at University College London specifically fluorescence guided surgery, advanced imaging modalities, augmented reality and computer vision. This includes supervising a number of postgraduate students. The Masters programme of which he is Director is considered the most innovative and technologically advanced surgery programme of its type with a leading international faculty. Mr Chand also holds an MBA and has a keen interest in the management of complex institutions.

Gemma Humm

Gemma graduated from the University of Liverpool in 2007 with a First Class BSc (Hons) in Orthoptics. She then attended the University of Birmingham Medical School, graduating from the Graduate Entry Medicine Course in 2012 with distinction. She has undertaken postgraduate training in Mersey, Eastern and KSS Deaneries, and is currently a General Surgery Specialist Trainee studying for a PhD at UCL researching the use of novel digital tools to support minimally invasive colorectal surgery. Gemma is the Immediate Past President of the Association of Surgeons in Training.

Monica Millán

Dr. Monica Millan is currently one of the staff surgeons in the Colorectal Surgery Unit at La Fe University Hospital in Valencia, Spain. Dr. Millan obtained her PhD degree (2005) from the University of Valencia and completed her surgical training in Valencia, Spain. She then completed a Clinical fellowship in Colorectal Surgery at the Cleveland Clinic Foundation (Ohio, USA, 2005-2006). She has also received several travel scholarships including an ESCP fellowship in St. Mark´s Hospital (2013). She has extensive clinical and surgical experience and has been specially dedicated to IBD patients for the past 14 years, and has participated in the European Consensus Statements (ECCO-ESCP) on the surgical treatment of both Ulcerative colitis and Crohn´s disease. Other clinical and research interests are colorectal cancer, individualized surgical treatment for elderly patients, ERAS, and

complex proctology. Dr. Millan is a co-author of over 70 publications in index journals. She is also an International Fellow of the American Society of Colorectal Surgeons (ASCRS) and an active member of the ESCP, and currently participates as an examiner for the EBSQ Coloproctology examination. She is also a reviewer for several medical and surgical journals, including Colorectal Disease, World Journal of Surgery, European Journal of Surgical Oncology, Nutrition Journal, Techniques in Coloproctology, Cirugía Española, and Journal of Geriatric Oncology.

Twitter – @monicamillan72
LinkedIn – Monica Millan
Facebook – Monica S Millan

Rebecca Fish

Rebecca is a Colorectal surgery specialty trainee in Northwest England. Clinical and research interests include research methodology and outcomes measurement, anal cancer and peritoneal tumours.

She is passionate about patient engagement in outcomes selection and research. In 2019, she completed a PhD developing a core outcome set for clinical trials in anal cancer (CORMAC- open access in Lancet GastroHep) using mixed methodology and culminating in an international consensus between healthcare professionals and patients. She was named Faculty of Biology Medicine and Health PhD student of the year 2019.

Rebecca won the ACPGBI BJS prize 2018 (presenting CORMAC) and 2019 ACPGBI Young coloproctologist of the year and the Royal

Society of Medicine Norman Tanner medal 2016 presenting work on the impact of UK specialist services commissioning on referral and treatment pathways for pseudonyxoma peritonei.

She is a founding member of the North West Research Collaborative (surgical trainees research collaborative link: http://www.nwresearch.org); Associate PI & TMG member for SUNRRISE trial- national, trainee led multicentre RCT investigating use for single use negative pressure wound dressings for reduction of surgical site infection in emergency laparotomy.

Value based medicine

Sir Muir Gray and Professor Julio Mayol

Astonishing developments have taken place in surgery in the last fifty years and the profession can be proud of its achievement. Not only have new technologies such as transplantation and hip replacement been developed, evaluated and implemented, the profession as a whole has grasped the need to improve effectiveness, quality, safety and efficiency. However, health services everywhere face the challenge that the need and demand for healthcare will grow faster than the resources available and will not be sustainable unless radical moves are made to reduce waste and increase value from the resources. Obviously payers, both insurance companies and tax payers, will take action to improve productivity for example by reducing duration of stay, but increasingly the surgical profession will be required take responsibility for the value.

The term value translates well and so to does the distinction between the meaning in the plural and the meaning in the singular. In the plural, values can be regarded as a set of principles, for example the values of the surgical profession are a commitment to the wellbeing of the patients referred for treatment, honesty and the need for self-criticism and improvement. These are values but value in the singular has more of an economic meaning. At this point it is useful to distinguish between the use of the word value in the United States of America[1] and in all other countries committed to universal health coverage (Table I). The meaning of quality is the same in the United States as in countries committed to universal health coverage, but the meaning of value is different because in any country committed to universal health coverage there are at least two key issues that are different in their countries. The first is that there is a commitment to equity.

Table I. The EXPERT PANEL ON EFFECTIVE WAYS OF INVESTING IN HEALTH (EXPH) adopted this opinion at its 16th plenary on 26 June 2019 after public hearing on 4 June 2019. However, before discussing each of these dimensions it is important to set the focus on value based surgery in context particularly related to evidence based surgery and to quality improvement.

Allocative value:	equitable distribution of resourses across all patients groups
Technical value:	achievement of best possible outcomes with available resources
Personal value:	appropriate care to achieve patients' personal goals
Societal value:	contribution of healthcare to social participation and connectedness

Inequity is on the agenda of every health service committed to universal health coverage, not only because of the high prevalence of disease in the more deprived subsets of the population, but also because of the phenomenon in which people from the wealthier subsets of the population access and use health services to a greater degree. This applies particularly to those health services in which clinical judgement plays an important part, for example the judgement of the clinicians about who to refer to a surgical service, for example a service for people with hip pain as opposed referral decisions to a service for people with a fractured neck or femur.

The second difference between the meaning of the term value in the United States and countries committed to universal health coverage is that in those countries there is a need to recognise that healthcare resources are finite, whether investment is tax based or insurance based. There comes a point at which societies recognise that further investment in health services can only be at the expense of other services for their population, for example educational services or defence services. Thus, people making decisions in countries committed to universal health coverage have to allocate finite resources to the subgroups of the population defined by need, for example for people with respiratory disease or people with mental health problems.

It should not be thought that this is a responsibility solely for those people classified as "payers" as will be discussed below. Clinicians have an important to play in the allocation of resources and the ethical implications of this.

The EU Report on Value Based Healthcare – quadruple value

The European Union has produced a report for Ministers on Value Based Healthcare and defines value as four dimensions set out in Table I.

In spite of the terrific progress that has been made in surgical services in the last fifty years three problems have been identified in every society in which they have been looked for, that is, unwarranted variation, overuse and underuse.

Unwarranted variation was first revealed by Jack Wennberg of Dartmouth University in his study of surgical services in the populations of New England. Unwarranted variation is variation that cannot be explained by differences in need or by the explicit choices of populations in which the variation is observed. He published the landmark Dartmouth Atlas of Healthcare in 1999 and many other countries have followed this approach for example, the NHS Atlases of Variation in Healthcare. Atlases of Variation can be used to identify variations in quality of the service provided by the institutions delivering the surgical services and this has been the focus of the GIRFT Programme in England, for what is called Getting It Right First Time. However, when the rates of intervention for conditions in which there is not an unequivocal indication for surgery are related to the population served and not to the patients treated by a particular institution then unwarranted variation is revealed[2].

Each population has to ask:

- Is this the right rate for our population?

or,

  - if we are at the high rate, does this represent good care or does it represent overuse of the intervention? or
  - if we are at the low rate of intervention, does this represent good care, or does it represent underuse of the resource? and

- How do we compare with populations most like ourselves?

The two key issues revealed are overuse and underuse, particularly by people from deprived subsets of the population.

To understand overuse it is essential to reflect on the work of Avedis Donabedian who not only "invented" quality assurance in 1966 but also in 1980 in his Magnum Opus of three volumes[3] described what happens as there is an increase in resource invested in a population's health service. The key issue for a particular population is whether or not the rate of investment in a service or specific intervention is beyond the point of optimality (Figure 1) and this is an issue being discussed with respect to elective surgery in many countries.

It is important to emphasise that while it is accepted that low quality care is low value, high quality surgery does not change the relationship between these two curves significantly. Harm is less and benefit is greater but there is still

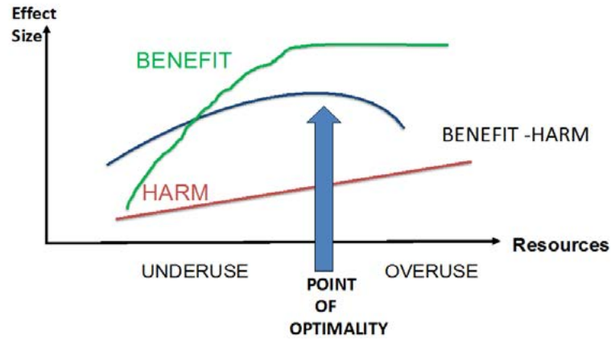


Figure 1. What this shows is that as increased investment takes place the benefits increase quickly at first and then flatten off whereas the harm that results goes up in a straight line, or may even increase faster than the direct relationship if people are treated are at high risk of complications and side effects.

the point of optimality so that high quality rate surgery cannot be regarded necessarily as being of high quality for that population. Similarly, intereventions with no evidence of cost effectiveness are of low value but even if there is strong evidence of cost-effectiveness an intervention may be delivered at a rate that is beyond the point of optimality for that population. The key question is to ask if more value could be derived from investing those resources for another group of patients, a test first raised in the first use of the term value based healthcare in 2001, in the second edition of the book 'Evidence based healthcare and public health'[4]. This is a key issue for the surgical profession, and it should be owned by them as rather than the payers, but we now need to consider the role of surgery in each of the four dimensions.

Allocative value

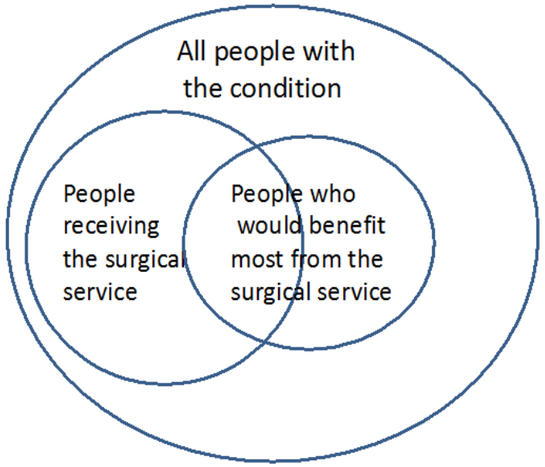
Payers will decide how much resource is allocated to, for example services for people with eyes and vision problems or services for people with musculoskeletal problems, both of which affect surgical specialties but once that decision has been made the next level of decision making, for example the decision as to how much resource to allocate for rheumatoid arthritis, hip pain, knee pain or back pain within the musculoskeletal budget is one that clinicians will have to take responsibility for because only they have the in-depth knowledge that is required, not only the evidence but also of local need. They will however have to be very aware of the huge variations in the rate of surgery form population to population and decide on whether the historical trends that have led them to the present position, often determined by the power of authority of some sub-specialists within a specialty, is the right balance of resources.

This will take the surgeons to a consideration of the technical value for the system for each common condition.

Technical value

Once resource has been allocated, for example to people with inflammatory bowel disease or to people with lung cancer, clinicians, with patient involvement, need to take responsibility for optimising resources for all the people in need in the population with that condition (Figure 2).

Figure 2.



Traditionally the surgeon with management and leadership responsibilities has focused on quality and efficiency but as we have emphasised high quality care may be of low value if the resources could be used for some other group of patients. Efficiency is the relationship between outcomes and costs for the patients treated and this is the meaning of the term value in the United States literature, but value is a broader concept in countries committed to universal health coverage. Efficiency continues to be of vital importance but operating on the wrong patients efficiently is waste, the opposite of value.

The surgical leader of the future will also be expected to ensure their resources are used to best effect for all the people in need and therefore have to try to minimise inequity by monitoring referral to the service from different sub groups of the population for which they are responsible, They will need to develop systems of care covering the whole care pathway and bring together all the professionals to create a network to deliver that system, a network that is given, and feels responsible for the optimal use of, all the resources for that group, all the resources, money, theatre time, imaging and for the carbon used in delivering care.

In addition, clinical leaders, including surgeons, will be given responsibility for ensuring the optimal distribution of resources along the whole care pathway, including prevention. Very often the different parts of the care pathway are in different budgets and the amount of investment has also been determined by the particular effectiveness of the different subspecialists, but all the specialists, generalists and patient groups need to take collective responsibility for the use of resources for a particular condition like lung cancer or inflammatory bowel disease or back pain, asking, in the example of lung cancer, should resources be switched for chemotherapy to surgery or vice versa.

Personal value

There is wide recognition of the fact that the outcomes of elective surgery have improved by ensuring that the individual having the operation have made an informed choice. The issues emerging from research include those presented in Table II.

Table II. Key issues emerging from research into decision making

- the limitations of the face to face consultation, because of lack of time and patient anxiety
- the need to define what is bothering the person as distinct from the diagnosis
- the need to use the internet before and after face to face consultation
- the low rate of use of patient decision aids
- failure of both patients and surgeons to understand probability

Perhaps this can be best summed up about the debate about whether we should move from the focus on the surgeon recording 'informed consent' for surgery to the patient making an 'informed request' for surgery.

The priority is to ascertain the patients' preferences and in their report on The Silent Misdiagnosis, the authors pointed out that operating on the wrong patient was prevented not only by ensuring the correct identity of the patient but also that the operation was in accord with their preferences. For example, performing a high-quality mastectomy on a woman whose preference was for a lumpectomy could be said to be operating on the 'wrong patient'.

Societal value

This is the broadest part of the definition and it is relevant for people managing institutions who need to decide, for example if they want to source their food supply from the multinational offering the lowest cost, in the short term at least, or support local farmers and food producers. An analogy relative to surgery is that surgeons can also play an important part in their local population. For example, the surgeon in London who is playing a leading role in the battle against knife crime in deprived communities, and theatre teams can also play a part in seeking to recruit staff from local populations with a tradition of deprivation and poor educational opportunities.

Population health management by surgeons

Good management and leadership of surgical services has improved surgical effectiveness, quality and efficiency but for the decades to come surgical services will also need to focus on

the population as well as on their service This is called population health management, namely management focused on sub groups of the population defined by need, for example people with visual problems, not on institutions or departments. One surgeon in each department should be given responsibility for this task. It is a leadership task with leadership responsible for culture change. What is needed is a new culture in which everyone feels responsibility not only for the quality of care given to those who reach it but also for the long-term sustainability of health services for the whole population by minimising waste and optimising value, this is termed the culture of stewardship.

The surgeon with lead responsibility for increasing quality has a clear set of responsibilities, so to has the new role of responsibility for, and to, the population for optimising value and there are five new leadership tasks:

1. Create the culture of stewardship

Everyone needs to feel responsible for optimising value, or to put it another way, minimising waste, not to save the tax payer or the insurance company but so that those resources are available for high value interventions for other patients in need

2. Define population sub-groups with a common need and allocate resources optimally

Surgeons need to work with all other clinical groups, and colleagues in finance to develop a systems approach to, for example people with bone and joint problems and within that identify the principal groups, people with hip pain or knee pain or rheumatoid disease for example. They need to allocate the resources to these sub groups optimise value,

3. Design a value framework for the system for each population sub-group

The team with all the disciplines, what can be called a Community of Value, then has to design a specification for each system, although this need only be done once nationally or even internationally. The outcomes that matter, which form the objectives of the system, are the same in Madrid or Montreal or Manchester. The system, for example the system for people with inflammatory bowel disease, needs a clear simple specification with a common aim, a set of objectives each with criteria to measure progress or the lack of it, and a budget

4. Deliver value equitably through networks

The surgeon leading the work to improve value has to work in a network with people from other bureaucracies and institutions, primary care for example[5]. Leadership in a network has the same key function as in an institutionally based service, and that is the creation of the right culture, in the pursuit of value a collaborative culture and the culture of stewardship[6].

5. Ensure each individual makes decisions to optimise personal value

Population value and personal value are two sides of the one coin and both need to be the focus of the surgeon with the new agenda, the agenda of value based healthcare.

References

1. Porter ME. What is value in healthcare? N Engl J Med 2010;363:2010:2477-2481

2. Judge A, Welton NJ, Sandhu J, Ben-Shlomo Y. Equity in access to total joint replacement of the hip and knee in England: cross sectional study. BMJ 2010; 341 :c4092+

3. Donabedian A. Explorations in quality assessment and monitoring. Vol. I. The definition of quality and approaches to its assessment, 1980; Vol. II. The criteria and standards of quality, 1982; Vol. III. The methods and findings of quality assessment and monitoring: an illustrated analysis. Ann Arbor: Health Administration Press, 1985

4. Gray J.A.M. (2001) Evidence based healthcare and public health , 2nd edition 4. Churchill Livingstone.

5. Mulley AG, Trimble C, Elwyn G. Stop the silent misdiagnosis: patients' preferences matter. BMJ. 2012 Nov 8;345:e6572. doi: 10.1136/bmj.e6572. Review. PubMed PMID: 23137819.

6. Plsek PE. Complexity, leadership, and management in healthcare organisations. BMJ. 2001 Sep 29; 323(7315): 746–749. doi: 10.1136/bmj.323.7315.746

Telemedicine for surgical care: transforming technology into value for patients

Luís Sánchez-Guillén

One of the greatest challenges in the 21st century is to find a solution to the growing costs associated with healthcare delivery, triggered by an ageing population and a rise of chronic diseases, while changing the old paradigm from a model of service delivery to a well-known small group of patients to a model of preventive, predictive, participative, personalized and population-based (5P) medicine in today's globalized world. To adapt the system to the dramatic cultural and demographic changes, digitalization of healthcare delivery is a potential solution, providing innovative applications designed to solve unmet needs of patients, health professionals, and the rest of the stakeholders in the current healthcare system.

The rapid advancements in information and communication technology (ICT) and the growing interest in its application to tackle health problems led us to coin the term 'eHealth', which is utilized to describe the use of ICTs in healthcare. Under this concept, there are many current and developing solutions. A summary of them is presented in Table I.

Table I. eHealth solutions

1.	Electronic health records
2.	Telemedicine
3.	Knowledge management platforms
4.	Web 2.0 and healthcare social media
5.	Mobile Health – mHealth
6.	Automation/robotization, artificial intelligence

Within eHealth, telemedicine refers to the provision of remote health services. Some of its popular uses include carrying out diagnoses, prescribing treatments, and preventing diseases using remote tools. In addition, it is employed as communication channels for professionals, both for training and research, and for consultation on patient case management and second opinions. The technologies more frequently used are teleconferencing, mobile phone and tablet applications, digital images, and text messaging. Telemedicine can be as simple as two health professionals discussing a patient's condition by telephone or as complex as a robotic device operating on patients with a surgeon sitting in a console[1].

Telemedicine may bring value to patients in different ways, the most obvious one being "access to healthcare" in situations and/or locations that favour underuse. Having access to an expert surgeon may be extremely valuable for underserved populations or in remote areas. In addition, improving the quality of care (second opinions), and reducing the costs of medical/surgical care (time and energy saved) may be considered valuable as well. With regard to outcomes, it has been shown that telemedicine is effective when it comes to reducing mortality, hospitalization, length of stay and, above all, patient satisfaction[2,3].

In surgery, telemedicine protocols have been used in three different ways: preoperative assessment, immediate postoperative assessment (wounds), and follow-up. The latter is the most frequently reported, both for continuous and programmed monitoring, as well as for the addressing specific mid-term/long-term issues. As shown in Figure 1 the most commonly used methods for conveying information are text messaging, photographs and phone calls or videoconferences from the patient's home or from a specific remote location, resulting in not only safety and effective care from both patients' and healthcare system perspective, but also in significant cost reductions[4].

Journal of the Association of Surgeons of Great Britain and Ireland, Number 55, Summer 2019
GUEST EDITOR

Figure 1. Modalities of telemedicine

Modalities	Technology required	Investement required	Security	Use cases
Videoconference	++	++	+	• Diagnosis & Treatment • Ongoing Monitoring & Care Coordinatior • Professional Consultation • Education & Engagement
Asynchronous Store-and-Forward	+++	++	++	• Diagnosis & Treatment
Phone call	+	+	+	• Ongoing Monitoring & Care Coordinatior • Professional Consultation
Remote Device	+++	+++	++	• Ongoing Monitoring & Care Coordination • Education & Engagement
Patient Portal	+	++	++	• Education & Engagement
Mobile App	+	+	++	• Ongoing Monitoring & Care Coordination • Education & Engagement

However, the application of telemedicine in surgery is still in its infancy. Regardless of robotic-assisted telesurgery platforms, which are gradually increasing in numbers, a recent study on the use of telemedicine in the USA has shown that it is hardly incorporated as a standard in healthcare but more dramatically in all surgeries (11.4 % physician to patient, 7.2 % physician to health care professional). Clearly, surgery lags behind medical specialties and anaesthesiology[5] in the use of Telemedicine.

There are many gaps and limitations of the current model that may explain the low implementation rates for care of patients with surgical conditions, such as privacy and confidentiality issues, and reliability of current technologies. Trust among professionals, patients, and technological robusteness are key to push the development of Telesurgery forward.

One critical aspect is how professionals and systems deal with privacy issues and security, because, despite professional and legal guidelines on the use of Telemedicine and new information systems have been issued, many surgeons and other health professionals are not aware of them. This results in reluctance to adopt secure applications and high adherence to out-of-the-system platforms (social networks, online video conferencing platforms like Skype or text messages or chats such as WhatsApp or Telegram) as an alternative, which do not meet the regulatory requirements to guarantee protection of patient privacy.

With the current care cycles and process, responding to patients' needs may be also a challenge with regard to budgets/remuneration, surgeons' time allocation and patient's perceived quality of the service[6]. This should lead to re-engineer traditional care processes.

One major gap in the current use of Telemedicine for surgery is that its benefits have been tested on younger, more educated and richer patients than those who need surgical care. For its correct implementation, educating and training individuals in need and targeting access to large populations is necessary. This may become more irrelevant as the new generations are more technologically savvy.

As the 21st century advances, surgeons will be required to use technologies to provide ubiquitous and convenient care to more patients. As with any surgical technique, once proven its benefit and effectiveness comparing to other approaches, indications adapted to patient's needs should be established. It may not be indicated for all patients but, when used, it will have to show better outcomes (more benefit and less harm), with an improvement in outcomes that matter to them and their families, and the environment.

Perhaps, as in the different surgical techniques, both patient and surgeon have to balance the risks and benefits associated with telemedicine, assuming that all processes are at some point imperfect. Telemedicine represents a change in the current healthcare model, which is a challenge for all members of the system. Nevertheless, its proven benefits and its potential for educational and social action as well as its global impact in areas where specialized surgical care is still not available, make telemedicine an essential tool for both surgeons and patients in today's world.

References

1. WHO guideline: recommendations on digital interventions for health system strengthening [Internet]. [cited 2019 Jul 8]. Available from: https://apps.who.int/iris/bitstream/handle/10665/311941/9789241550505-eng.pdf?ua=1

2. Lin M, Yuan W, Huang T, Zhang H, Mai J, Wang J. Clinical effectiveness of telemedicine for chronic heart failure: a systematic review and meta-analysis. J Investig Med [Internet]. 2017 Jun [cited 2019 Jul 7];65(5):899–911. Available from: http://www.ncbi.nlm.nih.gov/pubmed/28330835

3. Tchero H, Kangambega P, Briatte C, Brunet-Houdard S, Retali G-R, Rusch E. Clinical Effectiveness of Telemedicine in Diabetes Mellitus: A Meta-Analysis of 42 Randomized Controlled Trials. Telemed e-Health [Internet]. 2018 Aug 20 [cited 2019 Jul 7];tmj.2018.0128. Available from: https://www.liebertpub.com/doi/10.1089/tmj.2018.0128

4. Gunter RL, Chouinard S, Fernandes-Taylor S, Wiseman JT, Clarkson S, Bennett K, et al. Current Use of Telemedicine for Post-Discharge Surgical Care: A Systematic Review. J Am Coll Surg [Internet]. 2016 [cited 2019 Jul 8];222(5):915–27. Available from: http://www.ncbi.nlm.nih.gov/pubmed/27016900

5. Kane CK, Gillis K. The Use Of Telemedicine By Physicians: Still The Exception Rather Than The Rule. Health Aff [Internet]. 2018 Dec [cited 2019 Jul 7];37(12):1923–30. Available from: http://www.healthaffairs.org/doi/10.1377/hlthaff.2018.05077

6. Antoniotti NM, Drude KP, Rowe N. Private Payer Telehealth Reimbursement in the United States. Telemed e-Health [Internet]. 2014 Jun [cited 2019 Jul 8];20(6):539–43. Available from: http://www.ncbi.nlm.nih.gov/pubmed/24654748

Journal of the Association of Surgeons of Great Britain and Ireland, Number 55, Summer 2019
GUEST EDITOR

Right treatment, right person, right time; trial, tribulations and triumph of #PrecisionSurgery

Arfon G M T Powell

It has been said that the greatest barrier to discovery is the illusion of knowledge.[1] Our understanding of the aetiological intricacies of surgical disease has never been better, yet patient and surgeon reported outcome measures remain suboptimal. The reasons for this forms the basis of the greatest challenge facing the medical profession in the 21st century; how do we translate a greater level of knowledge into perfect outcomes. The truth, we still don't truly understand the complexities of the diseases and patients we treat. In the book "The Knowledge Illusion; Why We Never Think Alone", Sloman and Fernbach describe an experiment by Rozenblit and Keil of Yale University, which aimed to identify the disparity between perception and actual knowledge. They termed this the illusion of explanatory depth.[2] Using a zipper mechanism as an example, they asked participants to grade 1-7 how well they understood this process. Next they asked participants to describe in detail how a zipper works. Finally, they asked participants to grade 1-7 how well they understand how a zipper works. Not surprisingly, there was a tendency to over estimate ones understanding of how a zipper works, something most people use on a daily basis.

The illusion of explanatory depth may explain why 5-year survival for oesophageal cancer remains at 15%[3] and why 40% of patients are still affected by low anterior resection syndrome[4]. Despite a continual flow of new knowledge, major 'breakthroughs' resulting in paradigm shifts are relatively infrequent. Progress can be described as steps rather than a continual improvement. Has our illusion of explanatory depth resulted in us probing the wrong areas?

As we now enter an era of personalised medicine, more so than ever, we appreciate what we don't know. Historically, most disease processes were considered as homogenous entities. Yet within the arena of GI cancer, anecdotally there are patients with advanced disease who have good outcomes and those with early disease who have poor outcomes. One of the first major advancements in our understanding of treating cancer was the observation that treatment with trastuzumab plus chemotherapy improved survival in patients with metastatic HER2+ breast cancer, when compared with chemotherapy alone.[5] Giving patients treatments where they derive the most benefit results in the best outcomes; and this is the underlying principle of precision medicine. For the best outcomes, the treatments must be both precise and accurate.

PrecisionSurgery (the surgical component of precision medicine) aims to improve the outcomes of surgically treated disease. This is achieved by offering treatments tailored to the patient and their disease. This process first requires a higher depth of knowledge of the physiological characteristics of the patients and their disease, and secondly a thorough mechanistic evaluation of potential treatments.

A major breakthrough using these principles has been the use of immunotherapy in metastatic melanoma.[6] Three year survival rates are now around 40% compared to 5% prior to the introduction of immunotherapy. It would be easy to fall for the illusion that immunotherapy will work for all patients and all cancers. The small incremental gains seen over the last two decades has shown us that there is no one treatment that fits all. Each patients and their disease must be treated on a personal level.

PrecisionPanc[7], is a multicentre precision medicine platform that offers patients personalised treatment for their pancreatic cancer. This initiative has resulted in a greater understanding of the molecular genetic landscape of pancreatic cancer[8], and offers patients a bespoke treatment based on the molecular characteristics of their tumour. This process of biomarker discovery, validation, and personalised treatment implementation is also being performed in oesophageal cancer[9] through the OCCAMS collaborative and includes the precision Oelixir studies[10].

The need for a treatment model such as PrecisionPanc, to address the poor outcomes associated with pancreatic cancer, highlights our limited understanding of the diseases we treat. The personalised treatments of PrecisionPanc and Oelixir are based on a higher level of knowledge gained through comprehensive genomic profiling. It remains to be seen whether this model of management is transferable to other common conditions such as inflammatory bowel disease, pancreatitis, and abdominal wall hernia. It is safe to say that one treatment doesn't fit all and the time has come for widespread implementation of #PrecisionSurgery.

References

1. Sloman S, Fernbach P. Knowledge Illusion: Why We Never Think Alone. 1st Editio. Riverhead Books; 2017. 304 p.

2. Rozenblit L, Keil F. The misunderstood limits of folk science: an illusion of explanatory depth. Cogn Sci [Internet]. 2002 Sep 1 [cited 2019 Jul 6];26(5):521–62. Available from: http://www.ncbi.nlm.nih.gov/pubmed/21442007

3. Cancer Research UK. Oesophageal cancer survival statistics [Internet]. [cited 2018 Jun 17]. Available from: http://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/oesophageal-cancer/survival

4. Croese AD, Lonie JM, Trollope AF, Vangaveti VN, Ho Y-H. A meta-analysis of the prevalence of Low Anterior Resection Syndrome and systematic review of risk factors. Int J Surg [Internet]. 2018 Aug [cited 2019 Jul 6];56:234–41. Available from: http://www.ncbi.nlm.nih.gov/pubmed/29936195

5. Slamon DJ, Leyland-Jones B, Shak S, Fuchs H, Paton V, Bajamonde A, et al. Use of chemotherapy plus a monoclonal antibody against HER2 for metastatic breast cancer that overexpresses HER2. N Engl J Med [Internet]. 2001 Mar 15 [cited 2018 Jun 14];344(11):783–92. Available from: http://www.nejm.org/doi/abs/10.1056/NEJM200103153441101

6. Marconcini R, Spagnolo F, Stucci LS, Ribero S, Marra E, Rosa F De, et al. Current status and perspectives in immunotherapy for metastatic melanoma. Oncotarget [Internet]. 2018 [cited 2019 Jul 6];9(15):12452–70. Available from: http://www.ncbi.nlm.nih.gov/pubmed/29552325

7. Cancer Research UK. Home - Precision Panc [Internet]. [cited 2019 Jul 6]. Available from: https://www.precisionpanc.org/

8. Bailey P, Chang DK, Nones K, Johns AL, Patch A-M, Gingras M-C, et al. Genomic analyses identify molecular subtypes of pancreatic cancer. Nature [Internet]. 2016 Mar 24 [cited 2019 Jul 6];531(7592):47–52. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26909576

9. Frankell AM, Jammula S, Li X, Contino G, Killcoyne S, Abbas S, et al. The landscape of selection in 551 esophageal adenocarcinomas defines genomic biomarkers for the clinic. Nat Genet [Internet]. 2019 Mar 4 [cited 2019 Jul 6];51(3):506–16. Available from: http://www.ncbi.nlm.nih.gov/pubmed/30718927

10. NCRI Upper Gastrointestinal Cancer Clinical Studies Group [Internet]. [cited 2019 Jul 6]. Available from: http://csg.ncri.org.uk/wp-content/uploads/2018/10/NCRI-Upper-Gastrointestinal-Cancer-CSG-2017-2018-Annual-Report.pdf

Journal of the Association of Surgeons of Great Britain and Ireland, Number 55, Summer 2019
GUEST EDITOR

Digital surgical training and digital support in the operating room

Gemma Humm, Manish Chand

Introduction

A technological drive throughout the healthcare industry has led to the advent of Surgery 4.0 – touted as the next surgical 'revolution'. Included in this are innovative ways to enhance surgical training allowing the modern trainee to harness digital tools that have become so useful in other industries outside medicine. Thus, digitally-supported surgical training has gained attention in recent years. Traditionally, surgery was taught through a laborious apprenticeship necessitating thousands of hours spent in the operating room (OR), however the modern trainee is not afforded such exposure and instead is faced with a reduction in their training time due to increased administrative duties and reduced working hours. Furthermore, there is huge inequity in training regimes and resources. For example, in some low- and middle-income countries (LMIC) there is a paucity of structured, assessed training and faculty which can have a negative impact on clinical outcomes and the patient safety. Concurrently, there has been an increased focus of incorporating digital tools into the OR to augment surgical procedures making them more safe, precise and efficient. This article describes the current trends in digital surgical training and future concepts of a more efficient and safer, digital OR.

Digital surgical training

Video-based education

If a "picture says a thousand words" then a 'video' must say a million! Surgery is a discipline best learnt through visual aids and in particular, video review. Observation of clinical procedures is the basis of all procedural training and video recording allows users to view procedures repeatedly. Minimally-invasive surgery (MIS), filmed endoscopically, is an ideal digital resource for surgeons. Whilst the same concept can be used in open surgery, the arduous set-up of cameras and difficulties in storage means MIS lends itself to recording through the operator's view. The operative view can be easily captured, recorded and safely anonymised and used for training with patient consent. Indeed, recent suggestions that video recordings of operations could provide a higher standard of operative documentation[1] may have some merit where litigation is on the increase.

WebSurg (www.websurg.com) is a free website where surgeons and trainees can access high quality MIS video and webinars to support their learning of MIS techniques. MIS videos are narrated and/or annotated by the submitting surgeons and videos are published following stringent consent and peer-review process. The Advances in Surgery Channel (AIS) (www.aischannel.com) is another free online surgical video and webinar website, which additionally broadcasts live operating and congresses to educate surgeons of MIS techniques. Industry is fast understanding the importance of archived video content and we are now seeing medical device companies partnering with technology 'start-ups' to develop this field – Johnson and Johnson's acquisition of C-SATS is such an example.

The usefulness of a video archive is very much reliant on the content and an editorial panel to ensure that there is some degree of peer-review and quality control – this differentiates from any surgeon starting a YouTube channel, for example. The available literature on video-based education has been reviewed and suggests that that the retention of knowledge is improved by demonstrable improvements in post-test scores[2]. It is not yet known whether this transfers to an improvement in technical skills or acceleration through proficiency gain curves, which is an area for future research. Video-based education is of value to both surgical trainees and experienced surgeons alike. The former favouring explanatory narration and the latter examples of technical skill and expert tips[3].

Mobile Applications

Understanding the steps of a surgical procedure can be challenging and daunting for trainees early in their training. Textbooks in combination with observation and assisting in the OR have been the traditional method of learning the operative steps, instrument selection and cognitive and technical skills of surgery. But this method of learning is becoming increasingly incompatible for modern trainees. A survey of doctors and nurses across five hospitals in the UK showed that 98.9% of responding doctors and 95.1% of nurses owned smart phones, whilst 73.5% and 64.7%, respectively, owned tablets.

These devices are used for communication and clinical and educational mobile applications or "apps"[4]. The smart phone provides the user with rapid, mobile access to information they require whilst at work and at home. Touch SurgeryTM (www.touchsurgery.com) is a free app combines virtual reality (VR) and 'serious gaming' technology with cognitive task analysis to teach surgical trainees the phases and steps for over 200 procedures. The app runs in two modes; 'learn' and 'test'. This allows trainees to develop their understanding of operative decision-making and track their progress, building a degree of competitiveness into the training process. Familiarity with the steps of the procedure are invaluable for in-theatre training, making the theatre experience more meaningful and more useful. Face, construct and content validity has been demonstrated for Touch Surgery™ in laparoscopic cholecystectomy and has been further suggested that this knowledge can transfer to skill in the OR[5,6], which is likely to be a result of trainees attending their operating lists with superior cognitive preparation, which has facilitated earlier and more efficient acquisition of technical skills. The success and utility of Touch Surgery™ has resulted in its incorporation into a number of residency programs in the USA. Touch Surgery™ has also been successfully used to support surgical training in Rwanda and has demonstrated a positive effect in the short-term retention of knowledge and application of procedural steps for wet-lab simulated tendon repair in a small randomised trial. Given that the educational infrastructure and faculty in Rwanda is unfortunately lacking, this work provides additional support for the use of Touch Surgery™ and in LMIC similar digital tools may also be of benefit[7].

The principles of cognitive training have been applied to the mobile app, iLapp Surgery™, which is used for educational support for surgeons training in Transanal Total Mesorectal Excision (TaTME) of rectal cancer as part of a structured training program. In addition to comprehensive, evidenced-based modules and assessments, iLapp uses endoscopic video overlay which is demonstrable by holding the mobile app over the corresponding with a screen or printed prompt, available on their website (www.ilappsurgery.com/tatme). This is used to aid the understanding of tissue dissection planes using coloured graphical overlay on video. The novice surgeon can record their progress as they gain the necessary cognitive skills before taking on technical skills training[8].

Social media for education

Social media, in particular Twitter, provides a free, accessible platform for surgeons and trainees to discuss topics and disseminate information, ask questions from colleagues and mentors, and even set up research. Hashtags (#) have been used to identify threads for discussion, e.g. #SoMe4Surgery (generic surgery hashtag) and #colorectalsurgery (specialty specific)[9]. In less than 1 year, #colorectalsurgery, which started from the humble beginnings of a handful of users had incorporated over 2,600 users that generated over 24,000 tweets and 100 million impressions[10]. Twitter is allowing surgical trainees access to discussion and the expertise of world leaders in the field. This access is unparalleled and provides 'immediacy' like no other platform. Surgical trainees may find it difficult to attend conferences where this work is discussed, but the relative safety of an online discussion is empowering trainees to debate and discuss the topic with seniors and experts. They may not have had the confidence to, in the conference environment. Many of these discussions are ad hoc, many are part of organised social media journal clubs or tweet chats with guest speakers.

The Digital Operating Room

Digital support in the OR is a huge potential space for innovation. The ultimate goal will be to achieve the incorporation of patient-specific data and advanced imaging, telepresent connectivity, advanced instrumentation and robotics with instrument data-analytics to develop a context-aware system to optimise surgical navigation and precision.

Advanced imaging and navigation

Imaging techniques for intraoperative image-guided surgery has advanced and is more widely used for procedures with fixed anatomy, such as orthopaedic and neurosurgery. The advent of novel MIS techniques such as TaTME is providing an opportunity to apply these techniques to minimally invasive colorectal surgery. Proof of concept using MRI intraoperative image-guidance for TaTME has been demonstrated in a pilot study with promising results[11]. However, access to the OR infrastructure and additional expensive imaging equipment and radiology professionals is not equitable for many UK hospitals.

Innovative use of preoperative imaging has been used to create virtual anatomical models for rectal cancer, and has demonstrated utility in educational and preoperative planning[12]. Co-registered augmented reality (AR) has been used for intraoperative guidance in minimally invasive liver resection, including extra- and intra- corporeal steps. The images are projected either directly on to the patient or viewed on the laparoscopic screen[13]. Research is being undertaken in the development of mixed-reality (MR) models, viewed on a head mounted device (HMD), which are co-registered to the patient intraoperatively[14]. At the time of writing, these models have demonstrated proof of concept and have further identified areas for additional research and improvement. Concerns have been raised that this technology may not be suitable for interoperative guidance[15], following a recent publication of experimental work attempting to recreate binocular tasks guided by MR. Whilst these results may currently suggest that this technology is not ready for interoperative guidance, the experimental tasks' suitability and validity for clinical application could be questioned[16]. The newer generations of HMD are promising greater processing power that could meet the increased demands of clinical application. Further experiential work with MR and HMD is being undertaken.

Telementoring and telestration

Telementoring in surgery is building on the established relationship of a mentor and mentee via audio-visual communication. The mentor, who will be proficient in the clinical and technical management of the patient, supports and guides the mentee through the management, and can provide real-time intraoperative support. Telementoring can be delivered as simply as a wireless internet support audio-visual connection. More sophisticated systems can also be deployed in the OR, which utilise HMD, wearable technology and/or AR. The addition of AR and free hand annotations used to support the mentee's intraoperative decision making is classed as telestration. A similar model can also be used to support surgical training[17].

Telementoring, and particularly telestration, can be limited by the available technology and respective local technological infrastructure. A comprehensive systematic review has evaluated the available evidence for telementoring in surgery. It has established that the used of telementoring is safe for remote mentoring intraoperatively. That studies have found no significant difference in either operative time, short-term clinical outcomes nor educational outcomes. It has been suggested that the most beneficial use of telementoring is likely to be when onsite mentoring is not possible. That this may be of particular merit when the necessary expertise is not available locally, for example in a remote and rural setting. Limitations of telementoring are largely considered to be related to the technological capabilities of individual systems and connectivity and the security of connection at either site. Whilst this technology may have particular utility in some LMIC, the cost of the systems and infrastructure may be prohibitive[18].

Workflow analysis and computer vision

MIS video contains valuable data, which is often wasted. Unlocking the data that is within MIS video has far reaching potential. Techniques such as machine learning and computer vision are allowing the analysis of surgical workflow, procedural steps and instrument recognition and kinematics[19]. Using this information it is possible to train computer vision models to understand the operative procedure at a granular level.

This can be used to allow surgical phases to be automatically identified and timed. This can facilitate the understanding of the challenging operative phases, surgical flow within the OR and instrument usage[19]. There are challenges to developing this technology.

This requires a significant volume of high-quality video data that has been carefully annotated, frame by frame, by an expert. Convolutional neural networks can be applied to surgical video for automatic phase detection in laparoscopic cholecystectomy[20].

Conclusion

Digitally supported surgical training and digital support in the OR is becoming increasingly disruptive. The potential for these technological advances to democratise access to surgical training globally is significant. Furthermore, as further iterations of computer vision and MR algorithms are combined with complex MIS video data there may be the potential to create patient-specific, context-aware systems to optimise surgical navigation and precision.

References

1. Van De Graaf FW, Lange MM, Spakman JI, et al. Comparison of Systematic Video Documentation with Narrative Operative Report in Colorectal Cancer Surgery. JAMA Surg. 2019;154:381–389.

2. Ahmet A, Gamze K, Rustem M, et al. Is Video-Based Education an Effective Method in Surgical Education? A Systematic Review. J Surg Educ. 2018;75:1150–1158.

3. Mota P, Carvalho N, Carvalho-Dias E, et al. Video-Based Surgical Learning: Improving Trainee Education and Preparation for Surgery. J Surg Educ. 2018;75:828–835.

4. Mobasheri MH, King D, Johnston M, et al. The ownership and clinical use of smartphones by doctors and nurses in the UK: A multicentre survey study. BMJ Innov. 2015;1:174–181.

5. Kowalewski KF, Hendrie JD, Schmidt MW, et al. Validation of the mobile serious game application Touch SurgeryTM for cognitive training and assessment of laparoscopic cholecystectomy. Surg Endosc. 2017;31:4058–4066.

6. Chidambaram S, Erridge S, Leff D, et al. A Randomized Controlled Trial of Skills Transfer: From Touch Surgery to Laparoscopic Cholecystectomy. J Surg Res. 2019;234:217–223.

7. Bunogerane GJ, Taylor K, Lin Y, et al. Using Touch Surgery to Improve Surgical Education in Low- and Middle-Income Settings: A Randomized Control Trial. J Surg Educ. 2018;75:231–237.

8. Knol J, Keller DS. Cognitive skills training in digital era: A paradigm shift in surgical education using the TaTME model. Surgeon. 2018;3–7.

9. Brady RRW, Chapman SJ, Atallah S, et al. #Colorectalsurgery. Br J Surg. 2017;104:1470–1476.

10. Mayol J, Otero J. Breaking International Barriers: #ColorectalSurgery Is #GlobalSurgery. Clin Colon Rectal Surg. 2017;30:277–280.

11. Atallah S, Martin-Perez B, Larach S. Image-guided real-time navigation for transanal total mesorectal excision: a pilot study. Tech Coloproctol. 2015;19:679–684.

12. Sahnan K, Pellino G, Adegbola SO, et al. Development of a model of three-dimensional imaging for the preoperative planning of TaTME. Tech Coloproctol. 2018;22:59–63.

13. Hallet J, Soler L, Diana M, et al. Trans-Thoracic Minimally Invasive Liver Resection Guided by Augmented Reality. J Am Coll Surg. 2015;220:e55–e60.

14. Devoto L, Muscroft S, Chand M. Highly accurate patient-specific 3D mixed reality model creation for surgical training and decision-making. JAMA Surg.;In Press.

15. BBC. Warning over using augmented reality in precision tasks Available from: https://www.bbc.com/news/technology-48334457. Accessed January 3, 2019.

16. Condino S, Carbone M, Piazza R, et al. Perceptual Limits of Optical See-Through Visors for Augmented Reality Guidance of Manual Tasks. IEEE Trans Biomed Eng. 2019;9294:1–1.

17. Channel A. Telementoring: The future of surgical training Available from: https://aischannel.com/society/telementoring-future-surgical-training/. Accessed June 3, 2019.

18. Erridge S, Yeung DKT, Patel HRH, et al. Telementoring of Surgeons: A Systematic Review. Surg Innov. 2019;26:95–111.

19. Jin A, Yeung S, Jopling J, et al. Tool detection and operative skill assessment in surgical videos using region-based convolutional neural networks. Proc - 2018 IEEE Winter Conf Appl Comput Vision, WACV 2018. 2018;2018-Janua:691–699.

20. Twinanda AP, Shehata S, Mutter D, et al. EndoNet: A Deep Architecture for Recognition Tasks on Laparoscopic Videos. IEEE Trans Med Imaging. 2017;36:86–97.

Preoperative optimisation, enhanced recovery programmes and value-based surgery

Monica Millán

Innovation in patient safety has evolved in recent years. Value-based healthcare is defined by benefits in outcomes related to the cost to provide the service[1]. Technological advancements have been important in surgery, but perioperative management has surpassed surgical technique in terms of impact on outcomes and costs and can be introduced with lower investment. Enhanced recovery after surgery (ERAS) implementation is a good example of value-based surgery, achieved by improving outcomes and at the same time lowering the cost of care[2,3]. However, cost is not the only endpoint of efficient care, and the true value of care for our patients is improved outcomes. Perioperative care can also improve this[2,3].

ERAS programs are a package of evidence-based changes in preoperative, intraoperative, and postoperative care to reduce organ dysfunction and surgical stress response, and promote rapid recovery. The key elements of ERAS pathways are: extended patient information; preservation of gastrointestinal function (carbohydrate solution before surgery, early enteral feeding), minimizing organ dysfunctions (omission of mechanical bowel preparation, goal-directed fluid therapy, avoidance of drains and nasogastric tubes, minimally invasive surgery); active pain control (opioid sparing anaesthesia and analgesia, local anaesthetic infiltration of incisions); and promotion of patient autonomy with early mobilization[4,5,6].

This multidisciplinary perioperative strategy requires a team approach involving the surgical, anaesthesia, and nursing teams and other ancillary staff, including physiotherapists, dieticians, and stoma therapists. Care should be delivered by dedicated, multidisciplinary teams, for the full cycle of care (i.e. outpatient, inpatient, and rehabilitation), with a common measurement platform and joint accountability for outcomes and costs. Multiple studies have demonstrated that ERAS programs enhance postoperative recovery, reduce morbidity, and reduce the need for postoperative hospitalization and convalescence. ERAS has been shown to be safe, cost-effective and shorten length of hospital stay in patients undergoing colorectal resection[5,6].

Table 1. A summary of items included in Enhanced Recovery After Surgery (ERAS) pathways
POI= postoperative ileus

Active patient involvement

Pre-operative	Intra-operative	Post-operative
Pre-admission education	Active warming	Early oral nutrition
Early discharge planning	Opioid-sparing technique	Early ambulation
Reduced fasting duration	Surgical techniques	Early catheter removal
Carbohydrate loading	Avoidance of NG tubes and drains	Prevention of POI and glycaemic control
No/selective bowel prep		Defined discharge criteria
Venous thromboembolism prophylaxis	Goal-directed peri-operative fluid management	
Antibiotic prophylaxis	*Pain and nausea management*	
Pre-warming		
	Audit of compliance and outcomes	

Whole team involvement

Previous literature has suggested that ERAS programs should address different phases: preoperative (preadmission and preoperative), intraoperative, and postoperative. The postoperative recovery process should be further divided into 3 phases: immediate (post-anaesthesia), short-term (in-hospital) recovery, and long-term (post-discharge) recovery in order to understand the full recovery process after surgery and optimize outcomes[7].

"Prehabilitation" is the period of time from diagnosis to treatment in which functional capacity can be improved by a variety of means including optimization of comorbidities, improved nutritional status and cardiopulmonary function. Because functional disability is an important

predictor of outcome, it is likely that prehabilitation could improve outcome, especially in older surgical cancer patients. Prehabilitation as part of ERAS using a trimodal concept that includes physical care, nutritional care, and psychological approach, could be useful to decrease postoperative complications. The instructions and recommendations of prehabilitation can also help to promote a healthier life-style for patients, that can be continued even after full recovery from surgery[3,4].

Another key component of ERAS that likely contributes to improved patient experience is the focus on patient education and preadmission counselling. The culture surrounding ERAS focuses on including the patient as an active member of an engaged health care team dedicated to helping the patient recover. ERAS puts the patient in the centre of its team and empowers him or her by increasing motivation to recover and accepting responsibilities in their own management plan[4].

Furthermore, the need for discharge planning, education, and contact information is an increasingly important part of the care of surgical patients. Providing adequate education and discharge planning can foster a trusting relationship between patients and the health care team, have been shown to decrease length of stay (LOS) and have also been shown to decrease emergency room visits and readmissions. Patients with a new stoma, for example, have greater educational needs. They require ward-based stoma education in the postoperative period and cannot be discharged until they are competent to manage their stoma independently. Improvements in preoperative stoma education also can lead to a reduction in LOS and confidence for patients and caregivers, as well as in a reduction in complications. Providing discharge information and education may need to be customized according to the individual patient. Patients should receive information about normal post-operative convalescence, what complications might occur, and be given a contact number for a health care provider who is well informed of their hospitalization course and who can be contacted if patients have concerns[8].

ERAS programs have changed how modern surgical care is delivered, and how modifications in practice are disseminated and implemented. The results rely on a new approach to teamwork, continuous audit, and support of data-driven change and improvement. The position of ERAS pathways in colorectal surgery is nowadays well established as the best care and it is very unlikely that future trials will change this[8,9,10]. What will be needed in the future is a better understanding of how the physiological and underlying mechanisms of ERAS actually work at an individual level, and how they could be tailored to each patient, with their own characteristics and specific needs, to provide truly "personalized" perioperative care and further improve outcomes.

References

1. Porter ME. What is value in health care? N Engl J Med.2010;363(26):2477-2481

2. Tatarian T, Aggarwal R. Value-based surgical care: Evidence for the enigma. Ann Surg 2018. 268(1) www.annalsofsurgery.com

3. Lee L, Feldman LS. Improving surgical value and culture through Enhanced Recovery Programs. JAMA Surgery. Doi:10.1001/jamasurg.2016.5056

4. Ljungqvist O, Thanh NX, Nelson G. ERAS-value based surgery. J Surg Oncol 2017;1-5

5. Carmichael JC, Keller DS, Baldini G, et al. Clinical practice guidelines for enhanced recovery after colon and rectal surgery from the American Society of Colon and Rectal Surgeons and Society of American Gastrointestinal and Endoscopic Surgeons. Dis Colon Rectum (2017); 60:761-784 doi: 10.1097/DCR.0000000000000883.

6. Gustafsson UO, Scott MJ, Hubner M, Nygren J, et al. Guidelines for Perioperative Care in Elective Colorectal Surgery: Enhanced Recovery After Surgery (ERAS©) Society Recommendations: 2018. World J Surg (2018) https://doi.org/10.1007/s00268-018-4844-y

7. Lee L, Tran T, Mayo NE, Carli F, Feldman LS. What does it really mean to "recover" from an operation? Surgery (2014);155:211-216 doi: 10.1016/j.surg.2013.10.002

8. Liu JY, Wick EC. Enhanced recovery after surgery and effects on quality metrics. Surg Clin N Am (2018) https://doi.org/10.1016/j.suc.2018.07.001

9. Memtsoudis SG, Poeran J, Kehlet H. Enhanced Recovery after Surgery in the United States. From Evidence-Based Practice to Uncertain Science? JAMA doi:10.1001/jama.2019.1070. jama.com

10. Joliat GR, Ljungqvist O, Wasylak T, Peters O, Demartines N. Beyond surgery: clinical and economic impact of Enhanced Recovery After Surgery programs. BMC Health Services Research 2018;18:1008

Outcomes in surgery: conquering the great unknown

Rebecca Fish

Why outcomes matter

"First, do no harm" is one of the oldest and most fundamental medical aphorisms. The exact origins of the phrase have been debated, but the principle is enshrined in the Hippocratic Corpus. It has been argued that the phrase should be refined to 'do no net harm' to reflect the concept that for an intervention to be safe and acceptable, the overall risk of harm must be outweighed by the likelihood of benefit.[1] As surgeons; purveyors of interventions of the most invasive kind; we must have a working knowledge of the balance of benefits and harms of the procedures we perform to inform our discussions with patients and facilitate shared decision making and informed consent.

The effects of our surgical interventions, or outcomes, include benefits such as treatment of disease, alleviation of symptoms or prevention of future problems; and harms, more commonly referred to as complications. For the purposes of informed consent and shared decision making, a patient centred pre-operative discussion should cover the questions "What is the likelihood this operation will achieve the intended benefit?"; "What are the potential unwanted effects and how likely are they to occur?" and "What will happen if I don't have the operation?". Historically, the legal precedent for discussion of harms in consent was the The Bolam test (Bolam v Friern Hospital Management Committee, 1957) which required disclosure of harms that would be considered important by 'a responsible body of medical professionals'. The Montgomery ruling in 2015 (Montgomery v Lanarkshire Health Board, 2015) widened the mandate for discussion of harms to include anything that 'might reasonably be considered significant by the individual patient in the circumstances of the particular case'. To comply with this requirement, surgeons must therefore have a much more comprehensive understanding of not only the potential harms that can arise from their interventions but also how likely their patients are to attach significance to these outcomes.

Challenges with outcome measurement in the NHS

Knowing the outcomes of our interventions requires knowing what happens to our patients in the weeks, months and years after that intervention has taken place.

And this is where the first challenge lies. Whilst the diligent surgeon might attempt to keep a record of their outcomes, this is increasingly challenging in the current climate in the UK. The NHS is facing serious issues of demand outstripping capacity and the resulting overburden on inpatient beds and outpatient clinics has prioritised earlier discharge and necessitated 'no surgical follow-up' as the post-operative instruction for many common procedures. In the United Kingdom, aspirations for a universal health record have yet to be realised, and we therefore have little way of knowing what has become of our patients after discharge unless they are re-admitted to hospital or die within 90 days. Whilst this will capture the more serious complications of surgery, a great proportion of common harms such as wound problems and surgical site infections will go unrecorded.

Benefit outcomes pose just as much of a challenge. Unless a patient is referred directly back to us with a problem, we have little way of knowing whether our interventions have been effective, particularly in the longer term.

National outcome reporting

More robust systems for outcome reporting have been established, but these are not without their problems. Following the Bristol cardiac surgery scandal in the 1990s, NHS England in 2012 called for quality measures and mortality data to be made publicly available. Surgeon specific outcomes for a range of surgical specialties are now published by the surgical specialty associations and national audits, collated by the Royal College of Surgeons of England.[2] However, the range of procedures included is narrow (primarily cancer resections and selected major procedures, with the exception of cardiothoracic surgery) and the outcomes reported are in almost all cases limited to mortality and short-term complications such as readmission or re-operation. The selection of which outcomes to measure appears to have been influenced more by the ease of data collection than by the clinical relevance of the information collected.

Patient reported outcomes

Recognition of the importance of a more comprehensive approach to outcome measurement is growing, and crucially, the value of the patient's perspective is being acknowledged. Patient reported outcomes, and the instruments with which they are measured (PROs and PROMs respectively) are increasingly being considered for inclusion in national outcome reporting projects. The outcomes and tools included must be carefully selected and fit for purpose. Simply bolting on a PROM does not guarantee capture of the issues relevant to the patient population in question. Whilst a high-quality condition-specific PROM, developed from primary research into the experiences and priorities of patients, will ensure patient-important outcomes are included, generic PROMs, such as the EQ-5D or SF-36, are likely to miss important condition specific concerns.

Some of the early initiatives to collect national PROM data in England illustrate the importance of considering the priorities of the ultimate users of the information (the stakeholders) when selecting which outcomes to measure and which instruments to use. In 2009, patient reported outcome measures (PROMs) were introduced routinely in the NHS for hip, knee, groin hernia and varicose vein surgery. Following a consultation report in 2013 however, PROMs were discontinued for groin hernia and varicose vein surgery. The reasons given for discontinuing included the lack of a condition-specific PROM for groin hernia surgery, and lack of evidence that the PROM data collected was being used in practice. Outcomes that are relevant for decision making about commissioning and cost effectiveness may not be meaningful or useful for clinical decision making and vice versa. It is not clear from the reports whether the PROMs data collected for this project was intended to inform healthcare systems decision making or individual level care. The failure of this pilot may therefore reflect a failure to clearly define the intended use of the data and consult the relevant stakeholders.

More recently, several of national audits including the National Bowel Cancer Audit (NBOCA) and the National Cardiac Audit Programme (NCAP), have begun work to assess the feasibility of including PROMs in routine data collection.[3,4] Whilst this may seem like a positive step towards collecting data that is relevant to patients, such feasibility studies frequently bypass the crucial first step of determining which outcomes should be included, thereby risking the recommendation of an outcome measure that is feasible to collect but clinically meaningless.

Change the paradigm

In clinical research, failure to take account of patients' perspectives when selecting outcomes is recognised as an obstacle to the translation of results into policy and practice.[5] Recognition of this in recent years has led to the widespread adoption of patient-public involvement in research and to the promotion of core outcome sets[5-8] through the work of the COMET Initiative.[9]

Outcome selection for clinical audit and service evaluation should be no less patient centred. If we want to deliver patient-centred care based on high quality information, we must make more of a deliberate effort collect meaningful outcomes data. Although great strides have been made in this field in recent years with the establishment of an increasing number of national audits and registries, decisions on the outcomes to be measured are made almost exclusively without patient input and are often seem driven by pragmatism rather than clinical relevance. We must change the paradigm and ask our patients what matters and what to measure before we start working out how to measure it.

References

1. Schunemann HJ. Guidelines 2.0: do no net harm-the future of practice guideline development in asthma and other diseases. Current allergy and asthma reports 2011; 11(3): 261-8. 10.1007/s11882-011-0185-8

2. Royal College of Surgeons of England. Surgical Outcomes. 2019. https://www.rcseng.ac.uk/patient-care/surgical-staff-and-regulation/surgical-outcomes/ (accessed 04/07/2019 2019).

3. National Institute for Cardiovascular Outcomes Research. National Cardiac Audit Programme Annual Report 2018. https://www.nicor.org.uk/wp-content/uploads/2018/11/NCAP-Annual-Report-2018.pdf (accessed 04/07/2019 2019).

4. National Bowel Cancer Audit. The feasibility of reporting Patient Reported Outcome Measures as part of a national colorectal cancer audit. https://www.nboca.org.uk/content/uploads/2018/08/PROMs-Feasibility-Study-Final.pdf (accessed 04/07/2019 2019).

5. Heneghan C, Goldacre B, Mahtani KR. Why clinical trial outcomes fail to translate into benefits for patients. Trials 2017; 18: 122. 10.1186/s13063-017-1870-2

6. Williamson P. Core outcome sets will improve the quality of obstetrics research. BJOG: An International Journal of Obstetrics & Gynaecology 2014; 121(10): 1196-. 10.1111/1471-0528.12591

7. Williamson P, Altman D, Blazeby J, Clarke M, Gargon E. Driving up the Quality and Relevance of Research Through the Use of Agreed Core Outcomes. Journal of Health Services Research & Policy 2012; 17(1): 1-2. 10.1258/jhsrp.2011.011131

8. Williamson P, Clarke M. The COMET (Core Outcome Measures in Effectiveness Trials) Initiative: its role in improving Cochrane Reviews[editorial]. Cochrane Database of Systematic Reviews 2012; 4. 10.1002/14651858.ED000041

9. Core Outcome Measures in Effectiveness Trials Initiative (COMET). http://www.comet-initiative.org/ (accessed 16/08/2018 2018).

Moynihan Travelling Fellowship Report

Siong-Seng Liau, MD, FRCS
Addenbrooke's Hospital, Cambridge, United Kingdom

Travel Dates: Oct 31-November 13, 2018

Hosts:

1) Professor Sung-Gyu Lee, Division of Liver Transplantation and Hepatobiliary Surgery, Asan Medical Centre, Seoul, South Korea

2) Professor Jin-Young Jang, Division of Hepatopancreatobiliary Surgery, Seoul National University Hospital, Seoul, South Korea

3) Professor Ho-Seong Han, Division of Hepatopancreatobiliary Surgery, Seoul National University Bundang Hospital, Seoul, South Korea

I wish to thank the ASGBI for this immense privilege to be the 2017 Moynihan Travelling Fellow. I visited three major Hepatopancreatobiliary (HPB) centres in Seoul over the course of two weeks. This experience exceeded all my expectations.

I planned this visit to focus on minimally-invasive HPB surgery. During this time, I witnessed a wide spectrum of HPB surgeries, including laparoscopic and robotic-assisted approaches. Seoul is indeed the 'mecca' of HPB surgery with the major HPB units in close vicinity to each other, making it convenient to visit each of these centres during the same fellowship. Further, I was able to coincide my fellowship with the Annual Congress of Korean Surgical Society, held annually in Seoul.

My fellowship started at the Division of HPB Surgery and Liver Transplantation in Asan Medical Centre (AMC). AMC has the largest liver transplant and HPB programme in South Korea, with the highest volume of living donor liver transplantations (LDLTs) in the world (>300 LDLTs performed a year). This flourishing clinical programme is led by Professor Sung-Gyu Lee. The team is well-known to be surgical innovators, and perform high-end liver surgeries but more importantly, they have a standardised approach to complex surgeries, which ensures excellent quality and clinical outcomes. I have witnessed this first-hand in that all the live donor hepatectomies were performed to a standardised approach. Having been previously fellowship-trained in a hybrid HPB Surgical Oncology/Transplantation programme in Toronto, I appreciated that the skills gained in complex transplant operations are highly relevant to HPB resectional surgeries. From a technical perspective, whilst in AMC, I learnt the surgical techniques adopted in living donor liver transplantations, including vascular reconstruction techniques (e.g. reconstructing S5/8 hepatic veins with donor aortic or PTFE conduit, hepatic vein outflow reconstruction with a long saphenous vein 'fence' conduit, and arterial micro-anastomoses).

The AMC team has published their large series of laparoscopic major hepatectomies with excellent oncological outcomes. In fact, some of the technically challenging living donor right hepatectomies are now performed laparoscopically in AMC. The LDLT donor operation is one that requires precise conversance with liver anatomy and major hepatectomy techniques. To be able to perform a LDLT donor operation laparoscopically represents the epitome of laparoscopic liver surgery, and requires meticulous and specific skills sets. Although I did not witness a laparoscopic donor hepatectomy during my time there, I was fortunate to witness Professor Ki-Hun Kim perform a range of laparoscopic major hepatectomies (i.e. formal right and left hepatectomies). I gained important technical 'pearls' through this exposure. For instance, I learnt the utility of a laparoscopic 'intestinal' bulldog clip as an effective Pringle manoeuvre, which in combination with a low CVP, ensured a bloodless liver transection plane. I have incorporated this specific laparoscopic clip in my own practice of laparoscopic hepatectomies. Professor Kim also demonstrated his laparoscopic approach to major hepatectomy without the need for dissecting the hilar vascular inflow structures. Instead, the devascularisation is initially achieved with a curved vascular bull dog clip on the right/left hilum after lowering the hilar plate, and the vessels and respective hepatic duct are taken en-bloc with a stapler at the final phases of liver transection once the respective hilar bundle has been delineated clearly. During laparoscopic formal hepatectomy, he uses the anterior approach to allow for a good view of the liver transection plane and tracing of venous branches (e.g. S5/8) to their origin on middle hepatic vein. These cases prove that with the right skill set, laparoscopic major hepatectomies can be performed with

During my time in AMC, I gained important insights into how this remarkable unit can achieve such extraordinary clinical output. It was clear that Professor SG Lee has been an exemplary leader and has carefully nurtured a team of highly-trained surgeons who are ready to take the unit into the future. The outstanding results achieved are a testament to their hard work and personal sacrifice. It was memorable to witness the dedication that Professor Lee has shown to the welfare of his patients. He conducts a ward review of each patient under his team on a daily basis (including at weekends!) without fail. This usually starts at 7 am with a detailed review of imaging and laboratory results of each patient. This sheer hard graft has ensured the excellent outcome and AMC is about celebrate their achievement of 5000 LDLTs!

The second centre that I visited is the HPB Cancer Centre at the Seoul National University Hospital led by Professor Jin-Young Jang. Professor Jang has a specific interest in robotic-assisted pancreatic and liver resections. Professor Jang was a very gracious host, and we interacted extensively during my stay with him. Prior to each surgery, Professor Jang would talk me through the surgical steps he would take. We exchanged technical ideas regarding laparoscopic Whipple's resection. One memorable case was a laparoscopic Whipple's pancreaticoduodenectomy with hybrid robotic reconstruction on a patient with small pancreatic cancer. This hybrid approach makes sense as it harnesses the benefits of laparoscopic and robotic approach. Professor Jang has optimised his stepwise approach to laparoscopic Whipple's resection to make the surgery more time-efficient. Further, I witnessed his elegant techniques of robotic pancreaticojejunostomy (based on a modified Blumgart technique) on a soft pancreas with tiny pancreatic duct using the Da Vinci X robot. The robotic view and manoeuvrability of robotic suturing to achieve PJ reconstruction is clearly the way forward. I appreciated the careful planning needed at the stage of port placement that facilitates both laparoscopic resection and robotic-assisted reconstruction. Given my interest in robotic liver resection, Professor Jang invited me to observe him performing a case of robotic radical cholecystectomy (i.e. gallbladder bed resection) with hilar lymphadenectomy. He demonstrated the technique of elastic band retraction (a technique first described by a Korean group) to achieve exposure and facilitate liver transection. I found the elastic band technique incredibly useful and have since incorporated this into my own practice. In addition to technical surgery, Professor Jang and I discussed the challenges of academic surgery, the differences in our healthcare systems, and he gave me some insights into surgical practice in South Korea.

My third preceptor was Professor Ho-Seong Han at the Bundang Hospital. The Bundang Hospital was first opened in 2003 as a branch of SNUH serving the local population of Bundang in Seongnam City (outskirt of Seoul). The HPB service in Bundang Hospital performs close to 500 major HPB resections annually, of which close to 60% of these are performed laparoscopically. Whilst at Bundang Hospital, I witnessed a case of totally laparoscopic Whipple's pancreaticoduodenectomy in a patient with relatively high BMI by Professor Yoon who is a colleague of Professor Han. It was useful to see the laparoscopic reconstruction techniques, including the pancreaticojejunostomy. My time in Bundang coincided with Annual Conference of Korean Society of Anesthesiologists, and there was no OR list during the duration of the conference. I returned to Asan Medical Centre and witnessed several minimally-invasive HPB surgeries including a robotic spleen-preserving distal pancreatectomy and a further case of laparoscopic Whipple's pancreaticoduodenectomy. As we are about to set-up a robotic HPB programme in Cambridge, this exposure was certainly useful in learning the robotic set-up required.

I attended the Annual Congress of Korean Surgical Society, a 3-day meeting focused very much on the technical advances in minimally invasive surgery, with a good selection of speakers. I particularly enjoyed the sessions on robotic and laparoscopic liver resections with the high-quality surgical videos illustrating the critical steps of each procedure. I certainly learnt multiple technical tips in these sessions. In the research sessions, I was intrigued by several papers being presented which examined machine learning to develop prognostic systems which no doubt, if validated clinically, can have immense impact on how we utilise clinical data.

One of the highlights of my fellowship was a dinner in a traditional Korean barbeque restaurant hosted by Professor S-G Lee.

This was well attended by the AMC team and I particularly enjoyed the conversations with the AMC fellows. We discussed the challenges of training in a demanding specialty such as HPB/Liver Transplantation. During the dinner, I also interacted with several other visiting surgeons from Bulgaria, Slovakia and India. Overall, it was a truly enjoyable evening with the AMC team.

In summary, I am delighted that this travelling fellowship has been an outstanding success, and has fulfilled all my aims that I set out to achieve. During this 2-week fellowship, I observed 19 cases of major HPB/transplant surgery, 9 of which were laparoscopic or robotic-assisted surgeries. It is clear to me that the Korean HPB surgical community is particularly innovative in their surgical techniques/approaches, with a range of manoeuvres that each individual surgeon has developed to improve the quality of surgery. This travelling fellowship has clear tangible dividends in that lessons learnt will advance my clinical practice, and ultimately benefit the patients under my care.

I intend to use my experience to help the development of the minimally-invasive HPB programme in Cambridge.

Once again, I wish to thank the ASGBI for this wonderful opportunity. I am grateful that I have had a chance to interact with some of the leaders of HPB surgery in Seoul, including Professors Lee, Yang and Han, each of whom have developed outstanding HPB units. The trip to Seoul would not be complete without experiencing the Korean culture, history and food. I did have some opportunities to explore the culinary sites in Seoul and visited several of the well-known palaces where I gained some understanding of the history of this nation.

Mr Siong Liau with Professor S-G Lee (centre right) at Asan Medical Centre.

Mr Siong Liau with Professor J-Y Jang at Seoul National University Hospital.

Mr Siong Liau with the Asan HPB and Transplant Team at dinner hosted by Professor S-G Lee

Creating a Supportive Environment in Surgery

Eunice J Minford MBChB MA Dipl Clin Ed FRCS Ed
Consultant General Surgeon

The culture of surgery has been in the spotlight in recent times due to the significant levels of Bullying, Undermining, Harassment and Discrimination (BUHD) being reported. A female vascular surgeon, Gabrielle McMullin hit the headlines in Australia when she advised female trainees to acquiesce to requests for sexual favours from their male bosses, as reporting it would be a death knell to their career.[1] The Royal Australasian College subsequently performed a survey and found significant levels of BUHD, across all specialities and in all regions.[2] As a consequence they introduced an 'Operate with Respect' policy and instigated new measures to address complaints and improve education in these areas.[2]

The Royal College of Surgeons of Edinburgh survey found that 40% had experienced and 40% had witnessed such behaviours.[3] The impact of BUHD is wide ranging – affecting not only the wellbeing, morale and skills of those targeted but also seriously affecting the quality of patient care with increased perioperative morbidity and mortality. BUHD contributes to 71% of medical errors, 67% adverse events and 27% perioperative deaths.[3] It costs organisations £13.75 billion annually in the UK.[3]

In order to address these issues locally, I initiated an Innovation and Quality Improvement (IQI) project called 'Creating a Supportive Environment in Surgery', in collaboration with Gill Smith, the IQI Lead at Northern Health and Social Care Trust. We found similar rates of BUHD locally following an anonymous, multidisciplinary survey where 31% had experienced and 40% had witnessed these behaviours. However, only 18% had reported it and common barriers to reporting were: career fear, thinking it was an acceptable norm, that it wouldn't be taken seriously and not being sure who to speak to.

More recent reports show BUHD is not just a problem in surgery but is pervasive and endemic in healthcare in general.[4,5]

Clearly new ways of addressing these behaviours are needed and at the Northern Health and Social Care Trust in N.Ireland we commissioned the non-profit organisation 'AllRiseSayNOtoCyberABUSE' to produce four videos to expose the harm of these behaviours. The filming for all videos took place in one day, requiring excellent organisation, collaboration and co-ordination. Free theatre space is hard to come by these days - but filming during half-term week when a number of surgeons were on leave meant this hurdle was crossed more easily than initially anticipated!

The videos have been shared locally, regionally and nationally. They have been adopted by the NI Simulation and Human Factors Network, the Royal College of Surgeons of Edinburgh and the Institute for Healthcare Improvement (IHI) for training and educational purposes. The videos were recently awarded first prize in the Wiley Audio-Visual Competition at the ASGBI Conference 2019 and have received excellent feedback across the board. Many find them 'powerful' – making people think of their own behaviour and expose the harm of BUHD in an innovative and impactful way. They are a great way to start the discussion in small groups about the experience and impact of BUHD.

One participant summed it up by saying: 'the videos were excellent in portraying how one person's actions can affect others in a ripple effect and consequently directly affects patient safety.'

You can access the videos through the following links – the password is nhs.

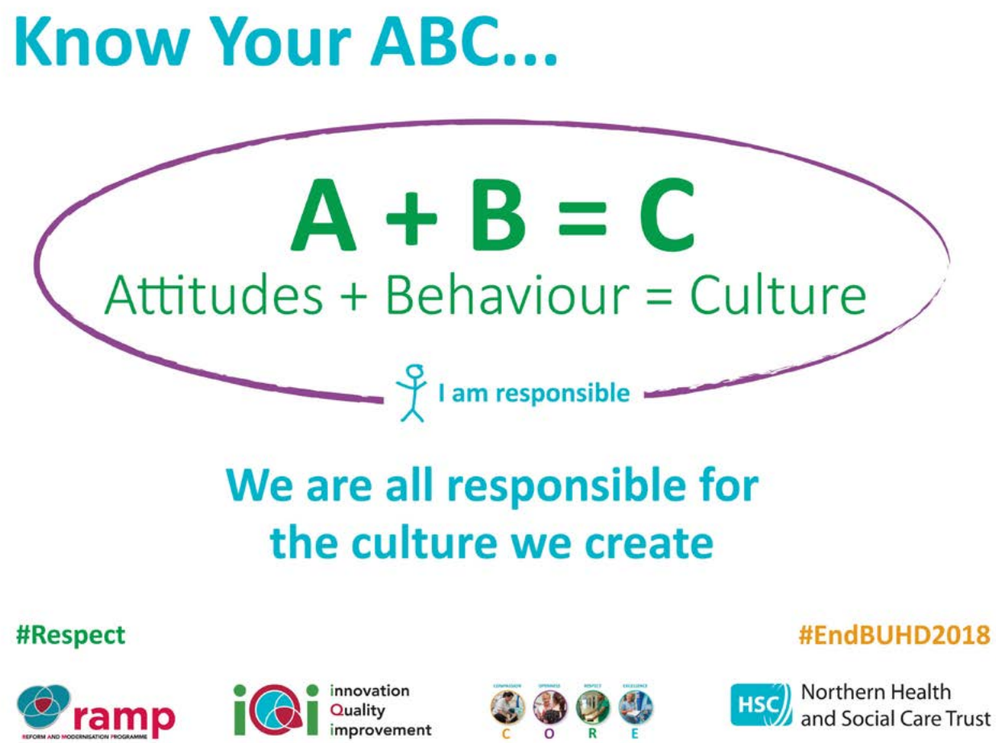
Surgery Film: https://vimeo.com/263856819

Cleaner Film: https://vimeo.com/263857614

Xray Film: https://vimeo.com/263856562

Sexual Harassment: https://vimeo.com/263856674

In addition to the videos, as part of 'Creating a Supportive Environment in Surgery' we developed a poster to encourage personal responsibility for the attitudes and behaviour we bring to work and those we accept in others. Giving people permission to speak up and call out unacceptable behaviours they observe or are subject to will help to address these issues earlier and create a culture that collectively and individually says NO to BUHD by everyone playing their part and taking responsibility.



We also did a survey on the use of first names and found that whilst junior staff are willing to be called by their first name, there is reluctance by Surgical Consultants, with only 37% agreeing to all staff using their first name. One area where there was more openness towards the use of first names was in theatre and so we have taken part in the #TheatreCapChallenge, where staff can opt to display name and role on their theatre cap as a means to improve communication, connection and flatten the hierarchy.

Addressing the toxic culture that is pervasive with BUHD requires a multifaceted, multidisciplinary approach and we continue to expand and develop new initiatives under the umbrella of 'Creating a Supportive Environment in Surgery', to raise awareness of human factors and bring more kindness, self-care, wellbeing and joy to work and our working environment – as the more we care for and look after ourselves and each other, the more we can truly care for our patients.

References

1) Sydney Morning Herald. Sydney surgeon Gabrielle McMullin stands by advice for female doctors to stay silent on sex abuse. https://www.smh.com.au/national/senior-surgeon-gabrielle-mcmullin-stands-by-advice-for-female-doctors-to-stay-silent-on-sex-abuse-20150307-13xzog.html

2) RACS. Building Respect, Improving Patient Safety. RACS Action Plan on Discrimination, Bullying and Sexual Harassment in the Practice of Surgery. Nov 2015 https://www.surgeons.org/media/22260415/RACS-Action-Plan_Bullying-Harassment_F-Low-Res_FINAL.pdf

3) RCS Ed. Bullying and Undermining Campaign. Let's Remove It. https://www.rcsed.ac.uk/news-public-affairs/news/2017/june/bullying-and-undermining-campaign-let-s-remove-it

4) BMA. Bullying and Harassment: How to address it and create a supportive and inclusive culture. http://www.onmedica.com/getResource.aspx?resourceid=8f951289-12fb-405b-be24-b2514db1f820

5) Marsh S. Bullying and sexual harassment 'endemic' in NHS Hospitals. The Guardian. Feb 2019. https://www.theguardian.com/society/2019/feb/24/bullying-sexual-harassment-nhs-hospitals

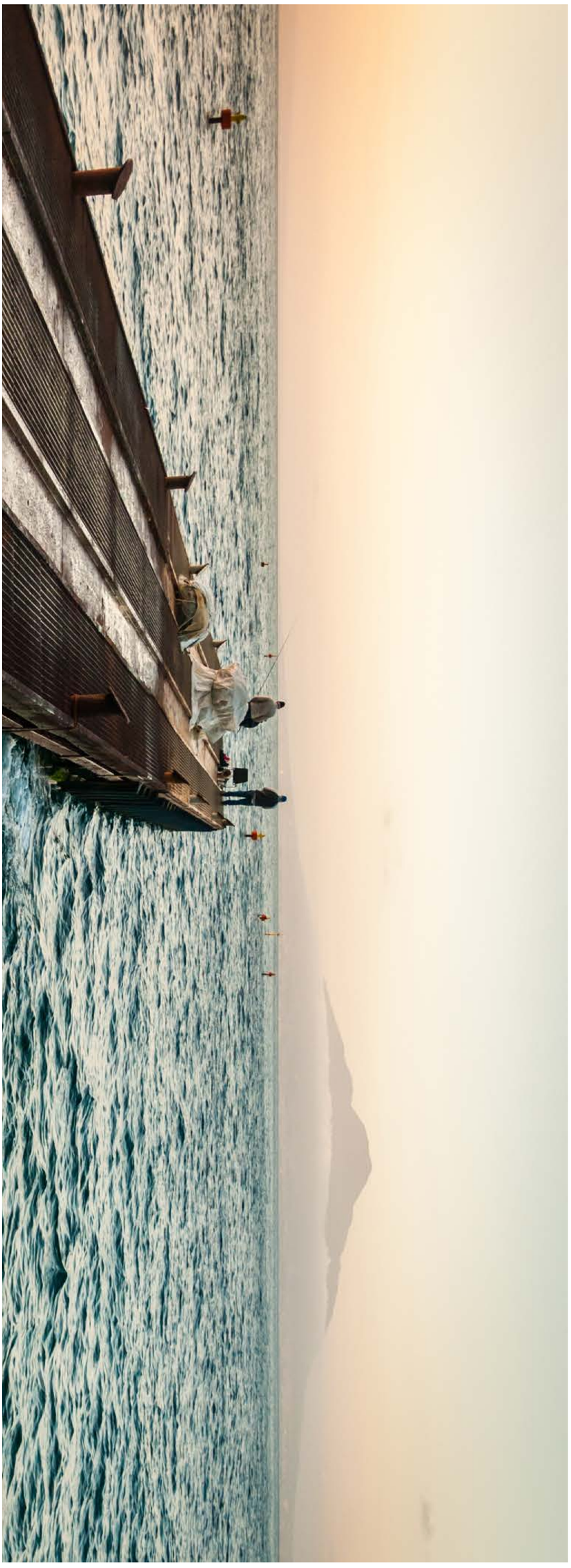
Journal of the Association of Surgeons of Great Britain and Ireland, Number 55, Summer 2019
FEATURES

The ASGBI 2019 Photographic Competition in collaboration with FujiFilm

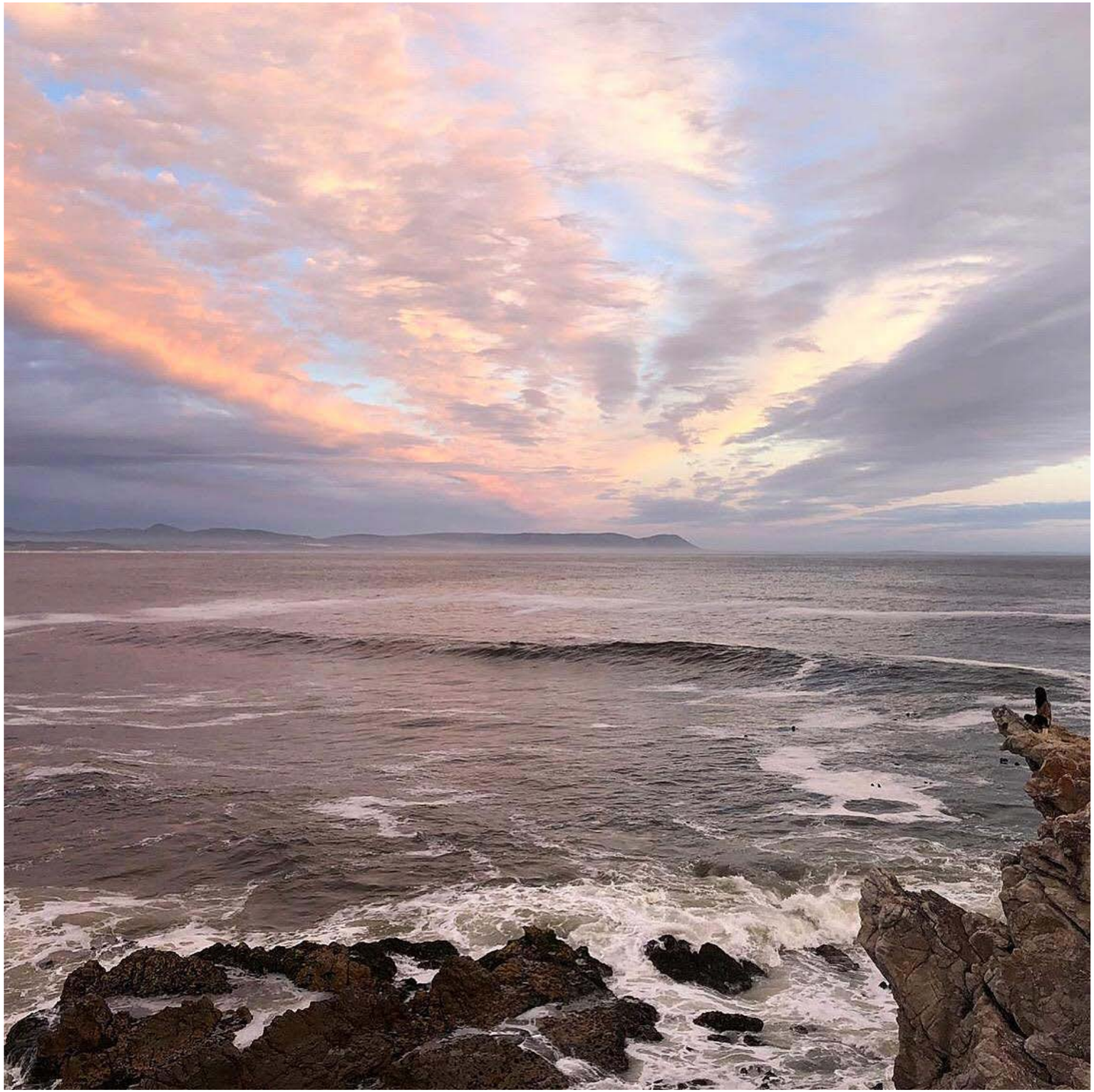
ASGBI partnered with Fujifilm for this years photography competition. We received a large number of excellent submissions that were shortlisted down to five for Congress delegates to vote for their favourite. Here are the five finalists.

Winner: Ain't no Mountain High Enough by Lina Yow

Journal of the Association of Surgeons of Great Britain and Ireland, Number 55, Summer 2019
ART AND SURGERY

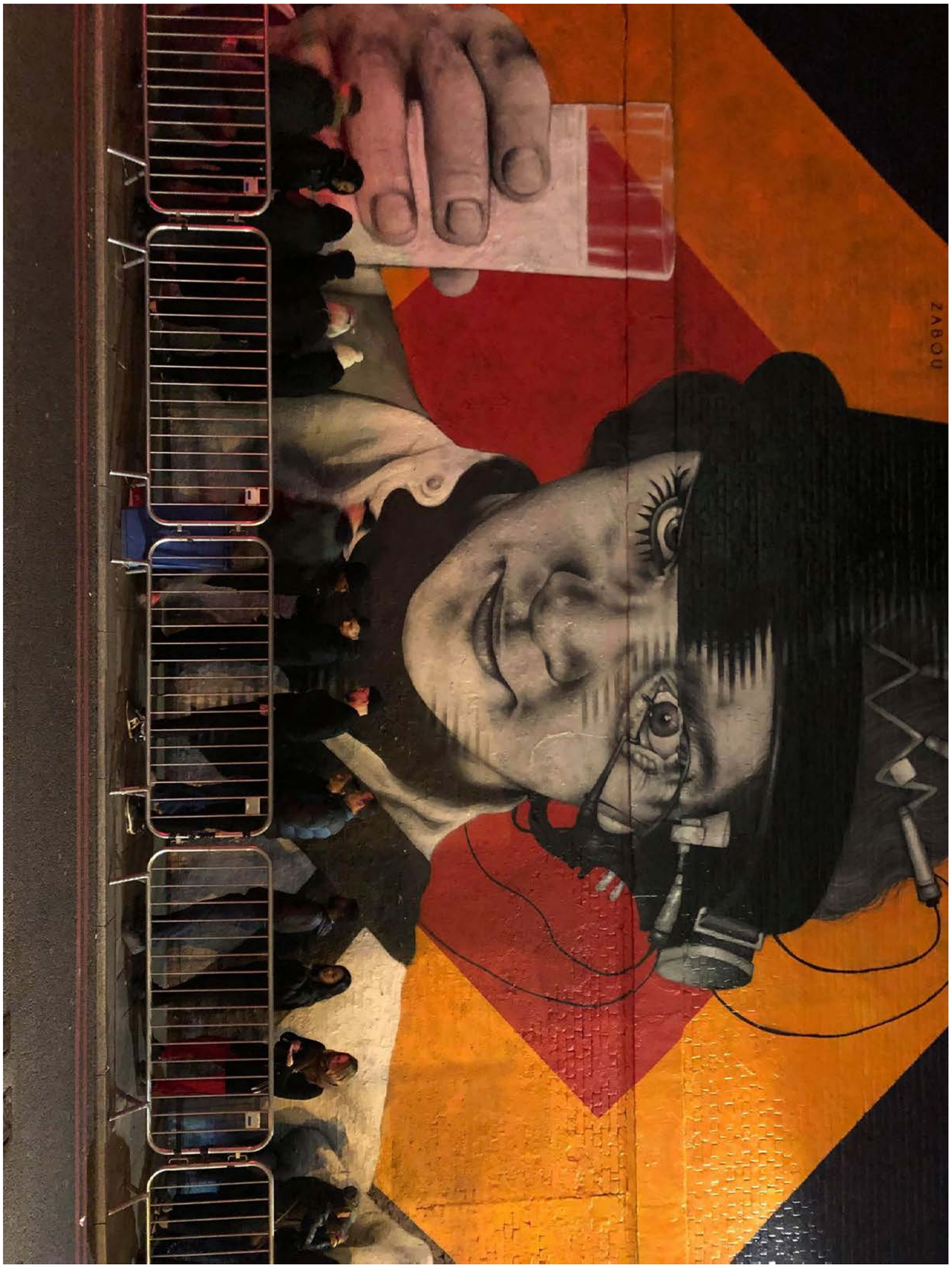


Fishing by Vesuvius by Zhi-Yan Low



African Skies, Hermanus by Supriya Singhera

Journal of the Association of Surgeons of Great Britain and Ireland, Number 55, Summer 2019
ART AND SURGERY



Mind washing by Sofia Anastasiadou

The Penguin behind me by Mohamed Rabie

Journal of the Association of Surgeons of Great Britain and Ireland, Number 55, Summer 2019
ART AND SURGERY

How to set up and apply for a surgical NELA Research Fellowship

Miss Gill Tierney.

Director of Emergency General Surgery ASGBI

Background

The National Emergency Laparotomy Audit (NELA) commenced in 2012 and has grown to be one of the largest prospective databases on emergency laparotomy worldwide, with over 120,000 patients to date. NELA is commissioned and funded by the Healthcare Quality Improvement Partnership (HQIP), and run by the Royal College of Anaesthetists as collaboration between anaesthetic, surgical and other key stakeholders. Fellows have been appointed to the Project Team since the start and help with a variety of key functions as outlined below. There are huge opportunities to maximise the value of the NELA dataset for the benefit of patients, and the Fellows posts provide one way of achieving this.

The Trainee's Perspective. Miss Hannah Boyd-Carson.

Discussion with your Training Programme director at the earliest opportunity is an imperative part of the process. It is also important to have a project idea or proposal for analysis of the data while working within the NELA team. You will need to submit a proposal to both your University and also the NELA team so it's best to start these early.

Both your own research and work for NELA team involves working with a large database, therefore attending a database management course and also a statistical course is highly recommended, some Universities run these as part of your higher degree.

You are expected to attend a NELA team meeting in London once a month. Travel expenses are reimbursed. The main aspects of the surgical fellow role involve analysis of the NELA database, as part of your own work and also for additional projects within the NELA team, speaking at meetings and conferences, and involvement in the production of the NELA annual report.

The Academic Supervisor's Perspective. Mr Jon Lund

First, secure the funding. You will need to fund the trainee for between 2 and 4 years, depending on whether the student will be registered for a master's or a PhD (or equivalent) with a University to which you are affiliated. You should factor in time to be taught the database management skills and ensure the student has access to a suitable course and be able to fund the course. You will need to find money to purchase a computer of sufficient power to manage the relevant programmes and large amounts of data. Funding can be from grants or finding salary from clinical posts. If it's the latter, then make absolutely sure that the time expected to deliver the clinical/teaching role will not overwhelm the trainee. There needs to be a lot of time free to do research. Remember that you will need money available over and above salary for a computer, courses, conference registration, travel, accommodation and sometimes open access publication fees. You should agree with the trainee before they start on who is to foot the higher degree fees.

Second, secure the right person for the job. These are not easy projects, so you should make sure you pick someone who has the potential to learn the sometimes-challenging skills to manage big data sets and analyse them correctly. They will also need good communication skills to work within the larger NELA team and be able to translate numbers into outcomes clinicians can relate to, presenting them in a way that all can understand if messages are to be translated into practice.

Third, make sure the trainee is working in a supportive environment. Having a trainee who can work in an existing functioning research group is good. It allows the trainee to access support and expertise from others in the group, both on their specific project and on generic research issues, such as writing up and presenting. In a wider group they can also contribute to group projects, enhancing both transferable skills and CV. They will need a desk in a room that they can spend long hours working in. You will also need to consider issues around compliance with data regulations in your environment.

Fourth, make sure you are a good supervisor. It takes time, effort and experience to be a good supervisor and a strong publication record, to help with design, analysis and writing up is helpful. You should ideally have a track record of successful supervision of higher degrees. It might be difficult to do this from a full time clinical post, so make sure you have time in your job plan to perform supervision well. Also, pick a co-supervisor with expertise that complements your own. If there is isn't good supervision there is a much higher chance the project will fail.

Fifth, have a good and clear idea of the project originality, aims, purpose, scope and relevance. If the suggested project is woolly in any of these areas then there is a risk that the trainee will get lost without a clear vision and guidance.

The TPD's Perspective. Miss Gill Tierney

Many surgical trainees undertake a formal period of research leading to a higher degree (PhD or MD). The regulations about this are available in the Gold Guide. Trainees must complete a year in program before starting an out of program (OOP) period. This period of time results in adjustment of the CCT date.

When contemplating an OOPR (out of program for research) it is wise to inform the TPD of the planned idea early, most deaneries require 6 months' notice to allow for planning of the rotation. The key to successful OOP planning is communication and I would strongly advise starting discussions with the planned academic supervisor and the TPD early and always copying both into any correspondence. Deaneries have a form on their website which needs to be filled in in advance of an OOPR period. This form requires details of the project, a time scale of deliverables and funding. This form needs to be signed by the supervisor, the TPD and the Dean usually 6 months before the OOPR starts.

The NELA Project team Perspective. Dr Dave Murray and Miss Sonia Lockwood.

NELA is happy to consider applications from surgical trainees wishing to be considered as a NELA research fellow. The requirements are that a fellow has a source of funding for the period of research (usually two or three years). The HQIP contract unfortunately prevents NELA funding from being used for direct research purposes. The fellow must be registered with a University for a higher degree and have a named academic supervisor. The academic supervisor should have a track record in supervision of higher degrees. The fellow should have a clear idea of the research question they wish to ask and the question should be answerable using NELA data. The aim of the research should be to improve quality and safety for patients undergoing emergency surgery. All secondary research needs to be approved by the Healthcare Quality Improvement Partnership, which involves an application form.

We are looking to appoint a Surgical Fellow to commence in February 2021. Further details will follow on the NELA website autumn 2019.

Journal of the Association of Surgeons of Great Britain and Ireland, Number 55, Summer 2019
EMERGENCY GENERAL SURGERY

The 3rd in our series of Emergency Laparotomy meetings takes place in Leeds on 19th November.

This year the focus is on **strategies in surgical emergencies**.

Registration is open and early booking is recommended as places are limited.

There is a significant discount on registration fees for ASGBI Members.

Presentations include:

- Bile Duct Injury and Gallbladder Catastrophes
- Bariatric Complications
- Specialist Upper GI Emergencies, strangulated hiatus hernia and Boerhaave when and who to call for help
- Is there trouble in the abdomen, will you look please? The intensivists perspective
- Pancreatic Trauma
- Blunt Abdominal Trauma
- Thoracic Trauma
- Major pelvic bleeding, the gynae theatre call
- Terrorist Attacks
- What screw goes where?
- Colorectal emergencies
- Acute Diverticulitis
- Colonic bleeding
- The frail elderly patient with peritonitis

The programme includes an 'Ask the expert' Session and Case Discussions.

Visit the web site for more information and the register:

https://www.asgbi.org.uk/

EMERGENCY GENERAL SURGERY
Interest Group

ASGBI is committed to developing excellence in emergency general surgery through evidence-based sharing of good practice. Through its Director of Emergency Surgery (Miss Gill Tierney) and the Emergency General Surgery Board (Chaired by Professor Pete Sagar), ASGBI works with all four surgical Colleges, trainee representatives and specialty associations to improve matters in this area.

ASGBI and EGS

The Association:

- Produces guidelines and standards on EGS services in conjunction with ACPGBI, AUGIS, ALSGBI and NFAS
- Works closely with NELA (National Emergency Laparotomy Audit) to produce reports, drive change and share best practice.
- Liaises with the SAC
- Shares best practice in ambulatory EGS tariff implications

If you would like to be part of the evidence-based development of excellence in UK Emergency Surgery why not join ASGBI, attend the annual emergency surgery one day meeting, our annual surgical congress and share with and learn from like-minded colleagues

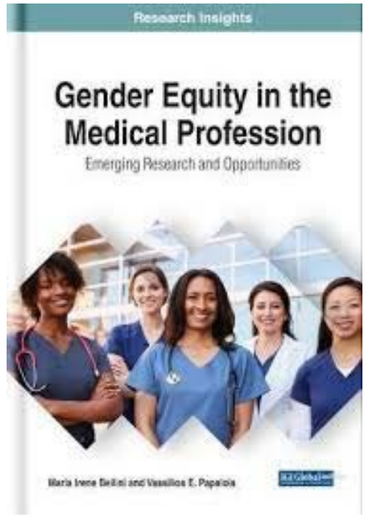
www.asgbi.org.uk

ASGBI Women in Surgery: where do we stand?

Miss M. Irene Bellini

The ASGBI Women in Surgery facebook group was launched in August 2017. Today, the group counts 445 members from all over the world, demonstrating to be an excellent springboard and platform to build opportunities for networking and allow relationships of distance mentoring.

In the last two years, lots of interesting projects have been successfully developed via this platform: an online survey published in January 2019[2] to better understand what the issues are and how to move forward. Furthermore, the results of the Women in Surgery Working Group analysis have been discussed in depth during the #HowIBecameAWomanInSurgey Symposium held last October in Telford by a panel of outstanding speakers and leaders in surgery. Our aim and mission is to actively promote the change of the surgical norm[3] to encourage more women to pursue a surgical career in an environment where both personal and professional growths are promoted. When discussing themes of inclusion & diversity, it is paramount to bear in mind that this is not limited only to the professional well-being, but also for the delivery of safe and high-quality care. If we want to attract, train, and retain the best talent for our patients, we need a strong and efficient diversity strategy in place[4]. This will translate in a better working environment for either gender, in fact our next project, a work in progress, is a “Gender Equity in the Medical Profession: Emerging Research and Opportunities” to deliver essential discourse on strategically handling discrimination within medical schools, training programs, and consultancy positions in order to eradicate sexism from the workplace.



Somebody could argue why the need for research on topics such as gender diversity, leadership roles, imposter syndrome etc? I would just like to answer with the recent published and retracted paper where the hypothesis to test was whether female physicians can perform equivalently to male physicians with respect to emergency procedures[5]. I found this disrespectful not only because of the hypothetical less strength applied into mechanical intubation rather than the appropriateness of the technique might lead to different outcomes, but also because this stereotyped culture of masculinity for technical procedures is still persistent and pervasive. Movement such as the ASGBI Women in Surgery do find their root into this mandatory change in culture and we are lucky in UK and Ireland to have the possibility to express it is such as a high level. As one of the authors of the above cited paper defines himself for having been “deeply gender-biased misogynist”, every possibility to tackle gender inequality at every level has to be used. It is never too late to get right.

http://www.asgbi.org.uk/women-in-surgery/

References

1. Bellini MI, Marson L. You cannot be what you cannot see. The journey through surgical training from a female perspective. Journal of the Associations of surgeons of Great Britain and Ireland. 2017;50:97-9.

2. Bellini MI, Graham Y, Hayes C, Zakeri R, Parks R, Papalois V. A woman’s place is in theatre: women’s perceptions and experiences of working in surgery from the Association of Surgeons of Great Britain and Ireland Women in Surgery working group. BMJ Open. 2018.

3. Bellini MI, Adair A, Fotopolou C, Graham Y, Hutson A, McNally S, et al. Changing the norm towards gender equity in surgery: the women in surgery working group of the Association of Surgeons of Great Britain and Ireland’s perspective. Journal of the Royal Society of Medicine. 2019 (in press).

4. Bellini M. Women in surgery—if you can see it, you can be it. BMJ Opinion. 2019.

5. Jung W, Kim J. Does physician gender have a significant impact on first-pass success rate of emergency endotracheal intubation? The American journal of emergency medicine. 2019.

coress Feedback

Surgical Safety Update: Cases from the Confidential Reporting System for Surgery (CORESS)

CORESS is an independent charity, supported by the Federation of Surgical Specialty Associations (FSSA)

Professor Frank CT Smith, Programme Director, on behalf of the CORESS Advisory Board.

This series of reports illustrates cases from several surgical specialties, emphasizing common themes across the practice of surgery. Lessons with respect to following protocols, using joint checks by both operators to confirm anatomical orientation (analogous to dual flight deck checks in aviation), and the need for early recognition of the patient who fails to respond following intervention, can be drawn.

We are grateful to those who have provided the material for these reports. The online reporting form is on the website (www.coress.org.uk), which also includes all previous Feedback reports. Published cases will be acknowledged by a Certificate of Contribution, which may be included in the

contributor's record of continuing professional development, or may form part of appraisal or annual review of competence progression portfolio documentation. Trainee contributions are particularly welcome.

Professor Frank CT Smith
On behalf of the CORESS Advisory Board

Bowel perforation in colonic screening patient

(Case ref: 250)

A patient on the national Bowel Cancer Screening Programme, with positive faecal occult bloods, was admitted for colonoscopy. A 40 mm pedunculated low rectal polyp was identified and removed endoscopically, by "piecemeal" excision, after elevation of submucosa with gelofusin, adrenaline and indigocarmine.

Due to the size and appearance of the polyp, MRI of pelvis, to stage disease locally, and computerised tomography (CT) of chest, abdomen and pelvis, to exclude distant metastases, were booked.

CT scan performed 3 days later showed locules of free gas in the rectal wall, suggestive of local low rectal perforation, but with no frank pneumoperitoneum and no free fluid in the pelvis. Some rectal thickening was noted at the excision site. MRI of pelvis at day 6 failed to demonstrate air in the rectal wall. The patient was discussed at colorectal multidisciplinary team (MDT), histology confirming adenocarcinoma with probable lymphatic invasion, with tumour extending to the diathermy margin. The patient was contacted the day after the procedure by the specialist bowel cancer screening practitioner who did not report any concerns as per the standard protocol.

Following discussion at the MDT, the patient was treated by chemoradiation for six weeks and was noted to have a complete clinical and radiological response. Patient remains on a complete responder follow-up protocol with 3-monthly flexible sigmoidoscopies, and MRI pelvis, and six-monthly CT thorax, abdomen and pelvis, for two years.

Reporter's comments:

The local "piecemeal" excision was undertaken in order to obtain larger biopsies for adequate histological diagnosis, and to avoid the need for repeated endoscopy. The polyp initially looked like a benign villous lesion of the rectum. It was not felt that transanal microsurgery (TAMIS) was feasible due to the low position of the polyp. The staging scans however confirmed a localised subclinical perforation, as a result of the "piecemeal" excision, classified as a significant complication in patients undergoing bowel cancer screening.

A dictionary definition of piecemeal is: "characterized by unsystematic partial measures taken over a period of time". In future, large rectal polyps will be dealt by taking small samples and macroscopic images so that patients can be discussed at the complex polyp MDT. Transanal endoscopic microsurgery (TEMS) or TAMIS will be considered for larger polyps.

CORESS comments:

The colorectal expert on the Advisory Board made the following comments: Endoanal ultrasound might have been useful here. The size of the polyp suggested malignancy and piecemeal excision made complete resection less likely. Early MDT discussion might have provided consensus for an alternative resection strategy. NICE guidance with respect to management of colorectal cancer and endoscopic treatment of polyps can be found at:

https://www.nice.org.uk/guidance/cg131/evidence/ful-guidance-pdf-183509680

https://www.nice.org.uk/guidance/ipg580/documents/overview-2

Laparoscopic bag disruption & colonic perforation during organ morcellation at laparoscopic nephrectomy

(Case Ref: 251)

A 54 year-old man underwent laparoscopic simple nephrectomy for benign disease. The resected kidney was broken up (morcellated) in a laparoscopic retrieval bag, using sponge holding forceps, to allow removal through port site. During the morcellation a tear was identified in the bag. Clinically it was felt likely that the morcellation specimen removal was complete and the case was closed.

Over the following 36 hours the patient became unwell with a fever, leucocytosis and abdominal tenderness. A CT scan suggested a bowel injury. At subsequent laparotomy, a perforating caecal injury with leakage of bowel contents was noted, necessitating bowel resection and stoma formation.

Reporter's Comments:

The patient had undergone previous abdominal surgery causing adhesions. Whenever undertaking morcellation of a specimen, whether manually, or with a mechanical morcellating device, do this with care to avoid damage to the specimen bag with potential spillage of contents. Morcellation should always be undertaken with maintenance of pneumoperitoneum, via an air-seal port device, and under endoscopic visualization.

CORESS Comments:

Most laparoscopic nephrectomies are undertaken retroperitoneally, when there is also risk to the aorta, vena cava and duodenum. Risk of tumour seeding was not a concern for benign disease but would have been, had this procedure been undertaken for malignancy. It is recognised in laparoscopic nephrectomy for cancer, that tumor staging is severely limited by morcellation. Knowledge of the radiologic features (pathology and lesion size, capsule, and vessel involvement) is important in sampling and staging morcellated kidneys removed laparoscopically.

Inadvertent distal anastomosis of femoro-politeal arterial bypass graft to popliteal vein

(Case Ref: 252)

A 75 year-old man with debilitating intermittent claudication of the calf underwent right below-knee femoro-popliteal bypass, using reversed great saphenous vein harvested from the same leg. The distal anastomosis was undertaken by an experienced trainee, but was checked visually by the Consultant, who had undertaken the proximal anastomosis.

On completion, there was good flow in the graft and the incisions were closed. The patient returned to the ward the same evening. Next morning the calf was swollen and an early surveillance duplex scan noted that the arterial bypass graft had been anastomosed to the below-knee popliteal vein instead of the artery. There was excellent flow in what was now an iatrogenic arteriovenous fistula. The situation was explained to the patient, who was taken back to theatre. At the second operation, the distal graft anastomosis was taken

down, the femoral vein repaired with a small patch of superficial vein, and the graft re-anatomosed to the tibioperoneal trunk which was sitting immediately behind and adherent to the popliteal vein.

Reporter's Comments:
The popliteal vessels were exposed by a standard medial infra-geniculate incision. The popliteal vein is often the first major vascular structure to be encountered behind the knee by this approach. It may be difficult to distinguish between the artery and vein, which may often be adherent, or co-located with venae commitantes around the artery. Difficulty in differentiating the vessels is compounded by a lack of arterial pulse in a vessel with a proximal occlusion. Nonetheless the vein is relatively thin-walled and the artery, muscular. Awareness of this potential confusion might have alerted the operator to the scope for misplacing the graft anastomosis.

CORESS Comments:
This case illustrates a lesson in supervision. Did the consultant check the dissection of the popliteal vessels, prior to formation of the anastomosis? Dual checks of the completed anastomosis (analogous to flight deck checks in aviation) might have avoided the final outcome. Similar confusion may arise in distal anastomoses to calf vessels. Pre- and post-anastomotic use of on-table Doppler ultrasound might have helped to differentiate between artery and vein.

Wrong rib resection for neurogenic Thoracic Outlet Syndrome (Case Ref: 253)

A 32 year-old lady with clinical features of neurogenic thoracic outlet syndrome including paraesthesia in the C8 T1 nerve distribution, and intrinsic muscle wasting in the hand, underwent transaxillary resection of the first rib.

Routine exposure of the first rib was undertaken via an axillary incision, by dissecting the axillary vein to the lateral border of the rib. However, the patient was mildly obese and access in the axilla was difficult, with the view impaired by some bleeding from a collateral branch of the axillary vein. The rib was cleared of intercostal muscles with a rongeur and periosteal elevator, and was eventually resected to a position, posterior to the brachial plexus. Surgery was completed with a redivac drain left in-situ for 24 hours, and the wound closed.

A routine chest x-ray undertaken the next day revealed that, inadvertently, a portion of the second rib had been excised instead of the planned first rib, leaving the offending first rib in-situ.

Reporter's Comments:
Limited vision and assistance compounded problems of access in this procedure. If in doubt, stop, consider the source of problems and institute alternative strategies to deal with these.

CORESS Comments:
Transaxillary resection of the first rib may be a difficult procedure in obese or large patients or those with pronounced axillary musculature. Use of adequate assistance (often two assistants are necessary, one to retract the arm and open up the axillary space), and appropriate long instruments including forceps, scissors, rib shears, periosteal elevators and bone nibblers are necessary. Vision may be improved for the operator, by use of a headlight, lit mammary retractors, or a Vital Vue TM suction device. A laparoscope inserted into the axillary space may enhance the view for assistants.

Identification of the first rib requires visual confirmation of the subclavian vein (anteriorly) and artery (posteriorly) passing over it. Palpation of the rib will usually confirm the flat horizontal nature of the first rib in contrast to the second, and the medially protruding scalene tubercle, to which scalenus anterior is inserted.

Inadvertent SMV ligation at extended lymphadenectomy right hemicolectomy (Case Ref: 254)

A 52 year-old man was diagnosed with carcinoma of the proximal transverse colon. A lymph node mass was identified on CT close to the origin of the superior mesenteric artery; however, full body CT and PET scan suggested that the disease was potentially curable through radical surgery.

The hospital's Colorectal Cancer MDT recognised that surgery would be technically challenging and two consultant colorectal surgeons were identified to undertake a 'complete meso-colic excision with central vessel ligation' (extended lymphadenectomy right hemicolectomy) operation. At laparotomy, feasibility of resection was confirmed, and the resection and primary ileo-colic anastomosis were completed to the apparent satisfaction of the two consultants.

In recovery, the patient was in pain, vomited and became hypotensive. He had received an epidural and had undergone a difficult and relatively long operation; hence alarm bells did not ring at this point. He was given analgesia and intravenous fluids. His blood pressure responded transiently to fluid; however, it became apparent that the hypotension was refractory to fluid and turning off the epidural. Arterial blood gas lactate was >5 mg/l, approximately 3 hours after his arrival in recovery. Intravenous Metaraminol improved the vital signs, but the lactate further deteriorated and approximately 4.5 hours after his arrival in recovery, a decision was made to return the patient to the operating room.

Re-look laparotomy was undertaken approximately 6 hours after his first arrival in recovery. When the abdomen was explored, it was identified that the superior mesenteric vein had been ligated. A direct reconstruction of the vein was achieved with a PTFE graft and flow re-established. The small bowel was clearly compromised; however, a healthy colour change was seen and it was felt that recovery was likely. The abdomen was temporarily closed with a laparostomy and vacuum dressing and the patient managed on ICU. Prophylactic heparin was given. Unfortunately, the patient further deteriorated and at subsequent emergency re-exploration of the abdomen, the graft was found to have clotted and the small bowel had infarcted. Despite all efforts, the patient died.

Reporter's Comments:
Investigation of this event identified:

• Injury to the superior mesenteric vein is a recognised complication of right hemicolectomy. This complication has been recorded as occurring in approximately 0.2% (1 in 500) routine right hemicolectomies and 1.7% (1 in 59) extended lymphadenectomy right hemicolectomies.

• Pre-operative mapping of major abdominal blood vessels by CT-angiogram has been shown to significantly reduce: a) operating time; b) difficulty in identification of mesenteric vessels; c) volume of intraoperative bleeding.

The Colorectal Cancer MDT wished to alert fellow surgeons to the tragic circumstances of this death, so that colorectal surgeons can:

• Recognise the relatively high risk to the SMV with extended lymphadenectomy colectomy (1 in 59 procedures); this has implications for 'Montgomery-compliant' consent.

• Recognise the utility of CT-angiography in pre-operative mapping of major abdominal blood vessels in high risk colonic tumours.

• Recognise the potential for involving specialist surgeons (HPB/Upper GI) in difficult colectomy operations in both the planning and intra-operative phases.

Finally, if a patient isn't 'right', in recovery after major abdominal surgery, the surgical team should have a low threshold for re-exploration, to identify any technical problem arising from the surgery.

CORESS Comments:
The Advisory Board were grateful to this reporter and his thoughtful comments. The potential complications of this surgery are recognised. Venous grafts with low flow, compounded by local pressure and oedema, are prone to thrombosis, and there was a significant potential risk of this outcome, with associated engorgement and small bowel death.

Journal of the Association of Surgeons of Great Britain & Ireland

We would greatly appreciate your feedback to further enrich the content and format of the JASGBI!

Please complete the survery (link below) to tell us what you think

https://www.surveymonkey.co.uk/r/X26JQC7

Journal of the Association of Surgeons of Great Britain & Ireland

Contributor Guidance

(As at Summer 2017)

The Association welcomes and encourages contributions from Fellows and asks that potential contributors take the following guidelines into consideration.

Aims

The Journal of the Association of Surgeons of Great Britain and Ireland (JASGBI) is a regular publication that has evolved from the previously named Newsletter. It aims to publish material of topical or general interest to members of the Association, which will promote and advance the reputation and functions of the Association to a wider professional audience.

JASGBI is not a peer reviewed, academic publication, and is not intended as a vehicle for conventional academic papers. We nevertheless welcome a wide range of subject matter which may include:

- Articles of national and strategic relevance in relation to surgical training, teaching, career development, and issues in national politics, as they bear upon surgical and professional practice.
- Articles of topical debate.
- News from the Regions, and from affiliated Specialty Associations and Societies.
- Articles on international surgical practice, as observed by members of the Association on their travels, attachments and secondments.
- Historical articles of interest and relevance to surgeons.
- Personal experiences, parallel careers, hobbies, activities and achievements which are out of the ordinary, or which would fit our popular 'Secret Lives' series.

This list is not exclusive. JASGBI is keen to encourage and help develop standards in professional writing and to act as a vehicle for new and original material.

Publication Standards

Although JASGBI is not a conventional, peer reviewed academic publication, we subscribe wholeheartedly to the highest standards in respect of Publication Ethics and the elimination of the various forms of publication malpractice, as set out by the Committee on Publication Ethics (COPE) and the World Association of Medical Editors (WAME). Material submitted to JASGBI should thus be original to the author(s). The editors reserve the right to submit any manuscript to peer review and to seek any amendments which are deemed to improve the presentation or content of the article to meet the standards and style of JASGBI.

Article length

Each page of JASGBI can accommodate around 750 words with a small picture. While we are flexible as to content, articles should usually be of 2,000 words or less, with up to four original images and/or figures. In general terms, PowerPoint graphics detract from the quality of presentation and should be avoided.

Images and Copyright

We support full colour pictures. Please only submit pictures for which you own the copyright, or have the written permission to reproduce from the person who holds the copyright. If the source requires attributing, please include this in the article. Number the images and state the appropriate figure title in the correct location in the text. Please ensure images are high resolution (minimum resolution 640 x 840 pixels) and submitted in JPG format if possible.

You retain the copyright of your published material. Where multiple authors have contributed to an article, please submit written authority and agreement of all authors to the publication.

JASGBI reserves the right to use published material in the advancement of the interests of the Association, and to distribute such material both in hard copy in the printed journal and by other electronic means, as through the Association's website, to secure the widest possible readership.

Authors must provide a 'for correspondence' email address with any article submitted. This will be published alongside your article.

References

JASGBI is not a journal of reference and we can neither encourage nor support long lists of references. In general terms, we will publish no more than ten relevant references.

Journal of the Association of Surgeons of Great Britain and Ireland

JASGBI IS PUBLISHED BY

The Association of Surgeons of Great Britain and Ireland
35-43 Lincoln's Inn Fields, London WC2A 3PE
Tel: +44 (0) 207 973 0300 | Email: admin@asgbi.org.uk
A Company Limited by guarantee, registered in England: 6783090. VAT number: GB 944 3070 34

JASGBI is an educational publication, distributed free to members of the Association.
The opinions expressed in this Journal are those of the individual authors, and do not necessarily reflect the policy of the Association of Surgeons of Great Britain and Ireland.

ASGBI gratefully acknowledges the professional support of the following Strategic Business Collaborators: