Surgical Life
The Journal of the ASGBI

Number 61

A Message from the President

Mr Neil Welch

The world continues to change and ASGBI continues to adapt. Like many of us, I watched the reports from COP26 and have been thinking about how ASGBI can reduce its own carbon footprint. We have been paperless for many years now, we have embraced working from home for our employee, and have held virtual board meetings and even a virtual Congress and EGS conferences. Nonetheless there is value in face-to-face meetings in my view to allow us to form new relationships which help when trying to influence and shape the agenda and outcomes. This is perhaps why COP26 needed to be face-to-face, and to a lesser extent why some face-to-face meetings must be re-established. However, the last 2 years have clearly shown that many meetings are best delivered virtually, encouraging wider participation and involvement, whilst reducing the impact on our own lives and the environment.

Our 2022 International Congress in Liverpool from 3rd - 5th May will go ahead as a face-to-face event, and I invite you all to attend and look forward to welcoming you. The programme is shaping up under the hand of Christian Macutciewcz and looks fantastic. Presentations and teaching in front of a live audience will hone these skills, and the opportunity to catch-up, network and make new acquaintances after the last 2 years locked away. We still don't know what will be necessary from the stance of the pandemic, but it would be reasonable to expect all delegates and attendees to have been at least doubly vaccinated. We will keep you informed on this as we get closer to the event.

Our virtual EGS conference on the 29th of Sept 2021 was a great success and well received. Amongst the most interesting talks were those from our colleagues working in impoverished healthcare systems abroad. Quite an eye opener. Delegates can still view the presentations on “catchup” and it will later be available to all ASGBI members via the members area. Our next EGS conference is planned for September 2022.

A novel symposium presented by the four surgical trainee groups (Moynihan Academy, ASIT, Dukes Club & Roux Group) took place on the 7th & 8th December, offering an overview of everything you need to know in the exam syllabus on EGS and trauma. Aimed firmly at those wanting to sit the exit exam for FRCS, we were delighted to see such a large and enthusiastic audience in attendance. It was a very worthwhile event and the participants can use the recorded presentations as an ongoing resource for six months.

It is difficult to believe that the Moynihan Academy has existed as the trainee branch of ASGBI for only a year and that the founder President Mr Alan Askari demitted office at the end of 2021, handing over to Miss Liz Vaughan. Thank you, Alan, for your enthusiasm. What a productive year, and with more developments to come!

Our series of educational webinars continue https://www.asgbi.org.uk/event. They are well worth attending and free to members.

Over the last few months, we have appointed new fellows to various roles. I’m delighted to welcome Mr Ben Griffiths as our Director of Education, Miss Kate Hancorn as our new Major Trauma Lead; Mr Parv Sains as our new Medicolegal Lead; and Miss Sarah Duff as the ASGBI representative for the NELA CRG. As usual, I was impressed by the quality of all the applicants and I am grateful that so many wish to serve in these roles. Miss Katie Cross our Regional Rep for the South West has been elevated to the role of Regional Director. A wonderful appointment and I wish her well. Miss Marianne Hollyman has succeeded Katie as Regional Rep. Mr Chris Lewis has demitted office as Director of Education and Training, and I thank him for all his effort. He will continue his involvement with the ASGBI EGS committees.

As you know the ASGBI Exec is seeking views from our membership on how we can change to be more representative and diverse. We expect we will need to make more changes to our constitution (“Mem & Arts”), but these will of course need to be presented to our fellows at an AGM or SGM in the future.

Your Association remains in good financial health, with vigorous leadership from all the Directors in their own portfolios. Our commercial partners are very important to us, and I reiterate our thanks for their support. We continue to be ably supported by our General Manager Bhav, and the whole secretariat. I am enormously grateful to them all.

I wish your all the best for the year to come.

Best Wishes

Mr Neil Welch
President, ASGBI

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A Letter from the Editor

Professor Vassilios Papalois, ASGBI Director of Communications

Dear Colleagues, Dear Friends,

Welcome to the winter 2021-2022 issue of ASGBI Surgical Life!

I believe that this issue will give you the opportunity to read and reflect on some excellent articles from the whole spectrum of modern surgical life.

I will start with strongly recommending reading carefully the most comprehensive article by Mr MKH Crumplin, the Archivist of the ASGBI, that presents and analyses the evolution of our historic association over 101 years! It is an article that I believe we need to give to all our new members so that they can get the right perspective about the challenges, achievements, and aspirations of the ASGBI – our history is who we are.

The section of the Guest Editor is always the backbone of every one of our issues. This time, a team of top-class authors led by my esteemed colleague, Miss Nuha Yassin as our Guest Editor, have put together a series of articles that offer an in depth and thought-provoking analysis related to the ASGBI movement on Equality, Diversity and Inclusivity. We plan to share those articles via our social media channels, and we hope that they will initiate stimulating discussion in the UK surgical community and beyond.

In this issue, we also gave emphasis to the Lancet report that presented some really top-class research and analysis on behalf of the London School of Economics (LSE), led by Professor Elias Mossialos (Professor of Health Policy at the LSE who was also Guest Editor of ASGBI Surgical Life for health policy matters related to surgical practice) regarding the future of the NHS in the post COVID-19 era. I am sure that this section, will also fuel robust discussions.

It would also like to highlight the great contribution by the Moynihan Academy, the special sections with articles related to surgical technology and innovation especially in the context of minimally invasive surgery and re-organisation of surgical services, and of course our usual excellent section by CORESS as well the refreshing "Art in Surgery" contributions.

I would like particularly to mention the article that presents the really amazing efforts of colleagues in Sri Lanka to develop a modern and innovative organ donation and transplantation programme. It should serve as an example as to how real passion for our vocation can move things forward despite adversity.

The article about the Sri Lanka organ donation and transplantation programme was part of our series "Proudly Presenting our Team!". It was the success of this series that led to the new ASGBI initiative for a monthly webinar entitled "The ASGBI Presents the Surgical Department of the Month". The aims of those webinars are to give to surgical departments across the UK and Ireland the opportunity to:

- present their team and great work, as well as build collaborations with departments with similar interests

- present in an interactive way topics related to state of the art surgical practice based on their experience and expertise.

The first webinar related to this initiative took place on the 1st of February 2002 and the second is planned for the 9th of March 2022- please see the relevant programmes. I am truly grateful to the colleagues who led the way, and we are cordially inviting departments from the whole UK and Ireland surgical community to join this great effort.

The winter 2021-2022 issue of ASGBI Surgical Life, is the last one for me as Editor and ASGBI Director of Communications. My term in office started in 2017 for 4 years and, following the request of the ASGBI Executive, my term was extended for one more year and comes to an end at the ASGBI Congress in Liverpool.

The last 5 years have been an amazing journey and I believe that together we got our publications portfolio to the next level including our own publications as well as publications in peer reviewed journals.

In addition to the massively increased number of submissions, the quality of the articles, the openness and inclusivity in our submission-publication approach, I believe that we need to be particularly proud for promoting and on many occasions setting the scene for major ASGBI initiatives such as:

- Health policy in surgical practice
- Women in surgery
- Surgical innovation and technology
- Advances in surgical education and training
- Emergency general surgery
- Value based medicine
- Surgical sustainability
- Medico-legal challenges
- Equality-Diversity-Inclusivity

A lot has been achieved and, as always, we need to evolve and advance further. The ASGBI is planning to move ASGBI Surgical Life to a new format, utilising e-media, and making it more frequent, accessible, and interactive. ASGBI Surgery will continue as a section of ASGBI Surgical Life offering the opportunity for publication of short punchy articles. With the support of all our members, I am sure there will be many more innovations and I wholeheartedly wish to my successor every success.

Personally, I would like to express my sincere gratitude to the ASGBI Executive, Council and to all our members and friends for the opportunity and the honour to serve our association and for a wonderful journey over the last five years.

Particularly, I would like to say a huge and heartfelt thank you to all the authors of our publications, to our Guest Editors, to the members of our Editorial Board and, most certainly, to all our members and friends who read and promoted our articles.

Last but certainly not least, I would like to express my professional and personal gratitude to Mrs Bhavnita Patel, the ASGBI General Manager, and Ms Vicki Grant, the ASGBI Communications and Events Manager. One cannot ask for better colleagues and better friends.

Farewell and Enjoy Reading!

ASGBI 2022 Annual Congress
Reset and Recharge

Director of the Scientific Programme, Mr Christian Macutkiewicz

As Director of the Scientific Programme, this is the busiest time of year for me, but also an exciting one seeing the 2022 Congress come together.

This year is going to be the first face-to-face congress since 2019 and I think we all deserve to be together, share knowledge, and enjoy the social events in the fantastic city of Liverpool.

Our theme for 2022 is 'Reset & Recharge', something we all need to consider after a couple of challenging years.

The amazing Pinky Lilani will be entertaining us with her thoughts about motivation and how she has made a difference in a man's world. We have Christine Hall giving the BJS Lecture and enlightening us on how to succeed in surgery despite adversity.

We have an excellent focus on hernia surgery with Agneta Montgomery, past-President of the European Hernia Society giving the Bland-Sutton Lecture on the evidence-based management of groin hernias.

Our educational programme has symposia on gallstones, reflux, benign colorectal disease and complications of bariatric surgery as well as a symposium on sustainability, where we will award the first sustainability prize for the ASGBI.

This year we are continuing with our partnership with Intuitive to bring an exciting robotic symposium focusing on collaboration and bringing together multiple specialties to treat multi-visceral disease.

We are very fortunate to have many Presidents of National Societies joining us to give us a real expert perspective to the congress.

We have a real focus on trainees, with several symposia covering a range of topics such as Fellowships, Challenges in Training and Research Opportunities. Our new Breakfast Academies every morning aim to help trainees with applications, exams, and how to improve your portfolios with research.

We have a "Reset & Recharge" symposium where burnout and motivation are discussed, and how we are to call on our resilience to help reset the workforce.

Our new Trauma lead, Kate Hancorn will Chair a symposium focusing on the type of trauma cases we see in the UK.

We are indroducing a new format session for 2022 - Ethical Dilemmas in Surgery - where several scenarios will be posed to the audience for discussion and debate.

We will be running a CESR Workshop for our SAS colleagues.

Our short Education Sessions will focus on a range of to update and inform.

We are delighted to have four excellent speakers representing the Colleges and look forward to updating you soon on their chosen lecture topics.

We finish the three days with the ever popular Bad Day on Call session. Professor Pete Sagar and Miss Sonia Lockwood have put together an engaging mix of topics to close on.

We look forward to seeing you in Liverpool!

Congress Summary

	Tuesday	Wednesday	Thursday
Symposia	Joint SRS/ASGBI Symposium: Best Surgical Papers Research Committee Hernia Symposium Bariatric Trainee Matters	Reset and Recharge Colorectal Sustainability Gallstones Upper GI Patient Safety Robotics Trauma	Fellowships for your Future Ethical Dilemmas in Surgery Bad Day on Call
Education Sessions	Pancreatitis for the General Surgeon Organ retrieval - application to trauma surgery FIT for purpose: Colorectal FIT testing and Lower GI Pathways	National Consultant Information Programme Consent in Montgomery	The Incidental Pancreatic Cyst The Neck Lump Incidentaloma The breast lump and abscess
Lectures	Motivational Lecture Bland Sutton Lecture	BJS Lecture RCSEng Moynihan Lecture RCSEd Sir Robert Shields Lecture RCSI Robert Smith Lecture	RCPSG Macewen Lecture Leadership in the NHS
Interactive Sessions	Breakfast Academy	Breakfast Academy Meet the Experts	Breakfast Academy CESR Workshop

2022 Keynote Lecturers

Motivational Lecture: Pinky Lilani OBE
Champion of women, food guru, inspirational entrepreneur

BJS Lecture: Miss Christine Hall
Overcoming adversity as a surgeon

BJS

Bland-Sutton Lecture: Dr Agneta Montgomery
Evidence based management of groin hernias

2022 College Lecturers

RCSEng Moynihan Lecture: Professor Ian Loftus

RCSEd Sir Robert Shields Lecture: Miss Anna Paisley

RCSI Robert Smith Lecture: Professor Deborah McNamara

RCPSG Macewen Lecture: Professor Susan Moug

Register here: www.asgbicongress.org.uk

Surgical Life: The Journal of the Association of Surgeons of Great Britain and Ireland, Number 61
CONGRESS

A Foundation for the Future
The first 100 years of the Association of Surgeons of Great Britain and Ireland

MKH Crumplin FRCS FRHistS, Archivist ASGBI

The commemoration and celebrations of the centenary of the Association of Surgeons have been hampered but not prevented by the current Covid-19 pandemic. It is, of course to a brighter future that surgery must now look. There have been many milestones that have been reached to get where the Association is today and so we can reflect on the relevance of Winston Churchill's exhortation that, 'A nation that forgets its past must have no future'. As the Association passes through its first 100 years, we should recall the objectives, achievements and challenges that faced our surgical forebears.

The catalysts for the birth of the Association were several. In 1907, the physicians had created the Association of the Physicians of Great Britain and Ireland. Also, there was an ever-increasing range of surgical ability with the advent of general anaesthesia and the practice of antiseptic surgery. A significant cohesion of the surgical brotherhood had been fostered during World War One and surgical research was expanding. Yet, in Britain there was an obvious isolation of provincial surgeons. The latter issue had been addressed by Berkeley Moynihan, a Leeds surgeon, who had written to a friend, the future Professor George Ernest Gask in earlier days, that he had been, *'struck by the lack of adhesion amongst members of my profession. A surgeon from Manchester had never, as far as I could hear, visited and operating theatre in Leeds, nor had ever been asked in consultation. As a consequence, it was not infrequent to have to listen to disparagement of one surgeon by another; and jealousies, openly expressed, were too often heard.'*

Figure 1: Lord Berkeley Moynihan

Thus, Moynihan felt a need for surgical friendship and collaboration amongst surgeons and, in 1909, after inviting twenty provincial surgeons to spend a few days in Leeds and with the help of another surgeon, Harold Stiles - a President of the Edinburgh College, knighted for his services in WW1 and the first British surgeon to perform a pyloromyotomy - he founded the Chirurgical Club, subsequently re-named the Moynihan Club, twenty years on. Four years later, with the enthusiastic support of Professor Ernest Hey-Groves, a Bristol surgeon, he founded the British Journal of Surgery. Moynihan served as the journal's first chairman of the editorial committee. During these pre-war days, Moynihan was pondering on the creation of a national surgical association.

THE BRITISH
JOURNAL OF SURGERY

UNDER THE DIRECTION OF THE FOLLOWING
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VOLUME I.
July 1913 to April 1914. Numbers 1 to 4.

BRISTOL: JOHN WRIGHT AND SONS LTD.,
LONDON: SIMPKIN, MARSHALL, HAMILTON, KENT AND CO. LIMITED.

Figure 2: Front page of the first edition of the British Journal of Surgery, July 13 1914

Before discussing how the Association came into being, it is apposite to recall some facts about Moynihan - its key founder. George Andrew Berkeley Moynihan was born in Malta in 1865, the year in which Lord Joseph Lister carried out experimental work using antiseptic surgical techniques. Moynihan's father was an army officer, who had won the VC in the Crimean War. After attending a naval school, Moynihan qualified in medicine in 1887 and served at the Leeds General Infirmary, first as a House Surgeon, Surgeon and then as a Consulting Surgeon (1927), until his death in 1936. He was also a Lecturer, then Professor of Clinical Surgery (from 1910) at Leeds University. He was the President of the Royal College of Surgeons of England from 1926-32. With a distinguished war record, he had risen to the rank of Major General.

As to his surgical abilities, he was an innovative and gentle surgeon, specialising in abdominal procedures, using in his anastomoses a left-handed square knot. He was the first surgeon to use rubber gloves, excise a subclavian aneurysm and to operate on a chronic duodenal ulcer. Well before the First World War, he employed an early form of blood transfusion. He would say that the perfect surgeon must have the heart of a lion and the hands of a lady, not the claws of a lion and the heart of a sheep. Or again, 'Infinite gentleness, scrupulous care, light handling and purposeful, effective, quiet movements which are no more than a caress, are all necessary if an operation is to be the work of an artist and not merely of a hewer of flesh.' He was an elegant lecturer, with a calm nature and a charismatic personality. He worked in London and Leeds and he no doubt, gradually increased his fees to an ever-growing crowd of wealthy patients!

In 1914, as the dark clouds of the cataclysmic First World War loomed over the planet, Moynihan persuaded a somewhat reluctant President of the English College, Rickman Godlee, Joseph Lister's nephew, to convene a meeting to discuss the formation of an Association of Surgeons. Godlee (later Sir Rickman), entertained 20 surgeons at his Wimpole Street house, at which Moynihan

enthusiastically put his case forward. Fuelled by a decent dinner, his concept was accepted and Moynihan was requested to draw up a constitution. Assisted by Hey Groves, Harold Stiles and Robert Jones, this was soon done, with HS Pendlebury proving to be a dedicated secretary.

But the Great War interrupted further progress. The bitter conflict generated some impressive future Fellows of the Association. A few are noted here: Moynihan became senior surgical advisor to the Army, Stiles became director of orthopaedics in Scotland, Robert Jones was Inspector of Military Orthopaedics, Gask consultant surgeon to the 4th Army and Cuthbert Wallace and Gordon Gordon-Taylor were appointed Consulting Surgeons to the British Army and obtained impressive results with early laparotomies performed for penetrating abdominal wounds. A significant issue in 1917, was the formation of the British Orthopaedic Association (BOA), at which time it was realised that the management of bony injuries required improvement with specialist intervention.

Figure 3: George Gask at work in a casualty clearing station in France in WW1

After the war, on January 8 1920, at the English College, Godlee proposed that the, 'meeting hereby constitutes itself into a body to be known as the Association of Surgeons of Great Britain and Ireland'. The first president elected was Sir John Bland-Sutton. A Council was created consisting of 15 leading surgeons of the day, including a treasurer and two secretaries. There were to be three membership (Fellowship) categories, Active, Senior and Honorary. The objectives of the Association were to be, '... the advancement of the science and art of surgery and the promotion of intercourse and friendship amongst surgeons of the United Kingdom.'
A month or so later, on February 12, the first council meeting decided on a Fellowship limit of 250 and a three-guinea entry fee. Thirty-six non-teaching hospital consultants (12 London and 24 from the provinces) were elected by Council. Shortly afterwards, the fellowship swelled to a total of 222 Fellows; England 156 (London 99), Scotland 40, Ireland 21 and Wales had just 5 Fellows.

The first meeting of the Association took place at the English College from 13 to 15 May 1920. Keynote addresses were delivered by Bland-Sutton and Moynihan, followed by a couple of lectures on war injuries. The first dinner was held at Claridge's and Bland Sutton was very moved after being toasted and a rendering of 'For he's a Jolly Good Fellow'. He commented that his wife must have heard the song, as the Bland-Suttons lived next door to the hotel! Sir John Bland-Sutton, our first president was a likewise a charismatic surgeon. The son of a farmer, he eventually became a Consulting Surgeon at the Middlesex Hospital in 1920. Of small stature, with a marked Cockney accent, he was a fluent writer and an able and witty speaker. His skill lay principally in abdominal surgery, particularly pelvic procedures. He became President of the English College over the years of 1923-5.

Figure 4: Sir John Bland-Sutton the Association's first president at the Middlesex Hospital

As we roll through some of the milestones of the first century of the Association, I will dovetail in some political and surgical developments in the UK.

In 1924, Moynihan presented a gold chain of office to be proudly worn by successive Association presidents. Two years later, a £350 six-month research grant was introduced for young surgeons. In 1927, discussions were first muted on the strategy for training students and aspiring surgical trainees. Over the two decades 1920-40, thoracic surgery began its gradual development - operations for TB and simple closed mitral valvotomy, for example. The 1930s saw the introduction of bacteriostatic agents, the sulpha drugs. The first was prontosil and was researched and introduced in 1932-35 by Bayer. In 1931, a female surgeon, Miss Maude Forrester Brown, applied for a fellowship of the Association. Her application was not successful. This was despite her serving previously, as house surgeon to Sir Harold Stiles!

Figure 5: Presidential gold chain

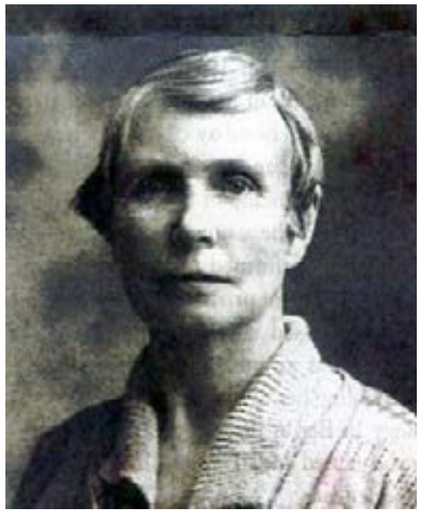

Figure 6 Miss Maude Forrester-Brown, MS, MD

Two years later, there was a resolution passed by the Association to eschew involvement in medical political issues. That year heralded the first pneumonectomy and 1934 saw the introduction of Pentothal.

Five years after Miss Forester-Brown's application to join her male colleagues in the Association, the resolution to admit women was passed and a Moynihan Fellowship was introduced. In 1937, the year of King George VI's coronation, a Travelling Fellowship was launched. Although interest waned in this, it was later to be reinvigorated.

In September 1939, war was declared against Nazi Germany and once more, the Association's business was interrupted with its functions largely in abeyance. In 1942 there was an ad hoc meeting based on sundry war topics and this year saw the introduction of the Moynihan Medal. Shortly after this, muscle relaxants were first used, much to the relief of both anaesthetists and abdominal surgeons! Nineteen forty-four saw the first Association report on the education and training of surgeons and, as D-Day approached, opening a third front in the war, the blessing of mass-produced penicillin became available. In the final war year, there was an extensive meeting held concerning the post-war training of surgeons and provision of surgical services. At this time, the Bilroth II gastrectomy was introduced for the management of chronic peptic ulcers.

The 25-year period 1945 to 1970, saw some fundamental new concepts and techniques brought in. With a post-war change of government, the publication of the controversial novel, the Citadel, by AJ Cronin and the Beveridge Report recommending widespread social reform, the NHS was introduced in 1948, spearheaded by Aneurin Bevan. The Medical Act of 1950 introduced the pre-registration house officer year and some adjustments to the GMC's disciplinary procedures. The next year the Association established a £100 Moynihan Prize (worth £3,200 in today's money). This was to be awarded for the best paper written on a new research project. The first resection and replacement of an abdominal aortic aneurysm, using an aortic homograft, was performed by Dubost in 1951, with Cooley and DeBakey following suit several months later. In the year of Her Majesty's coronation in 1953, the Association brought in the award of Associate Fellowships to some senior trainees. Over the rest of that decade, cardiopulmonary bypass was developed.

In the second half of the decade 1950 to 1960, there were some exciting developments which advanced surgical practice. Organ transplantation, prosthetic hip replacement and the introduction of the Hopkins rod lens system. The latter received far less adulation than the other two innovative procedures. It was at this time, 1957/8, that the Association's meetings stopped including Fellows' visits to operating theatres. In 1966, the Moynihan Fellowship (of £1,000), originally brought in during 1937, was resurrected. During the late 1960s, deliberations of the Joint Committee for Higher Surgical Training commenced. It was at this time that Christiaan Barnard performed the world's first cardiac transplantation on Louis Washkansky. Between 1968 and 1970, duodenoscopy and ERCP entered clinical practice, so advancing and assisting biliary surgery.

In the first year of the next decade, it was decided that any consultant surgeon was eligible for a Fellowship of the Association. As it was the 50th anniversary of ASGBI, a concise history of the Association was produced by Harold Edwards and Mary Morris. Between 1970 and 2020 surgical practice was significantly impacted with many directives and political reforms, influencing training, education, career pathways and examinations. These had to be absorbed and implemented by our fellows.

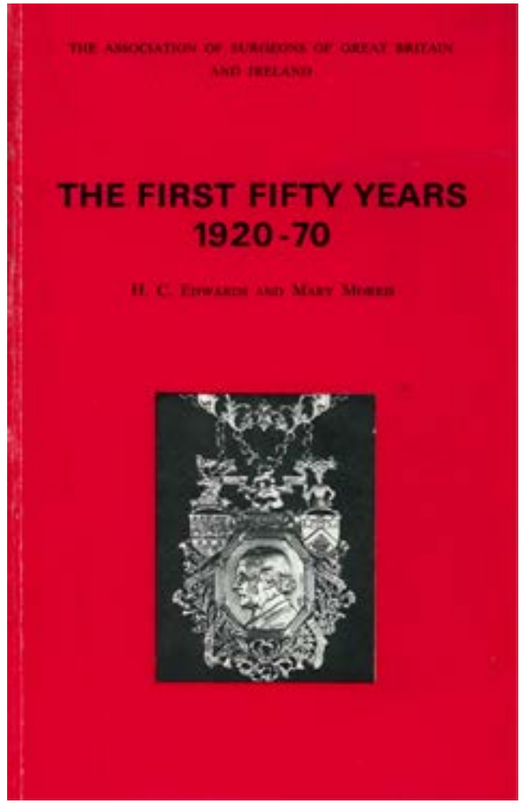

Figure 7: The Association's 'First 50 Years', written by Harold Edwards and Mary Morris

Godfrey Hounsfield's first CT scanner came into being in 1972 and became more generally used later in the 1970s. In 1976, a most important group and an ally of the Association was born- the Association of Surgeons in Training. Many of this group's presidents over time achieved significant roles in surgical practice, government and management. Members of ASiT were granted affiliate status in the Association.

Figure 8: Past-presidents of ASiT, 2016, many of whom achieved much for ASGBI

In 1979, a BJS travelling Fellowship offered new opportunities to fellows and two years on, ASGBI introduced a prize of £300 for the best audio-visual presentation at meetings. In the Summer of 1981, MRI scanning was introduced at the Aberdeen Royal Infirmary. The discovery of H. Pylori, by Marshal and Warren in 1982, brought about the demise of surgery for peptic ulcer. During the mid-eighties, laparoscopic surgery rapidly entered the general surgeon's armamentarium, reducing reduced scar length, pain and hospital stay and, despite sometimes increasing operating time, it proved very much to the advantage of our patients. As the decade of the nineties dawned, less invasive endovascular techniques, suitable for many major vascular interventions, encouraged beneficial co-operation of surgeons and radiologists, with again, less trauma to our patients. In 1992, the Association created an Associate Fellowship for all non-career grade surgeons - apposite in view of the critical contribution made by these surgeons in the NHS. That very year, the first robotic surgical procedure made its mark in minimal access surgery and in 1997, the da Vinci robotic platform was first in Belgium, to carry out a cholecystectomy.

The nineties heralded the introduction of the Calman (Chief Medical Officer, Sir Kenneth Calman) reforms, meeting the need to be compliant with EU directives, which required mutual recognition of completion of training. These reforms witnessed the introduction of the Specialist Registrar grade. Subsequently, the Intercollegiate Speciality Boards were sequentially introduced, speciality by speciality (with ASGBI providing representatives to the General Surgery Board). These Boards presided over the speciality exit exams, and came to be governed by the Joint Committee for Intercollegiate Exams. In 1995, the Speciality Training Authority defined an end-point to training, leading to the award of a Certificate of Completion of Speciality Training. Many fellows will recall the annual RITA assessments run by the various Deaneries and supported by representatives from the Speciality Advisory Committees. There were also changes to examinations. The old-style FRCS had run for 160 years with an unimpressively low pass rate. Then in 1997, a new MRCS replaced the FRCS. The following year the Association published its own valuable internet site (http:/www.asgbi.org.uk)

In the year before the Millennium, one of ASGBI's Presidents, David Watkins, produced an interesting histogram, showing the distribution of the numbers of Consultant General Surgeons within hospitals which served a catchment population of between 150,000 to 350,000 patients per hospital.

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population of between 150,000 to 350,000 patients per hospital. Although there was a broad range of numbers, the majority of District General Hospitals had 4-6 surgeons. Now, over 20 years later, the numbers have significantly expanded. The survey should be repeated!

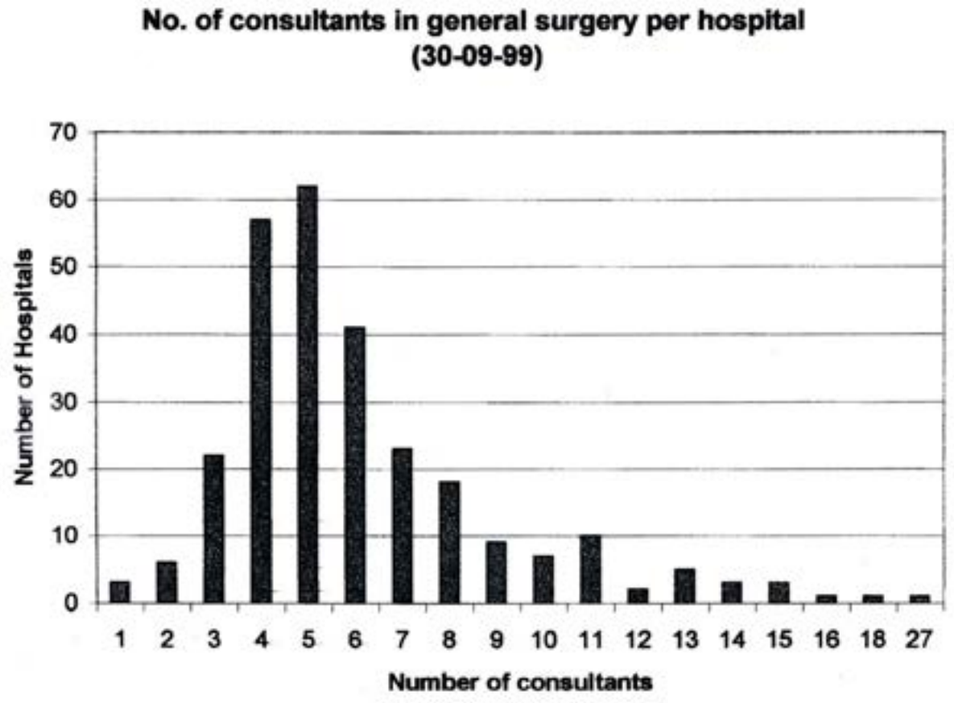

Fig. 9 Distribution of consultant surgeon numbers in District General Hopsitals in 1999 (Courtesy of David Watkins)

By the Millennium, the da Vinci robotic systems had become established in the UK. Significantly, over the first decade of the new century, there was a disturbing increase of antibiotic resistant bacteria.

In 2002, the Association established the Education and Training Board. This proved timely, since between 2004 and the end of that decade, many modifications in training and examinations had rolled out. At length, in that year of 2004, there evolved an intercollegiate MRCS and nine (expanding to 10 in 2012) Intercollegiate Speciality Board controlled examinations, leading to the granting of an FRCS, an integral part of the award of the Certificate of Completion of Training. The following year and for the next three years, the Post-graduate Medical Education and Training Board (PMETB) replaced the older Specialist Training Authority and the Modernising Medical Careers (MMC) scheme came about, introduced by CMO Sir Liam Donaldson. This was a major shake-up to the way postgraduate medical training was conducted in the UK. The introduction of a 2-year Foundation Programme followed by specialty training programmes, marked the start of a new era in evaluation and assessment in postgraduate medical education. In 2007, the Medical Training Application Service (MTAS) was brought in, consisting of an on-line job-application service for junior surgical staff. For many reasons, the system proved unworkable and was scrapped that same year, costing the taxpayer around £6.3 million.

Through these times to the present day, the Joint Committee for Surgical Training (JCST), the advisory group to the four Royal Colleges, has worked closely with its constituent bodies; the

Specialist Advisory Committees, the Core Surgical Training Advisory Committee, the Training Interface Groups, the Intercollegiate Speciality Curriculum Programme and with the Surgical Speciality Associations and the Statutory Education Bodies (Health Education England, NHS Education Scotland, Health Education and Improvement Wales and the Northern Ireland Medical and Dental Training Agency) and the Medical and Dental Training Authority. The JCST sets the requirements for all aspects of surgical training, through its GMC-approved curricula and by being the only body which recommends trainees to the GMC for Specialist Registration. Its sister committees, the Intercollegiate Committee for Basic Surgical Examinations (ICBSE) and the Joint Committee for Intercollegiate Examinations (JCIE) set and run the UK's surgical examinations.

Between 2009 and 2010, the European Working Time Directive was introduced, with clear advantages and yet challenges for some surgical trainees. Also, the GMC took over the Function of the PMETB. During these periods of regulatory change, running on to 2012, major trauma centres were introduced into the UK.

So, the Association now continues to act as a forum and hub for the spokes of General Surgery, whose constituent groups and the dates of their inception, are shown in the table below:

- **British Transplantation Society - 1972**
- **Association of Surgeons in Training - 1976 (Collaborate)**
- **British Association of Endocrine/Thyroid Surgeons - 1979**
- **Association of Coloproctology - 1985**
- **Association of Laparoscopic Surgeons - 1994**
- **Association of Upper G/I Surgery - 1995**
- **Society of Academic and Research Surgery - 1996**
- **The British Hernia Society - 2007**
- **Association of Breast Surgery (ex-BASO) - 2010**
- **UEMS Mono-specialist Committee in General Surgery**

Fig. 10 The sub divisions of General Surgery

The Covid-19 pandemic necessitated rapid responses in medicine and surgery. The poster below encouraged the evolution of cohesive teamwork in the surgical workforce and, created in the midst of this disruptive pandemic, reminded all surgeons of their new challenges and encouraged appropriate objectives, endorsed by the Royal Colleges, the Association and other bodies.

Fig. 11 Pulling through the pandemic together

The Association's relationship and roles with the Royal Colleges remains important. The four Colleges are advisory to the Department of Health and the General Medical Council. Their principal functions are related to training, examinations, surgical standards, quality assurance and surgical-political issues. The Colleges, geographically placed, work for all surgical specialities. ASGBI has a representative on the Council of the English College and the Association has General Surgery representatives on the sub-committees of the JCST, JCIE and the ICBSE. ASGBI is one of the ten specialty associations, which together, comprise the Federation of the Surgical Speciality Associations (FSSA). The Surgical Forum comprises the FSSA, the four College Presidents, Vice Presidents and Chief Executive Officers, along with the Chairs of the three intercollegiate committees (JCST, JCIE and ICBSE). The Colleges and ASGBI have crucial roles in surgical education and in the production of best practice guidelines (with the assistance of NICE).

So, near this centenary year, we have to consider the professional and personal benefits accrued by the Association for its fellows. Of note, the Chair of the General Surgery SAC is a member of ASGBI Council and the Chair of ASGBI's Education and Training Committee sits on the General Surgery SAC. The Association is the forum for both regional and speciality representation within the various arms of General Surgery in the UK and Ireland. The benefits are largely educational, rolling out conferences, a dedicated website, surveys, guidelines and awards. Various themed meetings, such as the 'Surgical Week', emergency surgery, private practice and hernia surgery, are just a few of many topics that have been addressed. To my mind, one of the significant advances is the way in which the Association tackles the problems and challenges that face ALL surgeons in their specialist practices, such as obesity, aged patients, trauma, training, peri-operative care, global and military surgery, medical-legal issues and even surgical history! Other achievements and advantages, of which this article can barely cover, include ASGBI's extant charity, the Surgical Foundation, supporting surgical training in sub-Saharan Africa and also, the opportunities offered and taken by the various fellowships and grants that have emerged over time.

What of the next hundred years? At present our Council will have discussed a strategic plan for the next decade or so. It will be dealing with a virtual world and opportunities to further great advances in robotic work, Artificial Intelligence (AI) and, also the immense challenge of an expanding pool of elderly and co-morbid patients, often emergency-admitted. With a mounting set of patients now awaiting elective surgery, resources are undoubtedly quite inadequate to meet these needs at present.

So, there are financial stringencies, limitations on study leave budgets for trainees, some 'splintering' of the craft with surgeons attending their own speciality meetings and the continuing need to address diversity issues.

We should leave the history and wind up with words from our President, Neil Welch:

'ASGBI is focussed on the core of general surgery that is common to all our sub-specialities [sic - special interest groups]. This includes the emergency general surgical take where all of us need to keep up to date with knowledge from all sub-specialities and not just our own. We also act as an umbrella for all the subspecialties so we can speak on issues that affect us all with a larger voice. This may be in our relationship with other specialities such as gynaecology, anaesthesia, peri-operative care; professional issues around COVID, prioritisation of waiting lists, burnout, discrimination & inclusivity, and manpower. With our developing committee structures, we want to give a wider voice to our members to influence ASGBI policy internally, and via ASGBI, reach out to influence Royal Colleges, and the wider NHS. Next year we fervently hope to have a face-to-face meeting in Liverpool again. Virtual meetings are great from an educational aspect, but they do lack the fellowship and networking of a live meeting which is highly valued. However, we will maintain our online program of evening webinars which have proved such a success with our members. ASGBI has just started its second century, and I have no doubt that we will continue to evolve to the benefit of our members - the only certainty is change!'

Finally, we should remind ourselves of the Association's motto, 'Omnes ab Omnibus Discamus' ('All Things are Learnt from Everybody') created around 20 years ago, by the late Neil Orr (my predecessor as archivist to the Association) and also that the original objectives of ASGBI were that we should, 'advance the science and art of surgery and promote intercourse and friendship amongst surgeons of the United Kingdom' (and Ireland). Thus, we must pose the question, have we in the last 101 years achieved our objectives? I feel that the answer has to be an overwhelming 'yes'.

My thanks to Gareth Griffiths and President Neil Welch for their help and guidance with the production of this article.

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Moynihan Academy: An Introduction

Miss Elizabeth McLennan, Education & Training Lead, Miss Hannah Boyd-Carson, Research & Audit Lead, Miss Elizabeth Vaughan, President and Mr Alan Askari, Past President on behalf of the ASGBI Moynihan Academy Executive Council.

Hello! We are the newly established, education and training focussed, branch of the ASGBI and we thought it was about time to give an introduction on who we are, what our aims are and how we plan to work for all our surgical colleagues.

The Association of Surgeons of Great Britain and Ireland was founded by a group of leading surgeons with the guidance from our namesake, Berkeley Moynihan, over 100 years ago. He explained his inspiration in a letter to George Gask, years after the formation of the association. Moynihan wrote he was struck by the lack of adhesions amongst members of his profession and witnessed surgeons across different cities not working cohesively or collaboratively. His desire to change this status quo was the spark for the ASGBI and, after keeping the lamp burning for his idea during World War One, the ASGBI was founded in 1920. The founding objectives of the Association were "the advancement of the science and art of surgery and the promotion of friendship amongst surgeons" and these have not changed.

Fast forward a century later, what is the Moynihan Academy's role in the modern iteration of this vision? The Academy aims to further surgical education for everyone at all levels, from medical students to post Certificate of Completion of Training (CCT) – which, I'm sure many will agree, builds on the ASGBI's proud history and determined advances. In line with Moynihan's original dreams of promoting friendship amongst surgeons, we provide support and a community for our surgical colleagues at all levels, and we will give them an inclusive forum to work and learn together. The Academy's Executive Council is a prime example of this inclusivity, embracing members from all different backgrounds, genders, ethnicities, and levels of training. The end result is a collaborative, passionate and determined Academy that sees students working alongside near CCT trainees and experienced SAS Surgeons from excitingly varied backgrounds, each contributing to the mosaic of experience, knowledge and vibrancy that is the ASGBI. "One size fits all" progression and training rarely gets the most from a work force and, as a group who have gained useful experience in a wide variety of jobs and paths, we hope to represent colleagues from all backgrounds in whatever job they find themselves doing. The Moynihan Academy's more personal aim is to support, represent and encourage awareness of the fresh-faced, rapidly growing area of Emergency General Surgery (EGS) which often interlinks quite closely with the new General Surgery Trauma subspecialty. As surgery becomes progressively more sub-specialised, we will need a branch which retains the overview of emergency pathologies to ground general surgical practice to it's roots. Therefore, we will be focussing on EGS and trauma in our events and training opportunities and hopefully be plugging the gap of representation on the field.

That's a lot on our aims, when will we be putting our money where our mouth is? Right now! We have been working behind the scenes on a podcast on all things surgery, we are helping ASGBI with an online program aimed at middle grade surgical trainees, there will be The Coffee Room webinar coming your way soon and we hope to see many of you at our collaborative EGS Day in December which is the first educational day run jointly by Moynihan Academy, ASiT, Roux Group and Duke's Club (the biggest General Surgery training representative groups in the UK). While we're working on these events we are also here to represent, and we welcome ideas and input from our membership. We hope that together we can build on our history and make the next 100 years even more excellent, collaborative and diverse.

So, join us in this exciting new chapter of the ASGBI!

Twitter: @ASGBI_MA
Web: https://moynihanacademy.org.uk/

A trainee's thoughts on a potential career in Trauma Surgery

Cara S. Swain, Surgical registar, Severn & Defence deaneries
Trauma Lead of ASGBI Moynihan Academy

Higher specialty trainees are now enrolling or transferring onto the updated Intercollegiate Surgical Curriculum Programme (ISCP) General Surgery curriculum[1], which features Trauma Surgery as a declared skill set (Figure 1).

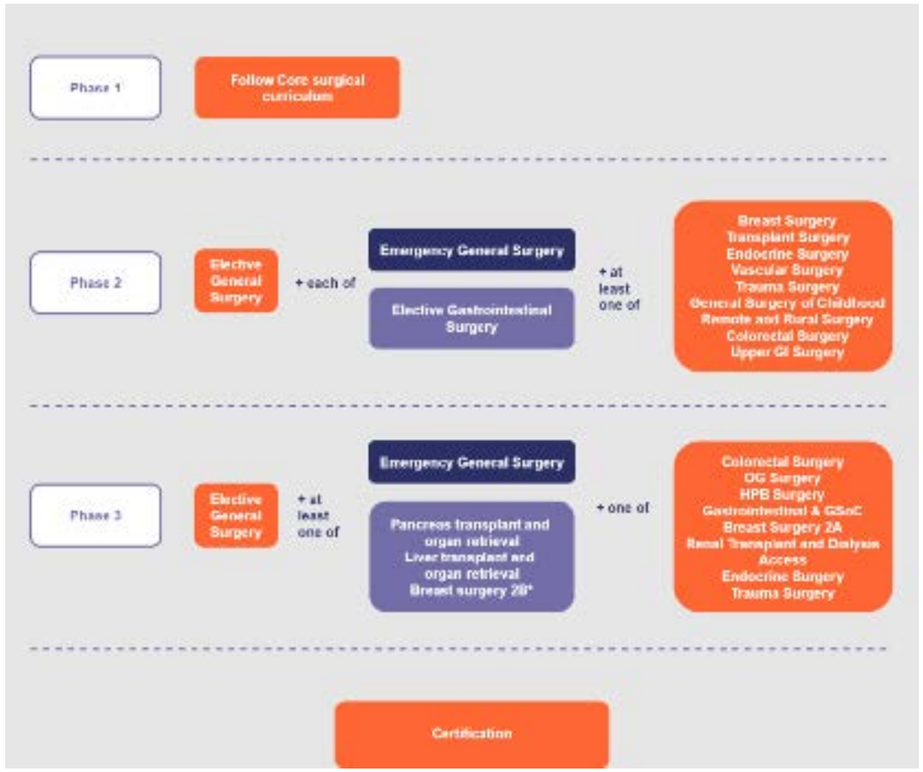

Figure 1: from ISCP General Surgery Curriculum
https://www.iscp.ac.uk/media/1103/general-surgery-curriculum-aug-2021-approved-oct-20v3.pdf

Trauma care has evolved; there is increased emphasis on emergency general surgical care, and major trauma systems have been established, meaning training has had to adapt to meet demands. Previously, few surgeons were noted to be trained to manage major haemorrhage regardless of anatomical location[2]. In 2017, the Joint Committee on Surgical Training (JCST) and General Medical Council (GMC) approved a syllabus for a training interface group (TIG) trauma fellowship. Within the next few years, trainees will begin obtaining a Certificate of Completion of Training (CCT) as Emergency General Surgeons with a sub-specialty interest in Trauma Surgery. But is there really a requirement for this sub-specialty in the UK?

The Royal College of Surgeons of England states that major trauma systems are of paramount importance due to serious injury

accounting for the greatest number of UK deaths in children and adults under 40[3]. Overall, there is a relatively low incidence of penetrating trauma in the UK (estimated 3.1% of adult and 10% of paediatric trauma[4]), but this incidence varies significantly by location, for example 21% of cases in London versus just 7.3% in south-west England[4]. Knife crime in England and Wales is increasing with the Office for National Statistics (ONS) reporting a 28% increase in homicides involving sharp weapons[5]. Although firearms offences increased by 27% over a 5-year period up to 2019, numbers of fatalities are low , and mass shooting events like that experienced in Plymouth this year, where five people and the perpetrator lost their lives, are mercifully rare.

Due to higher crime rates in urban areas, it could be assumed that trauma surgeons will need to work at major inner city trauma centres dealing with penetrating injuries precipitated by knife attacks. But what does this mean for those of who don't aspire to work and live in these locations? Firstly, it is important to remember that trauma is not all about penetrating injuries – in fact, severe life-threatening injuries are mostly caused by blunt mechanisms with falls and road traffic collisions forming the bulk of trauma casualties in the UK. Secondly, these types of trauma can occur just as readily in non-urbanised areas, thus there is a real need for well-trained trauma surgeons outside of city hospitals. Finally, and perhaps most importantly, the ability to deal with trauma situations is an integral part of being a General Surgeon; localised expertise not only reduces pressure on the major trauma centres, but also ensures that patients receive high-quality trauma care at a hospital near their home.

Currently, exposure to general surgical trauma during training is variable, largely because trauma is highly unpredictable; trainees are involved in an average of just three trauma laparotomies per year[8]. Incidence, injury patterns and patient demographics vary and there is no 'standard' management plan. Consultants with a specialist interest in trauma surgery must be able to assess and manage the multiply injured patient with blunt and penetrating injuries of the thorax, abdomen, soft tissues and skeleton, as well as perform the initial management of head and neck injuries. Technical skills required include median sternotomy, thoracotomy, trauma laparotomy, vascular control of major vessels, surgical airway and fasciotomies. To achieve this, trainees will need to liaise with their Training Programme Directors (TPDs) to rotate through high volume centres, gain experience with other specialties, and perhaps negotiate moving between deaneries, in addition to seeking trauma-specific fellowships to meet the prescribed competencies.

For some trainees, perhaps those of us who avidly watched Elizabeth Corday and Peter Benton in ER during the late 1990s (or re-watched it when they should have been revising for exams), this is an exciting prospect. However, it is important to realise that the trauma surgeons of the UK are not the same as those in the United States, where trauma surgeons are typically involved as part of the Emergency Department resuscitation team. Following general surgery residency, they complete a trauma surgery fellowship which typically includes training within surgical critical care. In the UK, consultants who are currently working as trauma surgeons typically have a background within vascular surgery and/or military experience and will have undertaken fellowships abroad to develop or enhance their trauma skills while maintaining an elective subspecialty practice. Currently, there is no FRCS outcome for Trauma Surgery, so are trainees still expected to CCT in a 'traditional' general surgical sub-specialty? More importantly, what will a UK Emergency General and Trauma Surgeon job plan look like? Do/will those jobs exist outside of the M25?

Acute specialties have a high burnout risk, with surgeons having a significantly higher risk compared to the general population. Factors independently associated with burnout include: younger age, having children, number of nights on-call, conflicts between work and home, as well as increasing new/important amounts of information relevant to the specialty and increasing patient expectations[9]. The unpredictable, demanding, continually evolving nature of trauma surgery within the UK certainly will tick some of those boxes. Trainees across many surgical specialties are concerned about operative numbers due to lack of exposure, but how difficult will it be to achieve Level 4 PBAs (Procedure-Based Assessments) in rare events such as resuscitative thoracotomy? Of course, trauma surgery is not just about knowing the contents of Top Knife cover-to-cover and operating. Yes, trauma surgeons will need an arsenal of diverse surgical skills, but also a wide range of non-technical skills – leadership, situational awareness, rapid decision-making, communication skills to work with a large multidisciplinary team and liaise with patients, relatives, and wider agencies.

Any career in surgery is not for the faint-hearted. However, there are issues that indicate that training as a trauma surgeon may be a physical, mental, and emotional challenge, certainly not one which would suit every trainee (Figure 2), and despite the curriculum formalising the pathway to consultancy, there are still several queries to be navigated on route, and the destination (both professionally and geographically) remains unclear.

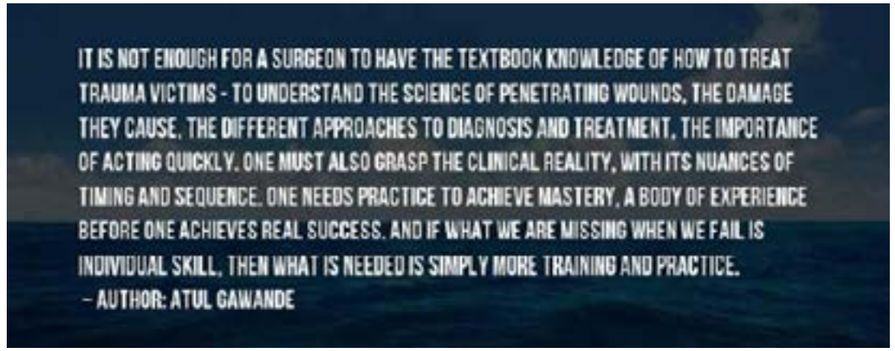

Figure 2: Quote from Atul Gawande
Free access online.

That being said, for me personally, it is a really exciting time to be a trainee with an interest in the rapidly developing and exciting field of trauma surgery. The Association of Surgeons in Great Britain & Ireland (ASGBI) has taken bold steps in supporting this development. The Moynihan Academy, ASGBI's trainee and SAS surgeon group is focused heavily on the topics of Trauma and Emergency General Surgery, further supporting current and future trainees in taking up an increasingly important sub-specialty. Working with the Moynihan Academy to deliver training and education, collaborative work and audit has been a great pleasure and I hope that even more trainees will join in its various activities in helping shape the future of trauma surgery training in the UK and Ireland.

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Surgery in the post-pandemic NHS
Comments on the Lancet - LSE Report

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The COVID-19 pandemic is a global catastrophe, unprecedented in the modern era, which has costed countless lives and devastated livelihoods. While we are still counting our losses and realizing the repercussions of this crisis to our society and to the future generations; there is a sad truth we have to face: the pandemic tested our National Health Service (NHS) to its very limits. Indeed, the UK has recorded one of the highest death rates associated with COVID-19 in the word, whether measured as deaths that are directly attributable to COVID-19 or by excess mortality.

But amid the crisis there is a unique opportunity: a chance to reflect on how we want to change; how we should armor our NHS to be better equipped to face the challenges that lie ahead. History has shown that this country has great strength when it comes to capitalizing on these opportunities. The very birth of the NHS in the aftermath of World War II is the perfect example for this. The COVID-19 pandemic has brought our NHS into focus as never before, and revealed the underlying challenges it faces. While the immediate focus is on the pandemic, now is the time to take stock and consider what needs to be done to support and strengthen our NHS to better meet the populations needs in the years to come.

In 2018, to mark the 70th anniversary of the NHS, The Lancet and the London School of Economics (LSE) established a joint commission co-chaired by Professor Elias Mossialos and Professor Allistair Mcguire to independently evaluate the NHS and its role in health in the UK. 3+ years in the making, the work of the commission coincided with the pandemic outbreak. This provided a great opportunity to combine input from commissioners across England, Scotland, Wales, Northern Ireland, 100+ key NHS stakeholders (including Royal Colleges, patient organisations and public health institutes etc) in an in-depth analysis of the priorities for the future of the NHS and how these were affected by the pandemic. The groundbreaking report of the commission, published in May 2021, provided a set of comprehensive recommendations aiming to ensure resilience of the service to further major threats to health and long-term advancement to meet population needs[1,2].

We believe that the work done by the Lancet-LSE commission is highly relevant not only to policy makers, but also to all health and care providers and the wider public as well. The implications of the commission's findings on the different fields of healthcare, need to be realized and highlighted by the relevant scientific societies if we are to collectively take meaningful action. In the present article, we attempt to capture the implications of the commission's findings and recommendations for the field of surgery and to foresee what the future holds for surgical practice in the post-pandemic NHS. Below we extract and summarize the most relevant lessons learnt from the work of the commission:

1. Tackling Inequalities and Poor Health outcomes

Despite the undeniable success of the NHS in providing universal services free at the point of delivery, the key findings of the report included poor health outomes in certain diseases, a rising income inequality in the UK, and a gradient of life expectancy with economic deprivation both regionally and nationally. Even before the pandemic, outcomes in most cancers and maternity care were horizontally poor when compared to the G7 and EU15 countries[1]. Health outcomes for Black, Asian and Ethnic Minority (BAME) groups have been historically worse compared to outcomes for people of White ethnicity. The COVID-19 pandemic exacerbated the pre-existing unmet need for surgical services. To free up capacity and protect patients against potential inhospital transmission of SARS-CoV-2, many elective procedures were postponed and waiting times were doubled creating an unprecedented backlog[1]. This disproportionally affected the poor and the vulnerable. Making surgery accessible to all members of the society and improving outcomes is therefore the top priority in the post-pandemic NHS.

2. Developing Efficient and Sustainable Surgical Services

Another major finding of the report was an observed bias resulting in systematic prioritization of treatment over prevention of disease and disability in our healthcare system[1]. The authors concluded that this bias has contributed to a decrease in the national public health capacity leaving the UK vulnerable to health crises, such as the

COVID-19 pandemic[1]. Surgery is most-commonly realized as a secondary care, if not a tertiary care service and thus lacking the preventive capacity that is usually attributed to the primary care sector. But if we are to develop a sustainable service our focus needs to shift. Surgery in the post-pandemic NHS, is likely to increasingly focus on improving quality of life and operating on people with the aim of prevention[3]. In certain areas of surgery, this approach has already been adopted (i.e. pre-emptive living donor renal transplantation before the onset of hemodialysis) and has resulted in advanced outcomes. Indeed, the UK is considered a global leader in outcomes for Chronic Kidney Disease and Kidney Transplantation[1]. Introducing this major shift in focus in clinical practice over the next decade is going to be challenging. To facilitate this, the commission makes a recommendation on how we can reform our hospital re-imbursement system and introduce bundled payments for care episodes for specific diagnoses and procedure[1].

3. Putting Emphasis on Research, Innovation and New Technologies

One of the traditional strengths of our health and care system that the report stresses is the emphasis on Research, Innovation and New Technologies and how these are integrated in clinical practice through the work of National Institute for Health and Care Excellence, the Scottish Medicines Consortium, and the All Wales Medicines Strategy Group[1]. Indeed, even during the COVID-19 pandemic, research efforts played a crucial role, providing most valuable guidance in clinicians throughout the UK (i.e recovery trial) and ultimately enabling our society to turn the corner. Technology is expected to revolutionize surgery in the post-pandemic NHS. Imaging technologies (including Virtual Reality and Augmented Reality), Minimally Invasive Surgery technologies, Artificial Intelligence and Big Data, Genomics, 3D printing and bio-artificial organs are expected to radically change the landscape in the years to come[3]. The report calls for a stronger systematic evidence appraisal for these technologies through the relevant institutions. These assessments should systematically review the evidence basis for these technologies, their cost-effectiveness and their environmental impact[1]. There is a need to invest in green, cost-effective technologies for the progress to be sustainable[1]. Disinvestment in technologies that are harmful to the environment, are not -cost effective and are lack a strong evidence basis is also a mandate[1].

4. Workforce Planning and Surgical Training.

One of the findings of the report that the Commission highlighted were the large staffing shortfalls in our health and care system[1]. Surgery is no exception. Advanced targeted recruitment of surgical workforce in the years to come will be necessary in order to maintain the surgical services sustainability and meet the population needs. Apart from the greater number of surgeons, a different skill mix will be required. Surgical training is necessary to change in order to meet this requirement. Surgeons in the future will have multiple roles and identities: clinical surgeons, academic surgeons, scientists, entrepreneurs, educators, innovators, managers and leaders[3]. Thus, competency based surgical training is necessary to equip the trainees with the necessary experience, exposure in different technologies, knowledge and credentials to succeed in these roles. This should be done in a humane, ethical way taking into account the wellbeing and morale of the professionals involved.

5.Developing an integrated learning health system through patient and public engagement.

Last but not least, the report highlighted the need for greater integration across the different domains of the health and care system (NHS, social care, public health) and called for greater patient and public engagement[1]. Developing an approach in designing surgical services where the whole journey of the patient and the different contributing factors are taken into consideration is key in order to improve outcomes. Artificial intelligence technologies nowdays provide us with an opportunity to improve the quality of these services. The patients' input is necessary to facilitate this. The work of the commission clearly foresees that in the post-pandemic NHS, surgeons will be expected to work with the patients to deliver personalized and effective surgical care[1].

In Conclusion, the Lancet-LSE commission report highlights a set of challenges for the future of the NHS after the COVID-19 pandemic and a set of comprehensive policy recommendation on how to approach them. As illustrated above these challenges are highly relevant to the surgical profession. It is now our collective duty to prepare, collaborate and work hard to stand up against these challenges for the benefit of our patients and our society.

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A comprehensive exam revision guide for section 1 of the FRCS (General Surgery)

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South Tyneside & Sunderland Hospitals
On Behalf of Higher FRCS

The FRCS is probably one of the most difficult exams you will do. Part of the challenge lies in the stage of life you are at and juggling family, friends, work and need to operate. It's really important that all of those around you are onboard with what you are trying to achieve and understand the pressures on you to attain those objectives.

General Advice

A good way to approach this is by starting early typically 3-6 months before the exam and really do your best. Don't use an attempt as a trial because you only have 4 attempts, and they go really quickly.

Another great way of maximising your time is by creating a thorough timetable factoring in your personal and work time aswell, identifying dead time such as waiting for the computer to load or walking from one ward to another. I would also recommend getting a group together for moral support during the journey and have sessions where you discuss the questions that you're not quite sure on. The JCIE have some sample questions that are useful but dissimilar to the exam, so be mindful of that. You can access them at this link:

https://www.jcie.org.uk/Utils/DocumentGenerator.aspx?Type=CMS&docID=1fd94c07-5220-4ebb-bbc2-8de6c31e8492

Everyone revises slightly differently and so you have to have insight as to the best way that you work. In terms of revision we would certainly recommend you starting with an area that is familiar to you because psychologically it will help and motivate you during this period of study. Have a particular deadline for finishing the area that you know well and then move to more challenging areas that you're not familiar with, commonly transplant and skin.

You may have heard a lot of people talk about marginal gains when referencing the exam and this is very true. Often people will fail by 1 mark and that can be really gutting. A recount or reassessment of your paper usually doesn't lead anywhere and is expensive. Furthermore, the final positive outcome is that you void your attempt rather than have your marks changed which makes the process less than worthwhile unless you're on your last attempt. Make sure that when you create your timetable every area is covered on the syllabus, and this will maximise your chances for success.

Below I provide a comprehensive review of all the resources that I have identified that are useful for the exam and am happy to share them with you.

A guide to the written resources (Books)

There are 7 major books used by candidates for the FRCS. Five of these are focussed towards the UK exam and the other 2 are American based books for the ABSITE exam but do have valuable information for the FRCS. I have to remind everyone that no singular resource is perfect and there will always be areas in which they can improve and so with the books, in particular, that should be borne in mind when using them for revision.

There are a couple of other lesser known books and generally aren't used by most candidates although some may find it useful.

1) Molloy, R. G., In MacKay, G. J., In Roxburgh, C. S., & In Quinn, M. M. (2020). SBAs and EMIs for the general surgery FRCS. (Known as the Blue Book)

Potentially the most used book for the FRCS, it covers a good breadth and depth of knowledge required for the FRCS exam. The questions are challenging and do appear similar to the exam. The explanations are well thought out and have good diagrams too. The book comprises of SBAs (Single best answers) and EMIs (Extended matching items) as it was published a year before the switch to just Single Best Answers. Even so, the EMIs give valuable information and the book is the most reflective of the exam out of the current available books on the market.

2) Wilson, A., & Hildebrand, D. (2018). FRCS general surgery: 500 SBAs and EMIs. (Known as the Green Book)

The Green book got a bit of flack over the years for being a good book, but with errors. No book is going to be perfect but there is a second edition, and I would hope these corrections have been made. It also includes SBAs and EMIs. The questions in the book are quite challenging and start to give you a flavour of what the exam is really like. When doing the questions, it is very easy to miss the key words like 'likely' OR 'most appropriate' and this is why, in my opinion the book has great value. A lot of the exam is about technique and understanding the direction of the question and this book certainly helps with that.

3) Datta, P. K., & Selvasekar, C. R. (2016). FRCS (General Surgery) The Road to Success. Doctors Academy.

This book is more of a mini-textbook and is written in a question answer style. This allows for a good approach to the exam although may be more suitable for part 2. The big advantage of this book is that covers a wide area of topics including areas such as skin and gives a lot of basic knowledge which lays the foundation upon which to build a greater understanding of the subject material. It will almost certainly help from the part 2 perspective too.

4) Aroori, S., & Puneet, . (2011). MCQs for FRCS. London: Radcliffe Pub.

This is an older book and has quite a few questions in it. This is a good book to revise to towards the end of your revision process. This is because the explanations are quite brief and so the focus is on testing your ability to answer a completely new set of questions and asked in a slightly different way. It would work well with the website surgery online discussed below to assess your understanding of the syllabus.

5) Fernandes, R., & Royal College of Surgeons of England. (2019). FRCS general surgery: Section 1.

This book is nicely divided into specific areas which try to map on to the syllabus. It has a good approach and has a good bariatric section which is useful. It maybe more useful towards the end of revision or to plug any gaps in your knowledge rather than being the main focus for revision.

6) Fiser, S. M. (2009). The comprehensive ABSITE review. Richmond, Virginia: Hancock Surgical Consultants, LLC.

Although I don't have first-hand experience of this book it is considered to be an excellent revision tool for the FRCS. It is primarily aimed at the American audience and their ABSITE board exams but many candidates that I have come across have used this book as part of their revision

7) Behind The Knife ABSITE Podcast Companion. Published by Behind The Knife - The Surgery Podcast, 2020

Without doubt Behind the Knife podcasts are excellent and if the companion to the podcast is anything close to the actual podcasts, it will be amazing. This came out after I had passed my exam, but I have been told by people taking the exam recently that it is a very well-thought out book and is certainly useful. One of the areas to be aware of is that although the management and cancer workups are very similar between the UK and the USA, there are some small variations so always ensure that the info is corroborated with a UK source/guideline too.

There is a new book underway called Higher FRCS and attempts to map on to the syllabus. It has an extensive expert authorship and will also have some Robotics questions which is the first book to do so. It will only focus on the SBAs which is the new format for the section 1 exam.

Textbooks & Reading Material

The companion series books are excellent books and were traditionally viewed as the go to resource for FRCS revision. The role of these books has changed slightly and are mainly used for the part 2. It will definitely be helpful to read before part 1 to supplement knowledge and improve understanding but without using the online question banks, most have struggled to pass because the exam is a combination of

knowledge and technique. The question banks focus on that side along with knowledge which can then be consolidated with books such as the companion series.

The syllabus is one of the most fundamental documents you will read as part of your revision. This document gives you the framework of all the areas that could potentially be tested in the exam. From my own experience my program director used to tell me at every appraisal that I should look at the syllabus and read it but I never really did until the year of my exam. It is an extensive document that has over 130 topics and each of these topics are fair game, certainly for part one. This means that a question on skin is equally likely to come up compared to a question on colorectal diseases. I would highly encourage everyone to read and reread it, to get an overview for your revision. It can be accessed at the following site.

https://www.iscp.ac.uk/media/1103/general-surgery-curriculum-aug-2021-approved-oct-20v3.pdf

Other books that many of the candidates (including myself) read were the ATLS manual, the CCrISP manual and Top Knife.

Online revision resources

There are 2 starter courses and 5 major online resources for the FRCS section 1. We present a short review on each for your help and reference.

Starter courses

1) Doctors Academy

Doctors Academy are well known for their educational resources and offer a great 1 or 2 day course for the part 1 FRCS. The course covers a lot of subject matter which is a great way to really kickstart your revision. It also helps midway to clarify areas that you didn't know much about. They cover some technique and go through questions during the course too. This is a great resource for those who aren't quite sure about where to start or how. Places are usually limited so you should regularly look at the website.

https://www.doctorsacademy.org//frcs

2) Higher FRCS Starter Course

Higher FRCS starter course is another great starter course. The advantage is that it is tailored for any stage and goes through the process of application to the first few weeks of revision. It is delivered via zoom which makes it easy to access and there are plenty of dates and availability due to the online nature of the course. It runs for about 3 hours and covers cancer protocols, exam technique and uses a really nice interactive platform called mentimeter to allow audience participation. Its well worth attending, not too long and gives a valuable set of resources that could save you weeks in the initial period of revision. The organisers also send round a list of helpful resources and revision notes courtesy of Mr U Wale

https://www.eventbrite.co.uk/e/frcs-section-1-tips-and-techniques-tickets-158506554371

Online Resources

1) Efrcs

No list is complete without mentioning efrcs. It is probably the most used resource for the FRCS. It has a range of questions just shy of 1000 questions. They also have an additional set in their timed test section so don't miss out on them. The resource includes both extended matching and single best answer questions. It all helps in terms of revision. They also have questions on anatomy and physiology of which there can be a few questions in the exam about. The developers regularly update their questions and was seen in areas such as the change in polyp guidance in 2019/20. It is really well laid out in a simple format too. There are a few image based questions that will help prepare you for the exam too.

https://www.efrcs.com

2) Companion FRCS

A great set of questions of over 600. It really does begin to feel like the exam when doing these questions. Many of the questions are image based and the site has a timed test feature too. The layout and design is slick and clean with easy to navigate features. The questions are good and have the advantage of highlighting key words and why the other options are wrong which can be equally useful to hone in on the knowledge required for the exam. The descriptions often have good diagrams and clear explanations which all help. They have also added explanations to their timed tests which is a great bonus.

https://www.frcscompanion.com

3) Higher FRCS

The newest question bank released in September 2021, it has over 1000 single best answers. This makes it one of the largest dedicated SBA sites for the FRCS.

It focuses on guidelines from the UK and those generally followed by UK clinicians. It mainly focuses on clinically orientated scenarios and is divided into 9 main speciality areas. It is easy to use and is similar to exam in its style and depth of knowledge. It has an evolving image and protocol based question section which is being expanded on regularly. The site is very easy to use and focuses on the user experience during revision and serves as a useful adjunct to the other resources available.

https://www.higherfrcs.co.uk

4) On Examination

A massive resource that includes SBAs and EMQs. A range of types of questions and separated out into subject areas. Some of the questions may not be very similar to the exam but are useful to keep your mind thinking about the topics and areas of interest. One of the biggest advantages to OnExamination is the app which allows you to take the questions anywhere on the go. This means that all the dead timings like waiting for a coffee or walking along a corridor can be used to answer another question. The exam is all about marginal gains and OnExamination certainly helps with this side of revision. In addition some libraries purchase bulk licenses and so you can actually get a month or two for free via the local hospital library.

https://www.onexamination.com/products/frcs-general-surgery

5) Surgery Online

A good resource to test yourself on a brand new set of questions. There are about 400 SBA questions but they also have about 250 EMQs which all help for the exam. The questions are not divided into subjects which gives you a real 'test feel' to the site. A useful resource to revise from but most useful towards the end of the revision period.

https://www.surgeryonlinefrcs.com

Online resources to look out for!

1) FRCS guide

This is a resource that is due to come out this year or early 2022 and attempts to mimic the exam in its style. The exact number of questions will vary between 300-500 questions - definitely a useful addition to the ones listed above.

2) Grab the FRCS

This is a resource under construction and will focus on part 1 and part 2.

Online Community Resources

There are 2 Facebook pages related to the FRCS general surgery. These provide updates on features of their question banks and give helpful tips and tricks to give an added dimension to your revision.

https://www.facebook.com/HigherFRCS/

https://www.facebook.com/frcscompanion/

There are 3 FRCS related community groups which post useful information about the exam and experiences from candidates and well worth joining to keep up to date.

https://www.facebook.com/groups/4904996052860240/

https://www.facebook.com/groups/1171998452846874/

https://www.facebook.com/groups/1850665048498879/

Social Media

There are currently 3 major social media resources

Twitter

@HFrcs – This is the Twitter handle for the Higher FRCS question bank (www.higherfrcs.co.uk). This is an excellent resource and a new question is posted every fortnight, independent to its question bank. It generates some really stimulating discussion and advice from candidates who have recently passed also get posted. It has a real community feel to it and posts some nice snippets of information about relevant topics and guidelines. It currently has over 870 followers making it the largest dedicated FRCS Twitter account for the general surgery part 1 exam.

@frcscompanion – This is the Twitter handle for the FRCS Companion question bank (www.frcscompanion.com). The Twitter account provides regular updates about the website including new features and also sends messages of support to those taking the exam.

Instagram

h_frcs – This is the Instagram handle for the Higher FRCS question bank (www.higherfrcs.co.uk). There are some nice pictures of cancer flowcharts and how the site works too. There are also some nice snapshots of challenging questions to get you thinking about the exam too.

Online Presentations & YouTube

Higher FRCS has produced a really good presentation for the FRCS exam looking at parts 1 & 2. They talk about the exam and approach to it including some practical tips on how to start revising. It was used as part of the revision advice in the Emergency and Trauma Symposium run by the Moynihan Academy in December 2021. You can access it from the link below. There's also a welcome presentation to the website which has some useful tips too. The main other presentation about the FRCS is slightly older now but has some good advice on the approach to take with the exam and general tips that are worth considering over the course of your revision. This is also a personal account of someone who has recently passed the exam with some good top tips.

https://youtu.be/hfvraGIpVM8

https://youtu.be/5pcNVTJm4u8

https://youtu.be/b5Bq5f0YXhQ

There are also some nice generic general surgery presentations that may also be useful to watch but are not specific to the FRCS however begins to gear your mind towards SBAs and the exam format.

https://youtu.be/YriEhFA8iQQ

Podcasts

There are a range of Podcasts available to revise from and it can be quite overwhelming to begin with. The main sources for Podcasts are the ASGBI, Royal College of Surgeons and St Marks.

One of the best podcast series is the ABSITE review by Behind The Knife which gives an incredible overview of all the major subject areas in an hour. It's easy listening and fun, something I would recommend everyone revising for part 1 to do.

https://behindtheknife.org/podcast-series/absite/

Don't forget local and regional teaching days

The local and regional teaching days are designed to target deficiencies in knowledge and are very useful. It can be tricky when it clashes with clinical work but they are designed for you and some regions also have FRCS teaching days as part of the regional teaching. The ASGBI are recently looking into developing a nationwide teaching program that brings local hospital teaching to a global audience and is certainly something to look out for.

Each of these resources have their benefits and pitfalls. We would encourage you to use all of these resources to give you the maximum chances of success as they enhance your revision in slightly different ways and in different circumstances.

I really hope everyone passes.

Good luck!

Higher FRCS

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1. Fazio VW, et al. Reduction in adhesive small-bowel obstruction by Seprafilm adhesion barrier after intestinal resection. Dis Colon Rectum. 2006 Jan;49(1):1-11. doi: 10.1007/s10350-005-0268-5. PMID: 16320005.

Spotlight on Equality, Diversity and Inclusion

Introducing our Guest Editor Miss Nuha Yassin

Nuha Yassin is a Consultant Colorectal Surgeon and has been on the staff of the Royal Wolverhampton NHS Trust since September 2018. Her Clinical and Research interests are in Colorectal Cancer and Inflammatory Bowel disease.

She is the lead for Robotic Colorectal Surgery and the GI research lead at her Trust.

After qualifying from the University of Manchester in 2003, she trained in the Northwest, Yorkshire and West Midlands regions. Her postgraduate research experience was based at St Mark's Hospital in London where she obtained her PhD from Imperial College, London.

Nuha was appointed as the Director of Equality, Diversity and Inclusion at the ASGBI (2020).

She is an elected Council Member of The Royal College of Surgeons of England (2021).

She is passionate about all aspects of her work and personal life and truly believes that everyone has something amazing to contribute if given the chance.

Introduction

Miss Nuha Yassin, Director of Equality, Diversity and Inclusion, ASGBI

The publication of the Kennedy review in the spring of 2021 has sparked several discussions with regards to diversity and inclusion in surgery.

Professor Neil Mortensen, the President of the Royal College of Surgeons of England, and the team are to be congratulated for looking in the mirror and inviting Baroness Helena Kennedy to undertake the review into the RCSEng's leadership.

The ASGBI, the largest general surgical society, were invited to contribute to the Kennedy review. The personal testimonies from our members were extremely upsetting to hear/read. However, these findings are not specific to RCSEng, they are reflective of the wider surgical culture.

It is important to reflect on current and previous experiences in order to improve matters for the present and future generations. No one should feel that they don't belong. Diversity and inclusion ensure that surgery is attractive to people from all walks of life, sharing knowledge and advancing care for our patients. In order to truly to cater for the surgical workforce's needs, surgical societies and organisations have to be representative of the whole surgical workforce in all their beautiful diversities. A cultural change is required, where everyone is made to feel welcome and given the opportunity to contribute.

The ASGBI's Equality, Diversity and Inclusion (EDI) committee have responded to the publications of the Kennedy review and pledged to make some meaningful changes to benefit our members. We can only do this by welcoming and embracing everyone and learning from each other's diversity of backgrounds and experiences. The first step of learning isn't to sprint into action, it is in fact to listen and explore whilst building an action plan. A survey or our members was sent out in order to identify the different backgrounds as well as identify any areas of discrimination people may have encountered during their surgical career. We also surveyed our members with regards to their thoughts on the leadership of the society in order to be a representative and transparent society in all its processes and activities.

In this edition of the ASGBI Surgical Life, the focus is on EDI. We bring you a series of experiences, thoughts and wise words. It is everyone's duty to educate, support and encourage if they feel strong enough to do so. The aim of shining the spotlight was to invite people from different surgical and personal backgrounds. We wanted to listen, learn and collaborate. I am very grateful to all who agreed to contribute for their honest and helpful views. I hope that you find this an eye-opening, educational and interesting read.

My thoughts on EDI

Sue Blackwell
Patients and Public Involvement (PPI) Representative
ASGBI EDI committee

I will admit that I have been guilty of making assumptions about healthcare professionals based on their name or their accent. I expect if people are honest, so has everyone reading this. It is not something that I am proud of, but I do believe that we all need to stand up and admit when we are in the wrong. Equality and diversity is something that we all need to work on.

The surgeons of tomorrow need to be able to see people succeeding in their surgical careers that they can relate to, to give them the belief that surgery is a career for them, whoever they are.

However, it is also important that our surgeons and clinical teams reflect us as patients, and the communities that they look after. As patients, we trust you with our lives, or with the lives of our loved ones, and we tell you things that we wouldn't discuss with our closest friends. We need to be able to feel confident that we are not being judged for the way in which we live our lives, for our sexuality, our gender, our level of literacy, or the colour of our skin. Putting equality and diversity at the heart of ASGBI will not only ensure that surgeons are given the support and opportunities that they deserve, but it will also lead to better patient outcomes.

Some of the results of the ASGBI diversity survey are surprising, the numbers of surgeons declaring a disability are far below what is seen in the UK population. Disability has many aspects, I suspect that there are many more surgeons who do meet the legal definition but who do not consider themselves to be disabled, much as I don't. That ASGBI has twice as many members identifying as LGBTQ than the general population is both a positive and a negative, given that many people are still not able to be out in the workplace.

The Kennedy report, and the recent article in the RCS Bulletin on sexual assault in surgery shows that there is still a long way to go to change the culture in surgery. The results of ASGBI EDI survey give the Equality and Diversity Committee much to work on, slowly but surely, we will change the culture of surgery, and by doing so, improve patient outcomes.

ASGBI EDI and Leadership surveys

Following the creation of the Equality and Diversity Committee of ASGBI a survey was created using a modified Delphi process and emailed out to all 1300 ASGBI members to try and establish the diversity of those working in general surgery across the UK. Initially, 139 members responded to the emailed survey. The survey was also shared on the ASGBI Twitter account, this led to a further 62 responses, giving a total of 201 responses. With a 15.5% response rate, a question poses itself as to why the response rate was lower than the published average survey response rates for clinical/ academic surveys.

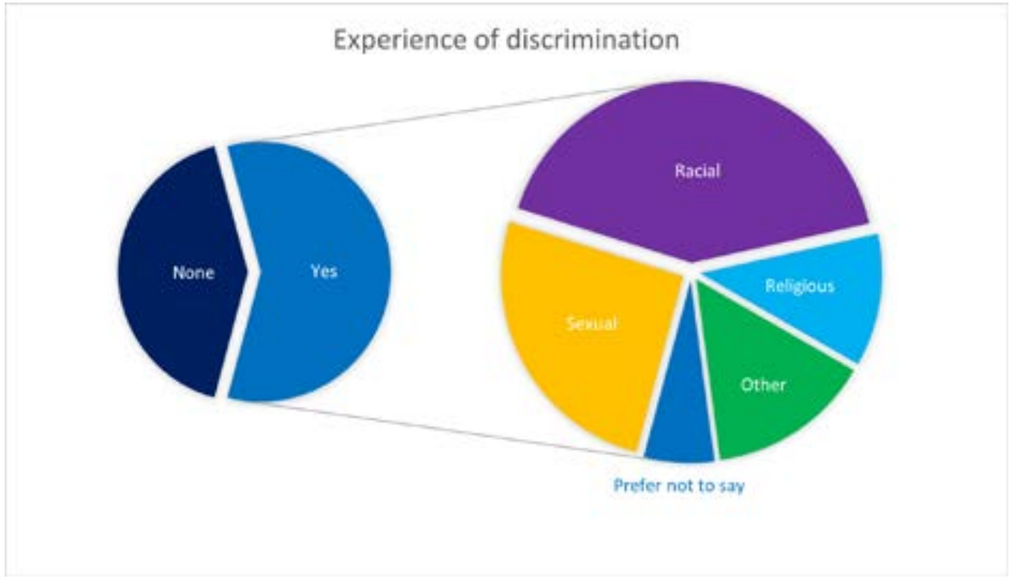
The survey comprised of a number of demographic questions covering age, gender, ethnicity, sexual orientation, disability, education and employment status, followed by two specific questions on experiences of discrimination and whether the respondents felt that they were under-represented in surgery. There was also a free text box for respondents to add anything they felt the survey had missed.

A separate survey was conducted to gauge the views of our membership on the leadership of the ASGBI and how they wished for the selection process to occur for the regional representatives, the executive teams, the vice president leading to the presidential role. A response rate of 7.4% was achieved, which in itself leads to further questions.

The leadership survey comprised of questions relating to the required experience for candidates to be eligible for the president-elect position, the process of selection of candidates as well as gender and diversity group balance. Similar questions were asked regarding the elections' process.

We are looking forward to sharing the full results of both EDI surveys with you during our upcoming events and would like to thank you all for your contributions. Below are some of the findings:

Fifty point 7 percent (50.7%) of respondents to the ASGBI EDI survey were born in the UK, with 49.3% born outside the UK, with 34 countries represented as can be see from the chart below.



Fifty-one-point two percent (51.2%) of respondents said that they had experienced discrimination during their surgical career. Most of the discriminatory experiences were due to racial discrimination, followed by sexual and religious discrimination.

It is important to identify, highlight and discuss these issues, so that we can help to change the culture, hammer out terrible behaviours and support our colleagues who may be repressed and suffering in silence. It is important to create a safe and inclusive atmosphere where everyone feel a sense of belonging and are made to feel welcome as a valued member of the surgical societies regardless of their background.

Under the spotlight:

Diversity in Colorectal Surgery – The ESCP Collaboration and EDI survey

Franco Marinello, Consultant Colorectal Surgeon, Vall d'Hebrón University Hospital, Barcelona, Spain

Twitter: @francomarinello

Gianluca Pellino. Associate Professor of Surgery, Universitá degli Studi della Campania "Luigi Vanvitelli", Napoli and Colorectal Unit Research Coordinator at Vall d'Hebrón University Hospital, Barcelona, Spain

Twitter: @GianlucaPellino

Collaborations between ESCP and ASGBI – Gianluca Pellino

In July 2021, the European Society of Coloproctology (ESCP) launched a campaign on Sustainable Surgery (https://www.escp.eu.com/news/2277-escp-goes-green), aimed at raising attention on a very important issue in surgery, which is the impact of surgical activities on the environment.

The Society and the Social Media Working Group (Yongbo An, Vittoria Bellato, Nagendra Dudi-Venkata, Cristián Gallardo, Zoe Garoufalia, Gloria Zaffaroni, and Richard Brady, chair of Communication Committee), which I was co-chairing with Miguel Cunha, worked hard to produce scientifically sound content and collecting contributions from opinion-leaders in the field of sustainability.

As part of the campaign, the ESCP designed the ECOS-Surgery (ESCP Capturing Opinions on Sustainable Surgery) survey, aimed to explore knowledge and attitudes towards sustainable surgery and opportunities to drive sustainability in coloproctology.

The survey was developed with participation of the ASGBI as well, in the person of Ms Cleo Kenington, who has been investigating in this field over the last years. The survey was finalised and disseminated on SoMe. The results of the survey were released during the Sustainable Surgery month and did demonstrate that most respondents had not received any guidance on how to improve sustainability of their practice. This would be crucial as more than half of respondents felt that lack of understanding across the profession was key barrier to improving sustainability in colorectal surgery. https://www.escp.eu.com/news/2303-surgery-guidelines-gap-only-1-in-4-surgeons-receive-guidance-on-sustainable-surgery This advocates for immediate actions to be taken by Societies like ESCP and ASGBI, hopefully in a harmonised collaboration – things are already moving in the heart of both societies. Results of the survey are now being collated into a manuscript, to be submitted for consideration to a scientific journal.

The Sustainable Surgery campaign produced much more content and interviews, part of which can be accessed on twitter using the hashtag #SustainableSurgery on the twitter page of ESCP (@escp_tweets and @YouESCP), on ESCP Instagram (@escp_insta) and linkedIn (https://www.linkedin.com/company/escp/) profile, and on ESCP website (https://www.escp.eu.com/

The EDI initiative – Francho Marinello

How the idea started.

I was invited to give a lecture on Diversity bias among colorectal surgeons at the last ESCP virtual meeting held last September. When I was preparing the presentation and reading on EDI, I realized the lack of evidence there was on these issues among colorectal surgeons. Also, there were no studies done in Europe. Therefore, and assuming bias in EDI is prevalent among us nowadays, I decided to perform a snapshot of the current situation through a bespoke survey.

It was divided to screen and inquire bias in gender, sexual orientation and race/religion of either consultant or registrars in colorectal surgery. After refining the survey with Gianluca (and perfected further with Drs. Gabriela Möslein and Eloy Espín-Basany) it was spread out through social media platforms and scientific societies including ESCP and ASGBI.

Results

The survey was available online for 6 weeks and a total of 306 responses from 70 countries around the globe were retrieved. The results were flabbergasting. Almost 40% of the respondents stated that they had personally experienced or witnessed first-hand situations of gender inequality in their current workplace. However, only 5% reported bias related to of sexual orientation, and 7.5% due to their race or religion. Regarding gender, the main inequalities were described as not achieving a promotion or appropriate professional advancement in barely half of the population of the survey, lack of opportunity to develop a particular surgical technique, and impact on income due to gender differences in almost a quarter of the women respondents. Also, some of them described that they felt they were not invited to present at conferences or attend congresses due to their gender. The examples given of discrimination and harassment included sexist jokes, pregnancy-related comments, homophobic comments, liberal use of offensive terms and disparaging comments and stereotypical jokes were commonly experienced.

Many respondents thought their work institution or employer did not guarantee respect in gender equality, sexual orientation, or race diversity, and the majority of them indicated their work institution or employer did not develop programs regarding respect in these topics. Besides, only 20% of the colorectal surgeons who are affiliated with Scientific Societies, stated that the scientific association they hold membership with had a program regarding respect in gender equality, sexual orientation, or race diversity.

From this survey we can prove that diversity bias exists in colorectal surgery, as it does in other areas. When I started designing this survey in the search of actual data for the conference, I never imagined how some colleagues suffer, most of the time in silence.

As colorectal surgeons and in order to stop this scourge, we need to embrace diversity and foster a culture of inclusivity and belonging for all our colleagues worldwide.

We are happy to announce that the results of this survey have been reflected in a manuscript that we hope will be published soon.

Wrap up and future collaborations – Gianluca Pellino

The two initiatives herein discussed clearly show that there is a crying need for actions in these fields, and that Societies have an important role in increasing knowledge, facilitating acquisition of information, and protecting members and the stakeholders.

If we really aim to make an impact and drive the change, truly collaborative efforts are needed, so that any initiative can lead to globally applicable outputs, generated by a diverse panel of members, ensuring universal representation, and facilitating implementation into everyday practice. ESCP and ASGBI can work together and benefit mutually, ensuring that all members are offered equal opportunities, and serve as platforms for vivid exchange of opinions and initiatives.

Among the drivers of the change, a major role is played by the young members of the society, the Young ESCP (Y-ESCP) group and the ASGBI Moynihan Academy (ASGBI MA); interactions between them should be facilitated, as well as between our societies and many others, both at international and national level.

We are lucky enough that – despite the challenges posed by the SARS-CoV-2 pandemic – we are far from losing our enthusiasm, and we can always be connected with technological advancements. Using such platforms, societies should keep working together towards a continued collaboration, ranging from training exchange opportunities, joint research, social campaigns, to individually targeted initiatives.

Diversity and inclusivity, and respect for the others and the environment, should lead the change and innovation; the hope is that many more collaborative efforts will stem from these successful experiences, shaping the new future in surgery and coloproctology.

Under the spotlight: EDI manager at RCS England

Corriene Bailey-Bearfield, Diversity and Inclusivity Manager, RCS England

Introduction and background: Can you tell us about your current role at RCSEng?

Why did you apply for this role?

I had been working at Diabetes UK for 4 years and in 2020 everything changed. I was asked to join the BAME staff network as a committee member and a few weeks in the chair and co-chairs quit so was left with myself and my colleague, Shemina. Given everything that was happening at an international and national level and feedback we had received from members of staff we felt that it was really important to keep the network going. We wanted to ensure that our colleagues had a safe space to discuss the issues of the day and how this impacted their work and sense of wellbeing. It was this newly found role as co-chair of the network that led me to working closely with the CEO and the senior leadership team. I worked with them on recommendations put forward by the network and supported some of the executive team by reverse mentoring.

After leading the network for six months and listening again and again to peoples' stories, along with the constant barrage of news of inequalities and racism I broke down and cried. I was so fed up and exhausted and couldn't understand why as humans we find it so difficult to get along. That moment led me to creating an initiative called Common Ground, which helped to support the organisation in having uncomfortable conversations on topics like identity, racism in the charity sector, microaggressions and language. I couldn't believe it when Chris, the CEO gave me the green light to develop and deliver the programme. Not only did he put his trust and faith in me but he also put his own reputation on the line by taking part in the conversations and leading from the front. This led him to offer me a role leading on the organisations tackling inequalities work in conjunction with my other role (paid of course), which I jumped at. The only problem was I was still doing my other role, which I had out-grown and realised that I wanted to focus all my energy on EDI full-time.

This led me to applying for and getting the role at RCS England, which I started at the end of June 2021. I break down my role at the College into two areas the first is programme managing the Kennedy programme and the second is supporting the internal EDI work, which sounds simple enough but keeps me incredibly busy.

The Kennedy review – What are your thoughts on its findings and subsequent action plan?

I think like a lot of organisations the findings were not a surprise. What saddened me was the example from a trainee about their experience with two different babies presenting with the same condition and the consultant's response and the devaluing of one life over another. I wonder what it will take for lives to be valued equally and for that to be reflected in society. I think for the RCS to publish that took a lot of guts and a willingness to reflect, which I'm not sure a lot of organisations do.

The College has really risen to the occasion in publishing the action plan and making a very public and clear statement about its intentions and willingness to evolve as an organisation. There are some really exciting aspects to the plan, which will make a huge difference. The work on differential attainment and grassroots medical organisations is very exciting and I look forward to seeing what comes out of those two streams of work. I think it's really important that we support organisations that are out there trying to make a difference in this space and amplifying their voices.

Should surgical societies implement the RCS Kennedy action plan and how can they implement it with limited financial resources?

Surgical societies are in a great position to influence the next generation of surgeons in a positive way. I think societies need to figure out what is appropriate and realistic for them to achieve in regard to the action plan and then come up with their own version. Given the limited resources of most societies I think a simple action they can take is to have a dedicated EDI role as part of their committees. They should consider what as a society is within their own sphere of influence. How can they ensure members have the skills they need to lead in an inclusive way?

Consider if they can collaborate with other departments at their universities to develop training and put on workshops around inclusive leadership practices so the next generation of surgeons have the tools they need to lead.

When they are organising events, consider who is being invited to speak and why. Can 4th and 5th year students do some outreach work in the local community and link with socio-economically deprived schools to inspire a new generation of surgeons? If your society has a journal club can some of the research papers you read be about EDI in the medical space? It's about asking themselves key questions and I think having a dedicated role on the committee will help to support that work.

What are your thoughts on what we should do beyond Kennedy?

I'm proud to say we have already gone beyond the recommendations in the Kennedy review and will be holding our first LGBTQ+ conference on the 25th March, which is incredibly exciting. To find out more https://www.rcseng.ac.uk/news-and-events/events/calendar/lgbtqplus-conference-and-drinks-reception/

Beyond that I think we need to ensure that we embed DEI as part of our business as usual, which might sound obvious but is no easy task. I think to do this it's really important that we focus on learning and development. In my previous organisation there was a strong focus on L&D and in particular around developing self-awareness, reflective practice, boosting creativity and innovation, management development and coaching skills. I think when you have a culture that is centred around learning and reflecting it makes it easier to be able to have some of the more challenging discussions that all organisations face at one time or another, and which if handled correctly can lead to a more positive and inclusive environment. I would love to see the College adopt this approach.

What other EDI work is happening at the RCSEng?

Alongside the Kennedy review RCS England also commissioned a report on what was happening internally, which led to the Globis report. This has led to an internal action plan being published and work is underway to implement the recommendations. We are currently working on an Inclusive language guide, setting up more staff networks, reviewing and developing policies, focussing on employee wellbeing through various programmes of work and activities and collaborating with AsiT on a number of joint initiatives. The staff diversity network just had a session focussed on diversity champions and whether or not the College should consider developing a programme, so it was great to see that BOTA have just announced their Culture and Diversity champions programme, which I am hoping we can learn from. This is just the tip of the iceberg and there is a lot happening at RCS England, which I am super proud to be a part of.

What does it mean to be an Ally or Advocate for change?

Simon Fleming, Trauma and Orthopaedic registrar. London
Founding member and the trainee representative for the International Orthopaedic Diversity Alliance (IODA)

The work to try and change the culture in healthcare is, and always has been, an iterative process. That is, it is a never ending cycle of learning and growth and change. This is why some enjoy regularly rolling their eyes and saying something along the lines of "it was ever so" or "things in surgery always go in cycles". Yet, what this fails to recognise, or perhaps, more reasonably, what it has failed to recognise until very recently, is that the lack of real change is because one has to change to foundations. There has been a great deal of superficial, performative, tokenistic change in the past – the motivations for this I will leave for perhaps another piece. The truth is, that real change, real growth, hurts. It is uncomfortable and scary and takes an investment of time and people and money.

So, having said all that, how can you be a part of that change? This is where the role of allyship and advocacy comes in. These are very popular buzzwords at the moment, so if you hope to be an ally, an advocate, the first thing to recognise is that these are not just titles, to be worn on a lanyard or seen at the end of an email signature.

If you wish to be an ally, or an advocate for change, do not take this responsibility lightly – it is an active choice, each day, to live your values. It means that your potential inaction in any one situation can and should be questioned. It means that you are declaring that you see the systems of discrimination and oppression and wish to be a small part of changing them. It doesn't mean you, personally, know what it's like to experience those things either. It means you are taking on that struggle as your own.

So, on to the pragmatic business of how one might be an ally or advocate. Firstly, and I cannot labour this enough, it is hard work. You will have much to learn, and perhaps more challenging, you will have much to unlearn. It means you will need to educate yourself and it means (this is 100% guaranteed) you will get it wrong. You will make mistakes. These will often be emotive and very public in nature. As a self aware ally, you need to make some proactive choices;

First and foremost, shut up. Honestly. Just be quiet. The first role of any ally or advocate is to be open to actively listening. If someone, or a group is telling you they are experiencing racism, sexism, harassment, discrimination, bullying or more – listen. Don't do the immediate usual "yeah but…" or try to rationalise or explain. Just listen and accept that maybe, just maybe, you don't know what they are going through. This means being aware of your biases and researching more about lives that aren't your own. It also means acknowledging that you work in a system that is not broken, rather it was built that way. The healthcare system we exist in is, by its very nature, patriarchal, hierarchical in nature. It is what it is, but it still requires acknowledging. Another challenge is to use the privileges you do have – this means amplifying, sponsoring and supporting. Avoid speaking over or for suppressed voices. Rather, draw attention to those voices and step back. Step back and…you guessed it…shut up and listen.

If I could give any top tips on how to be a better ally, a better advocate, its just that. Learn to listen. Accept that change means uncomfortable conversations and even more uncomfortable change. You will get it wrong, and when you do, let go of your individual pride and ego and accept that none of this is about you. We, as a community need to accept that what we permit, we promote. So it's time to shut up, listen, challenge when needed, and change.

Be Kind and Communicate Effectively: A Relative's view of a patient's journey

Mrs M (anonymised)
Healthcare professional in the NHS
Relative
Human Being

I am sharing with you the story of my aunt SM who has recently died secondary to ischaemic colitis. I am reflecting on her journey during her stay from a family perspective as her niece as well as from the perspective of a hospital pharmacist. I feel it is important to share with you what happened for shared learning.

SM was admitted in early December to the local district general hospital with symptoms of abdominal pain, vomiting and diarrhoea. She was referred to the surgeons who told her that she has ischaemic colitis and that they will manage it with antibiotics, fluids and pain killers. The surgeons carried out a CT without contrast because of SM's chronic kidney disease. She was told that it could be an infection or ischaemic colitis and that she was not suitable for surgery and not suitable for admission to ICU.

My aunt, SM was only 68 years old and her first language is Arabic, she speaks reasonably good English. When the surgeon told her that she is not suitable for surgery and that he will treat her with antibiotics and fluids, he did NOT explain to her what the consequences of this decision would mean. That she would be dead 10 days from the day she was admitted to the hospital. The decision was made as a unilateral decision on her behalf based solely on the surgeon's opinion. She accepted the decision not to operate without understanding what that meant and she was under the impression that the antibiotics and fluids will cure her. She was told that they will do a CT without contrast because of her renal impairment. She did not get a proper diagnosis or even know what the cause of her ischaemic colitis was, if that was in fact the actual diagnosis. Was it an infection, or thrombosis, or reduced perfusion that caused the ischaemia, no one really knows. The extent of the ischaemia was not explained to her, was it possible to resect it, was it in the small bowel, the large bowel, all of this was not explained to her as the surgeon himself did not know the answer. The CT was performed without contrast because of her CKD. My aunt's kidneys were protected from the damage of the contrast, did they know that not using the contrast means that we do not have a diagnosis and she will be dead in 10 days. Where is the logic in that decision. Without doing the proper investigations needed and without gathering the evidence and without explaining to the patient in a way that she would understand, the decision to write-off my aunt was made on her behalf by the surgeon. Based on what may I ask?

Visiting times at the hospital during COVID-19 were limited to only one designated person for one hour only, her daughter who is her next of kin was not able to meet the doctors to understand what was going on or understand that her mum is going to die as a result of this decision. I could not get a clear picture of what happened to my aunt from the story being told by my aunt and cousin, so on day 4, I decided to call the ward and speak to the nurse myself to find out how my aunt is doing. That is when the nurse informed over the phone that she is going to be referred to the palliative care team!!! To my shock and horror, I contacted my aunt and my cousin to ask them what is going on, only to find out that they are NOT aware that she is being referred to the palliative care team!!! The decision was made to palliate her without her knowing, without her next of kin being informed and without her family being told. If I did not call to elicit this information we would be in the blind.

I came to visit my aunt to get her perspective and find out what her wishes were and if she agreed to this palliative decision. She told me that she was not aware she is being palliated and she wanted to have the surgery performed in order to give her a chance to live. She was the life and soul of all family occasions, looking after her young grandchildren and dancing a couple of days earlier at her daughter's birthday party. She was not ready to give up or be given up on at 68 years of age.

The risk of dying from the surgery was calculated at 20% and complications afterwards like ICU, dialysis and a stoma bag were 99%. That was a risk she was willing to take as the other option of not operating meant that it will be 100% death.

I requested to speak to the consultant and was told that only the on-call is available over the weekend and I managed to speak to a registrar. I explained to the registrar that my aunt wants to have the operation done, she does not want to be palliated and she is aware what the risks are and accepts them. I was told that the decision was made by the surgeon not to operate, I asked for a second opinion from the hospital. I also consulted my good friend who is a colo-rectal surgeon at a different hospital and was told that my aunt needs to have a proper diagnosis done with a CT with contrast and the surgery needs to be performed ASAP if one is to do anything at all to salvage the situation, and if that was my aunt's wishes. I was told that she needed a proper work-up: did they send a stool sample? is it c-diff form use of previous antibiotics? is it a clot? are they giving an anticoagulant? did they consider endoscopy? did they give fluids? is her pain manged? how is she fed if she's been vomiting for over a week? I did not have the answer to any of these questions and when I enquired the answers were no, no and no. Nothing was being done at all, since admission!

By this time, it was day 8 since admission due to the lack of action over the weekend, my aunt had deteriorated significantly and her antibiotics were stopped over the weekend. A different consultant had taken over and I explained to him that my aunt is not happy with the decision to palliate and that she wants to have the surgery and the ischaemia removed. The new consultant did the proper investigations, CT with contrast, blood tests, x-ray, echo, anaesthetic review and ICU consult. By day 9 the results were all back and it was now far too late to act. My aunt was septic, the ischaemia had spread to the caecum and ascending colon. Her P-possum was now 65% and she was unlikely to survive the surgery. She now accepted the decision to not go ahead with the surgery and to get palliative care. My aunt died a couple of days later, whilst trying to speak to her family on facetime to tell them to stay strong.

I feel that my aunt SM was not treated promptly and the delay in her treatment led to her death. If she was operated on as soon as she was admitted there is a chance she would still be with us today, even if it was a slim chance, She wanted to be listened to and given that chance. The clinical decision made in the best interest of a patient should be based on three factors: the clinician's expert opinion, the evidence and the patient's wishes. In my aunt's situation the evidence was lacking as we did not have a proper diagnosis and her wishes were not respected; the decision was made solely based on the surgeon's opinion. Even when the decision was made to palliate her, this was not even communicated to her or her family. I feel a great misjustice was done to my aunt and that if she was admitted to a different hospital under a different surgeon she might have survived this condition.

I am sharing with you this story in order to reflect on the importance of comminating clearly to the patients and to check their understanding by what is meant in the shared decision. A patient does not need to have to fight for their voice to be heard and the family do not need to run around to get a second opinion to tell the surgeons that the CT needs to be done with contrast. As professionals we should be providing the best service for all our patients without having pushy families who intervene in their management. We should be treating patients with compassion and care, my aunt SM has died as a result of lack of due diligence in her care. I plead to you to reflect on this case and ask yourself how you would want to be treated as a patient needing this life-saving surgery. What does EDI mean to me? What does it mean to my aunt and the whole family? It's really simple, communicate effectively and ensure that the patient actually understands what their diagnosis is. Involve them in their own care and listen to them. Give them the time of day. Imagine they are your own relatives and treat them with respect. It's a very sad day when someone dies, but it's even worse when it's due to neglect, disrespect and lack of caring. Remember to be a kind human being first before you think you can play God and write people off.

Visibility in a Year of Cultural Change

Michael Okocha
ASGBI EDI Group Lead Trainee
ASGBI Moynihan Academy Honorary Secretary
ASiT Equality and Diversity Officer

There are many things that this last year has highlighted, from black lives matters to sexual assault in surgery[1], the theme being that there are many daily struggles that we are unaware of. Visibility is a term that has been left out of the recent EDI conversation. It's the process of bringing attention to underrepresented issues and groups. Often it is groups with poorly publicised struggles and issues that often have little support. Most would assume that underrepresented issues mainly arise from 'minority groups', but this is not the case, for example 97% of women in the UK have experienced sexual harassment[2]. With recent testimonies[3] it is likely that this is under-reported in surgery for fear of repercussions.

When the medical act was changed in 1876[4] to prevent gender discrimination when applying for membership of the royal colleges it was a huge step forward for medicine, but it wasn't until 1910 where we saw Miss Dossibai Patell become the first female member of the royal college of surgeons[5]. As such with the Kennedy report published last year[6] we cannot expect immediate change, but we can continue to highlight areas that need improvement. This year our focus is on improving EDI Culture with a focus on inclusivity. We have delivered the first national EDI workshop working in partnership with all surgical subspeciality trainee organisations, the College, and other networks such as the Disabled Doctors Network.

One of the ways that we are improving visibility is through our ASiT video series 50 Faces of Surgery[7]. 'You cannot be what you can't see' is an adage highlighting the need for visual representation and to see others overcome the challenges you face. We have interviewed medical students up to retired OBE awarded professors. Each with their own incredible story and a message that this career is truly worth it. I would ask each reader to watch a few episodes to be aware of the adversity some of our colleagues' face, and to be inspired.

I have been impressed with the work our ASGBI committee have done with a more balanced panel of presenters during webinars and special events, the formation of an EDI statement and response to the Kennedy report[8], and of course the inaugural EDI committee itself, of which I am honoured to be part of.

Social media has been important in improving visibility, generating conversation, and building community. The Hashtags HammerItOut, ChooseToChallenge ILookLikeASurgeon OperateWithRespect and our own Herelam, have really led to a shift in recognising a lack of inclusivity. Those who follow these hashtags have been leading the way on how to improve discrimination, harassment, and exclusion in surgery.

I leave you with the following thoughts:

There are trainees who struggle to find a home in surgery because they can't see anyone who looks like them.

There are consultants who struggle to find a home in surgery because they don't know anyone who has been through the same experiences as them.

There are HCAs who speak 3 languages and are seen as low-skilled.

There are nurses who rely on food banks.

There are women in surgery who's colleagues get honorifics, and they are undermined by first names.

There are trainees of different ethnic backgrounds who face role discrimination daily.

There are white male colleagues, who come from poverty, who are the sole providers for their entire families.

There are colleagues from ethnic backgrounds who come from poverty who are the sole providers for their entire families.

There are colleagues with disabilities and medical conditions who have daily struggles.

There are colleagues with mental health conditions who have daily struggles.

There are colleagues with kids who struggle to find the balance.

There are colleagues who don't have kids who struggle to find the balance.

There are LGBTQIA+ trainees asking to be seen and called by their chosen titles.

There are Muslim trainees asking for the theatre environment to be more inclusive.

You do not know the impact a simple thing can have on an individual.

The "thank you" to a colleague shows them they are appreciated.

The lack of thank you can demoralise them.

Calling them by their asked name, can make them feel valued.

Not calling them by their asked title, can make them feel isolated.

We can all recall a time in this career when someone made you feel seen...

when the boss taught you how to close skin,

when the patient thanked you,

when someone praised your work.

If you are struggling to understand why something is important,

it does not mean that it is not.

It means you need to ask why.

If a colleague's plight has the spotlight, it does not mean that the spotlight will never shine on your own challenge.

I can choose to support the colleagues around me to the best of my ability.

I can recognise that I cannot cure the organisational struggles of the NHS.

But I can change the culture I work within; I can support my colleagues to be visible.

Show compassion for your colleagues, for the struggles they may not announce.

Even as the NHS strains around you, you will never forget nor be forgotten if you treat your colleagues with kindness, respect, and honour.

#HereIAm

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Medical students and EDI

Jahnavi Kalvala, 3rd Year Medical Student
Academic and Diversity in Surgery Lead,
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Equity, Diversity, and Inclusivity (EDI) is an issue in the medical field that is far from subtle. Hearing about how only a third of all surgical trainees are female[1] (a number that is vastly different for the proportion of female medical students), or how black and minority ethnic surgeons are referred to the GMC more than their white colleagues[2] is frightening, to say the least. While many may say that they have not experienced this themselves, knowing that there is a possibility that I, or a colleague of mine, might be viewed differently or receive less access to support is unnerving, especially when choosing surgery requires a great deal of conviction as is.

When studying Medicine, diversity is paramount to what we are taught to do as doctors: considering the disproportionate burden of disease put on low-resource communities; treating patients from different backgrounds with high quality care, free from discrimination and bias; working to create a safe and stimulating environment for all NHS staff. The power of having both patients and doctors from gender diverse, LGBTQ+, neurodiverse and ethnically diverse backgrounds is something we should harness, however we are increasingly noticing this is not the case.

In Surgery in particular, the drive for more emphasis on inclusivity is building, especially following the Kennedy Report in 2021[1], when a light was shone on the importance of EDI and how surgery as a speciality has been falling short in the past. You have to ask yourself - why? Is it the working environment? Is it the physical and mental demands of the job? Is it barriers to accessing the training and portfolio points needed? It's likely to be a multifactorial challenge.

While Surgery has certainly reflected on the need for diversity in its community, the importance comes in what we do next. Education and promotion of EDI early on in our medical careers can help foster a better environment, especially in a surgical setting where teamwork is of utmost importance. As the next generation of doctors qualify and form the surgical teams of tomorrow, we have the chance to impact how accessible and successful these teams can be.

We, at Nottingham, are striving to create a society that is representative and inclusive for all our students. Our first step was changing the "Women in Surgery Lead" to a broader role, now titled "Diversity in Surgery Lead" instead. We hope that this change encapsulates what we wish to see at Nottingham; a welcoming community of students, bound by their interest in surgery, that revels in its heterogeneity. We think it is very important to introspect about the biases in our system that lay obstacles in students' path to go into surgery. We want to try and listen to different perspectives, especially those underrepresented in medicine, and learn about the challenges they face. From this, we hope to create actionable plans to cater to our members' needs and improve EDI on an institutional level, through hosting speaker events and implementing a buddy scheme where students will have someone they can reach out to, so they know they are heard. Some events we have inaugurated this year include our Diversity in Doctors Conference and a Diversity in Surgery event series where we invite surgeons to talk about a variety of topics such as allyship in surgery, operating with pride, and parenting while being a surgeon. We also continue to spotlight Women in Surgery through our annual Mini Mentoring Events and WinS Conference.

We think safer spaces are created, both in the workplace and for patients, when we challenge the assumptions we have about people and professions. Achieving an equitable and inclusive environment is certainly not an easy task nor can it happen overnight. However, we are hopeful that by educating, advocating, and collaborating, we can bridge this disparity and hopefully create sustainable and impactful change.

Surgical Life: The Journal of the Association of Surgeons of Great Britain and Ireland, Number 61
GUEST EDITOR

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SAS Doctors and their role in a General Surgical Team

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SAS doctors include specialty doctors, staff grades, associate specialists, specialists and a number of other career grades. There are around 11,000 SAS doctors working in England. SAS doctors are the most diverse branch of the senior medical workforce, with 69% from a black, Asian or minority ethnic (BAME) background and a large proportion having trained overseas.

The introduction of the concept of SAS grade started early in the history of NHS. Sir Robert Platt, in his report about restructuring of medical staffing in 1961, supported the introduction of an intermediate grade called medical assistant in order to address issues around stagnation of doctors at registrar grade due to the bottle neck affect at senior registrar and consultant level. Department of Health and Social Security in 1981 renamed this group as associate specialist, perhaps recognising the seniority and skills. To address issues around service delivery and training opportunities, a new intermediate service grade was introduced in late 1980s called staff grade. Both staff grade and associate specialist were the predominant SAS grades in 1990s and early 2000. Unfortunately, these doctors who were mostly from overseas had very limited developmental opportunities, leading to low morale and job satisfaction. This was evident from the various surveys conducted during this period. In order to de-stigmatise the grade and offer opportunities for professional development, a new SAS contract was introduced in 2008. Whilst this resulted in better developmental opportunities and introduction of better pay scales; the associate specialist grade was closed for new entrants in 2009 and the title specialty doctor was introduced instead of staff grade.

SAS Charter was introduced in 2014, written by Academy of Medical Royal Colleges, NHS Employers, British Medical Association and Health Education England. All Trusts are expected to implement the SAS Charter in full to support SAS doctors in their professional development and promote it as a positive career choice.

Following closure of associate specialist grade in 2009, it was recognised that those specialty doctors who are working at a senior and autonomous level have nowhere to go. Appetite for getting specialist registration and consultant post through CESR was limited due to variety of reasons. As a result, there was an increasing demand to reopen the associate specialist grade, it was believed that this will improve developmental opportunities for SAS doctors and would also help in improving patient care and ever increasing demands on NHS. The new senior SAS grade called specialist, has been introduced from April 2021 as part of SAS contract reform.

SAS doctors provide specialist clinical services, and at the time of first appointment the most common title is speciality doctor, they have a minimum of four years' full-time postgraduate training (or equivalent) and often possess MRCS or equivalent.

These doctors form a wide and varied group of staff, often performing highly specialised roles, sometimes with a narrower remit than consultants. They form an important component of surgical team. They often contribute to the on call rota at registrar level (ST3 and above equivalent) and as a result help in reducing the frequency of on calls for everyone on the rota (trainees, locally employed doctors and non-medical practitioners). This helps in addressing issues around balancing service and training need. SAS doctors are generally experienced and instrumental in providing informal training in different ward-based, clinic and theatre settings, benefitting all grades of doctors, students and non-medical practitioners. They are often asked by the trainees to do work place based assessments (WPBA) and give feedback. SAS doctors are a great support system for all rotating members of the team; they provide that continuity and institutional memory, and bring about that stability in the team, which eventually contributes to good patient care. There is a scope of formalising role of SAS doctors in induction process, supporting the rotating members of the team.

SAS doctors bring value to the surgical team and it is important to understand that there are overlapping needs for professional development amongst different members of surgical team, which occasionally could lead to conflict; and therefore an emotionally intelligent leadership is needed to create that environment of mutual respect and positivity.

Senior Specialty Doctors, Associate Specialists and Specialists, are now playing an ever growing role in education and training of all other staff in the surgical team. Royal College of Surgeons of England and Foundation Schools recognise SAS Doctors as clinical and educational supervisors.

The number of SAS doctors in these roles is limited and the opportunities are variable, however, it has been recognised by all stake holders including Health Education England, the importance of nurturing SAS doctors as educators; there are finite numbers of trainers and therefore utilising SAS doctors is beneficial for everyone.

The new People Plan 20/21 highlights the importance of diverse, inclusive and compassionate medical leadership. SAS doctors are encouraged to develop their management and leadership skills. Increasing number of medical leadership positions are now open to SAS doctors and as a result of this evolving cultural change, more SAS doctors are being appointed to leadership positions such as clinical director, appraiser, associate medical director and medical director. These opportunities are not yet fully embedded in the culture of NHS; however, with increasing number of leadership development opportunities we envisage growing number of SAS leaders in NHS.

A large number of senior SAS doctors work autonomously within the surgical team, these numbers are likely to increase with the introduction of the senior SAS grade "Specialist". These doctors will generally have a broader role in running of the team along with education and training.

SAS doctors are an important part of medical workforce and surgical team; they deliver high quality patient care and have an ever-increasing role as educators and leaders.

ASGBI launches SAS Doctors Forum

If you would like to join ASGBI's SAS Doctors mailing list, please join by emailing **SASdoctors@asgbi.org.uk** providing your name, title, telephone number and email address.

Surgical Life: The Journal of the Association of Surgeons of Great Britain and Ireland, Number 61
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Less than Full Time Trainee, Parent in Surgery and much more

Sarah Shamim
Core Surgical Trainee
ASGBI EDI committee member

Equality refers to providing equal opportunities to everyone and protecting people from being discriminated against. Diversity refers to recognising and respecting and valuing differences in people. Inclusion refers to an individual's experience within his/her workplace and in society, and the extent to which he/she feels valued and included.

In the NHS, equality is about creating a fair working environment where everyone can fulfil their potential. Diversity refers to recognising and valuing difference in its broadest sense regardless of age, disability, gender, racial origin, religion, belief, sexual orientation, commitments outside of work, part-time or shift work, language.

I am a woman of faith who proudly wears a hijab, a mother of two beautiful girls and LTFT. I took a career break after graduating from Pakistan and started my career in UK initially doing a PG cert. in Public Health from University of Liverpool. In order to pursue my clinical ambitions, I had to complete Foundation training programme. I entered clinical workplace after a hiatus of more than 8 years, and this was a daunting feeling when I started as a less than full time trainee (LTFT) working three days at 60 %. I was fortunate to have a foundation programme director who was most helpful and made sure I was supported in every way possible. My colleagues and everyone around me were also empathetic. I entered the clinical setting with the mindset of going into Public Health or GP training programme. However, after working in two well-structured emergency surgery firms in Merseyside with two seasoned, experienced and inspiring emergency surgeons have fallen in love with surgery. I never thought that scrubbing in a Hartmann's and seeing / smelling poo would make me feel so excited. Exposure to surgery has also positively impacted my family life as I can relate to some extent as to why my workaholic husband (colorectal surgeon) is always volunteering to stay back and operate. After careful consideration and ample support from my educational supervisor I am motivated to pursue a career in surgery.

I have learnt from my experience that it is possible to be a mother, work less than full time and still consider a career in surgery in this country. Although, there are stereotypes that women cannot manage these factors together, but I have been made to believe that I can. This is where in my opinion EDI plays an important role ensuring equal opportunities for everyone. Although the number of women in surgery these days is improving, a lot of work still needs to be done.

According to Stephens et al (1), although more women are visible in the surgery indicating increased recruitment in the specialty, further measures encouraging mentorship and address issues related to pregnancy and burnout will likely improve this. Obstacles to career development for women in surgery include residency/fellowship support, sponsorship, leadership, work-life balance, and pay equity. Another important factor is that of gender discrimination which stems from conscious and unconscious bias, which required recognition and deliberate correction. Another survey, by Bellini et al (2), showed that most female surgical trainees perceived surgery as a male-dominated field. Over half had experienced discrimination, while 22% perceived a 'glass ceiling' in surgical training. Orthopaedics was reported as the most sexist surgical specialty by 53%. Overall, a lack of formal mentorship, inflexibility towards part-time careers, gender stereotypes and poor work-life balance were the main perceived barriers for women in surgical careers. All these need to be addressed to facilitate surgical training for women. Abbasi et al (3) have also highlighted the importance of mentoring, support during and after maternity leave, time out to pursue an academic career, work--life balance and pay parity as crucial issues for women in surgery.

An independent review of diversity and inclusion carried out by Baroness Helena Kennedy QC for the Royal College of Surgeons of England (RCS Eng) also emphasized the lack of diversity and inclusivity within the surgical workforce and our society. The review also described the persistent difficulties faced by many women, Black, Asian, minority ethnic, LGBT+ surgeons and surgeons with disabilities because of conscious or unconscious discrimination, bias or racism.

At ASGBI, we have acknowledged and recognised the importance of this review and the need to create a more diverse and inclusive surgical society. We are working together for a better future.

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The Role of Advanced Clinical Practitioners in General Surgery

Kelly Papavarnava,
Advanced Clinical Practitioner (ACP) in General Surgery

From its first documented inception in 300 A.D nursing has advanced exceptionally (Nursing School Hub, 2021). Fast forward to the twentieth first century and the role and expectation of a registered nurse has adapted to meet ongoing challenges and demands of a modern National Health Service (NHS). Considered once to be a role of servitude and hierarchal structure, nurses are increasingly developing educationally and emerging into independent autonomous practitioners (Smith, 2019). Over the last two decades the role of a nurse practitioner has aligned to additional academic qualifications, responding to healthcare needs within the UK (Leary and MacLaine, 2019; The Kings Fund, 2021). Viewed as a workforce to assist continuing demand and capacity, the advanced nurse practitioner continues to be integrated into a multitude of health care settings from emergency departments to oncology (Health Education England (HEE), 2017).

The publication of the Multi Professional Framework for Advanced Clinical Practice in England (2017) highlighted a shared vision and collaborative working between professional bodies, with an ambition to deliver a way of working beneficial to the health of the nation. The introduction of the advanced nurse practitioner in surgery was further expected to demonstrate independent advanced clinical assessment, complex clinical reasoning, reflection, analysis and clinical judgement to support decisions (Royal College of Surgeons (RCS), 2021). A concept further reinforced by the Nursing and Midwifery Council (NMC), with a commitment to review, and regulate advanced nurse practitioners working at a maximum level of autonomy (Mitchell, 2019).

Health Minister Lord Darzi stressed the importance of workforce cohesion within the National Health Service (NHS), focusing on staff continued professional development and opportunity for staff to expand their existing roles (Department of Health, 2008). However, to date the role of the advanced nurse practitioner is met with may mixed views, attitudes, and perceptions. Hooks and Walker (2020) identify that, the concept of advanced clinical practitioners improve service provision, bringing an element of diversity valued by medical colleagues. Dating back to 1996, advanced nursing practice was deemed as effective, however barriers and preconceptions

of the nurse practitioner role were also very evident, fearing the replacement of traditional medical practice. Twenty-four years later research conducted by Ruiz (2018), evaluated perceptions and attitudes of the multidisciplinary team towards the advanced nurse practitioner. Common themes such as role ambiguity and a threat to traditional doctors' roles were again well documented. Reporting that 5% of study participants felt the advanced nurse practitioner threatened traditional medical roles and deskilled doctors, whilst 82% of participants within the study felt there was no clear definition of the advanced nurse practitioner role. However, on a political platform it is becoming more increasingly apparent that the National Health Service (NHS) is demanding greater capacity, responding to a shortfall in doctors by training and employing an increased number of advanced nurse practitioners associated with funding provision for Advanced Clinical Practice MSc program (National Health Service (NHS), 2019; Health Education England (HEE, 2017); National Health Service (NHS), 2014;). This point is further reinforced as the Department of Health (DH) delivers new initiatives to support professional accountability and better value for money (Lane and Barlow, 2011). Lane and Barlow (2011) further illuminate that as services change, health professionals may have to relinquish old practices as advanced nurses lead to promote future nursing roles. However, Lomas (2009) illuminates that nursing is in not in competition with medicine but is about providing most appropriate care and access to clinical services.

Whilst in the United Kingdom (UK) nurses have made progressive steps towards advanced clinical practice, it is apparent that ambiguity surrounding the role of the advanced nurse practitioner continues and in relation to countries such as the United States of America, advanced nursing practice is very limited (Coombes, 2008). To date in the USA advanced nurse practitioners are accredited on a separate register, clearly defining a professional group that differentiates from other nurses (American Association of Nurse Practitioner (AANP), 2021). As the role of the advanced nurse practitioner accelerates within the UK, the role is sustainable and effective whilst maintaining high quality care provision (Oliver, 2017). However, as the Royal College of Nursing continues to set out what appears be clear guidance for advanced nurse practitioners, it remains unclear as to what quantifies and defines the remit of this professional group. Overarching themes such as role ambiguity, definition and perceptions and attitudes towards advanced nurse practitioner furthermore call for the regulation of the advanced nurse practitioner urgently across all specialisms.

From a personal viewpoint the role of the advanced clinical/nurse practitioner in one of effectiveness, assisting a shortfall of medical doctors, however, it is important to stress that the role of the ACP is not intended to replace doctors but act as a service to complement medical doctors as part of the multi-disciplinary team. In current practice, the surgical advanced clinical practitioner has been integrated with the on-call team well. Overall feedback from junior doctors, surgical registrar's and consultants is extremely positive. Feedback includes comments such as consistent workforce (as junior doctors rotate on a 4 monthly basis) and effective assessment skills and practice, strongly supporting the role of the ACP in the surgical arena. However, whilst the role is met with positivity, at times the lack of accreditation and overall function of role has led to difficultly when defining the ACP. As efforts are made to address the lack of regulation, it is strongly considered that this will only assist and elevate ACPs as a professional group within a modernised NHS service. What EDI means to an ACP is that we all value and respect each other and work together for the benefits of our patients.

Why words matter? An LGBTQ+ perspective of surgery

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She/ Her

Whenever I give talks or start a new placement, I always mention that I have a wife. I know that representation matters and that you cannot be what you cannot see. Lesbian, Gay, Bisexual, Trans, Queer and other (LGBTQ+) representation in healthcare is woefully bad. In terms of healthcare leadership, Michael Brady cuts a lonely figure as the National Advisor for LGBTQ+ health but this role has only been in existence since April 2019, a stark reminder that LGBTQ+ health is has not been a priority or even a consideration until recently.

Perhaps this lack of visible LGBTQ+ leadership in healthcare is why there is a dearth of research into this community and its health outcomes (1). From some of the research we do have, there are some startling stats. LGBTQ+ youth are 3.5% more likely to attempt suicide, twice as likely to have mental health problems, and can have a 12 year lower life expectancy if they live in an areas of high prejudice and lesbian women have a higher rate of asthma compared to straight women (1). During the pandemic, The LGBTQ foundation, found that COVID 19 was disproportionately affecting the LGBTQ+ communities as well. (2)

But what of research into LGBTQ+ persons and surgery?

According to McKean et al, there are only five literature papers on LGBTQ+ in surgery (3). In a post Kennedy Review world- the research results are unsurprising, if not still damning. According to one paper, 4.8% of general surgical trainees identify as LGBTQ+ (4) but these trainees experienced more discrimination, sexual harassment and bullying than their straight counter parts. They also had more frequent thoughts of leaving their programme. Surgery does not appear to be welcoming place to the LGBTQ+ trainees either. Orthopaedic surgery, neurosurgery, thoracic surgery and general surgery have all been noted as being the least supportive or inclusive for the LGBTQ+ trainees and practitioners (3) When it comes to discrimination 57% of sexual gender minorities in medicine and surgery have overheard homophobic remarks from other trainees and nurses, but from attending surgeons specifically- it's 30%. (3) Is it any wonder then that 23% of patients in the UK have witnessed discriminatory remarks from healthcare staff, and 14% have been put off attending for treatment as they feared discrimination from healthcare staff. (5)

So when I say I always mention that I have a wife, when giving talks and at new placements, it is with the purpose of trying to be a visible role model to those who may wish to do surgery but are worried they do not belong to this world. Role modelling has been shown to influence what speciality LGBTQ+ doctors enter and I had none. (3) This does not mean that is it no tiring to have to have the same conversations at each new hospital, as I never know how it will be received. More often than not I am asked what my husband does for a living. I reply my wife is a Head Hunter. What usually follows is an awkward, 'o I'm sorry, I didn't know' with some kind of joke from me to try and plicate the situation and reassure your assumptions. This is the best case scenario. At worst, it could be met with homophobic discrimination. I have not experienced the latter, but have had jokes about sensible shoes. So whilst for you, asking someone what their partner does, may seem like political correctness, for me it shows me that you won't judge me for having a wife. That I am in a safe space at work and will not be discriminated against.

Discrimination in the surgical community has been described as "alive and unyielding". (3) It is time now for this discrimination to stop. For the sake of our patients and our colleagues, we must think about our language, the jokes we make, the 'banter' we have. The "that's so gay" type comments. (To be clear, the connotation here is the gay is a bad thing, something to be ashamed for, so as a LGBTQ+ person hearing these comments, you are less likely to be open for fear of discrimination). Think before you speak.

Associations need to take diversity and inclusion seriously. Interventions for allyship in surgery are not hard. Grava et al report on a two hour educational training course. It showed that 86% of the participants were better LGBTQ+ allies after the training (6). The LGBTQ+ community deserve better than discrimination and homophobia at work. One way in which the Royal College of Surgeons of England is trying to support this community is via its very first LGBTQ+ event on March 25th (7) being run by the new LGBTQ+ Surgical Forum (official name to be revealed). This will be the first of its kind for any UK surgical college, and is a clear sign that the LGBTQ+ surgical community is finally being acknowledged. Through training, allyship, and national platforms, we can improve the work environment for the LGBTQ+ community. Which will no doubt improve the outcomes for our LGBTQ+ patients as well.

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Final Thoughts

Nuha Yassin, Director of EDI, ASGBI

Equality, Diversity and Inclusion is an important topic but an understandably challenging one to explore. Most surgeons are raised to be stoic and try not to show any signs of weakness. The fortress we build for ourselves does not mean that surgeons are not humans with a soft core. I am very grateful to our authors for sharing some insights into why it's so very important to embrace our human side.

Most people wish to be valued, not due to or in-spite-of their diversity. Let's continue to listen, learn, educate, support and collaborate. Let's make diversity and inclusion in surgery the norm. Thank you for reading. Look out for our next "spot-light on EDI" in future editions of the journal.

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Simon is a London-based Trauma and Orthopaedic registrar. He is a founding member and the trainee representative for the International Orthopaedic Diversity Alliance (IODA), on the Executive board for the NIHR Clinical Education Incubator and Associate Editor for Medical Education and The Clinical Teacher. Previously he was Vice Chair of the Academy of Medical Royal Colleges Trainee Doctors' Group (ATDG) and President of the British Orthopaedic Trainees' Association (BOTA).

While passionate about orthopaedics, surgical education and mentoring, he has special interests in hand surgery, competency decisions and combating bullying, discrimination, harassment and the lack of diversity and equity in healthcare.

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Working as an Advanced Clinical Practitioner (ACP) in general surgery, Kelly Papavarnava is a dual registered nurse/midwife with over 20 years nursing experience. Having worked in within an acute surgical emergency unit for 6 years, Kelly further has gained experience in the acute emergency setting under pinned by the four pillars of advanced practice inclusive of research, clinical practice, management, and education. Prior to undertaking this role, Kelly worked and gained invaluable experience in research, oncology, and midwifery. To date Kelly continues to practice as a surgical ACP, with a keen interest in perceptions and attitudes towards the role of the ACP in practice and regulatory accreditation of the role, recently completing her dissertation evaluating the role and effectiveness of the Surgical ACP.

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Minimally invasive surgery

Introducing our Contributors

Miss Irene Bellini

Irene is Assistant Professor of Surgery at Sapienza University in Rome. She trained as a general and transplant surgeon in Italy and moved to the UK in 2013, to complete her PhD in Oxford and undertake further subspecialty training at Imperial College, London.

In 2020, she moved back to Rome, and she now sits on the General Surgery Expert Panel under the Ministry of Health.

She is a Fellow of the European Board of Surgery (FEBS) and an Associate Fellow of the American College of Surgeons. She was a Board member of the European Kidney Transplant Section (EKITA) between 2017-2021, a committee within ESOT (European Society for Organ Transplantation).

Irene has a strong interest in living donation, for which she was awarded a Scholarship in 2017 to visit Erasmus MC in Rotterdam (NE).

She has also been commended for her social media skills and is currently the social media editor for the official journal of the European Society for Organ Transplantation.

She is also recognized for having created a global distance mentoring social media movement #HowIBecameAWomanInSurgery, on behalf of the Association of Surgeons of Great Britain and Ireland (ASGBI), to inspire female colleagues to pursue a career in surgery. Among the others, the women in surgery working group she led, has produced highly cited papers (10.1177/0141076819854194 and 10.1136/bmjopen-2018-024349) and a book currently adopted by 97 Universities, including Yale, Harvard and Brooklyn NY, https://www.igi-global.com/book/gender-equity-medical-profession/222285

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Salomone is a consultant surgeon in elective General Surgery with particular focus on minimally invasive surgery and gastrointestical oncology.

He is Clinical Head of Laporoscopy in Trauma and AC Surgery at the Trauma Centre Bologne.

Prior to this, Salomone was a Consultant Colorectal Surgeon at Cambridge University Hospitals.

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Surgical Life: The Journal of the Association of Surgeons of Great Britain and Ireland, Number 61
SPECIAL FEATURE

Laparoscopic approach in emergency abdominal surgery: is it safe?

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Surgical practice is continuously evolving mainly because of technologic developments and better-performing instruments. Recent evolution of technology has dramatically changed the range of available instruments and, subsequently, the therapeutic options that can be offered to patients needing surgical interventions and eventually even emergency surgery.

The minimally invasive approach, refers to a surgical procedure performed through small abdominal incisions opposed to the traditionally larger and more painful laparotomy incisions, therefore captivating the patient's preference. The laparoscopic approach carries several significant advantages for patients, both in terms of much less postoperative pain (every effort should be undertaken to avoid or at least minimize pain) including faster and better postoperative recovery, shorter hospital stay, earlier discharge, and earlier return to normal daily activity, such as physical exercise (including sports and sexual life) and a significantly faster return to work. Therefore, these advantages might not only reduce the costs of the hospital stay for the health systems but also positively influence the social costs, allowing patients to resume their work significantly earlier and avoid long periods of inactivity.

In recent years, the use of laparoscopy became popular in colorectal surgery and surgical good oncologic results.

The technological improvements in this field include the development and perfection of laparoscopic instruments, including endo-staplers and harmonic scalpels[47].

The resected specimen is then extracted through dedicated miniincisions that can be made even smaller (if an intracorporeal anastomosis is performed, less painful (if muscle-splitting rather than muscle-cutting methods are used), and extremely low and concealed (i.e., so-called mini-Pfannenstiel incision in suprapubic site, just below the ''bikini'' line or level of underwear and therefore less apparent. Compared with oblique incisions in the right hypochondrium for right colectomy with eventual extracorporeal anastomosis, in the left iliac fossa for left colectomy, or with enlarged midline umbilical incisions, the suprapubic miniPfannenstiel incision to extract the surgical specimen has been shown to be associated with much a lower incidence of surgical site infections (SSIs)[1]. This kind of SSI often persists for several weeks, requiring repeated wound care, outpatient clinic appointments, delayed wound healing, and eventually even delay to the resumption of normal independent daily living, such as attending to personal hygiene and mobilizing. Furthermore, when associated with intracorporeal anastomosis, a suprapubic mini-incision of a few centimeters carries the risk of postoperative incisional hernia close to 0%,[2] which is significantly lower when compared with oblique or midline incisions and hypochondrial or iliac incisions. The transverse muscle-preserving approach[5] or muscle-splitting techniques are also advocated as an alternative for off-midline extraction site, yielding the lowest rate of incisional hernia development[41-42].

LAPAROSCOPY FOR ABDOMINAL EMERGENCIES

Nevertheless laparoscopic surgery is extensively used in elective surgery, for emergency surgery it is still considered too challenging and is not usually recommended. There are numerous reasons such as the laparoscopic skills of the operator usually limited to elective settings, the technical struggle in the presence of diffuse peritonitis, large purulent collections and diffuse adhesions, anesthetic concerns in the presence of comorbidity and older patients, and last but not least, the limited operating room resources during night time and after-hours shifts because the procedure is limited by time as well as by tha accessibility of equipment and surgical personnel, especially in rural hospitals.

These and many more issues contribute to make a laparoscopic approach challenging and risky in an emergency setting and prevent the development of ''laparoscopic emergency surgery.'' [1]

We have therefore reviewed the most recent scientific literature on advances in laparoscopy for acute care surgery and trauma in order to demonstrate the current indications and outcomes associated with a laparoscopic approach to the treatment of the most common emergency surgical conditions[41-49].

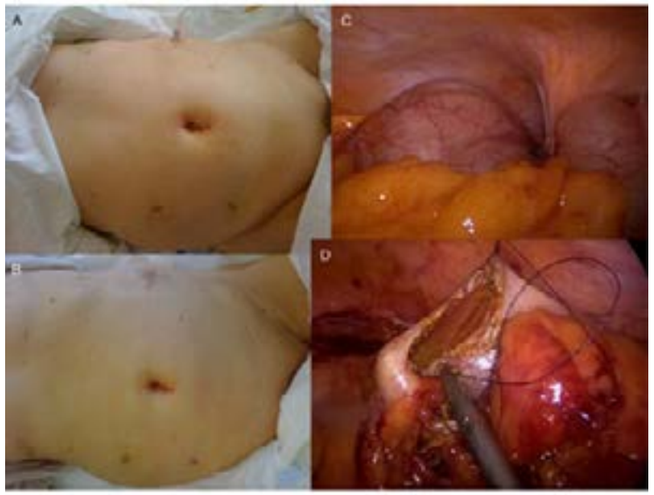

Figure 1.

A , Functional and aesthetic outcome in a 79-year-old patient operated for large-bowel obstruction from obstructing descending colon carcinoma, after 3 days from a totally laparoscopic left colectomy with intracorporeal colocolic laterolateral anastomosis and extraction of the surgical specimen through the umbilical access. The umbilicus is used for the camera. Operative trocars are in the right flank and an additional port is in the left flank for the assistant surgeon and useful as well for approaching the mobilization of the splenic flexure. This port can then be used for drain insertion. The specimen (obstructed descending colon) is extracted through a small enlargement (3.8 cm) of the umbilical port (see also Video, SDC 1, http://links.lww.com/TA/A428).

B, The same patient is discharged on fourth postoperative day after passing stools and removal of the abdominal drain (see also Video, SDC 1, http://links.lww.com/TA/A428).

C, The obstructing carcinoma of the descending colon is clearly visible. Marked stenosis and distension of the proximal large bowel are also evident.

D, After resection, a laterolateral intracorporeal colocolic stapled anastomosis is fashioned. The enterotomy is closed with interrupted 3/0 vycril stitches. Big bites of seromuscular layer are taken, and the extremities are carefully closed with large margins. The assistant surgeon is holding the margins and gently pulling upwards the enterotomy to prevent copious fecal spillage from the proximal obstructed colon, while the operating surgeon is stitching and closing the hole.[1-41]

ACUTE APPENDICITIS

Laparoscopic appendectomy (LA) was first described back in 19834 and some of its benefits were immediatly apparent: superior visualization of the peritoneal cavity, enabling the diagnosis of alternative diseases in the case of a normal appendix and, last but not least because acute appendicitis is the most common surgical disease in young people, cosmetic considerations.[2]

LA is now well accepted as the gold standard of care in cases of acute appendicitis[5,6]. Many studies demonstrate LA to be feasible, safe and effective. These studies show LA to be superior to OA due to shortened hospital stays, lower complication rates, earlier return to work and resumption of normal activity. LA can be considered the gold standard in premenopausal woman, in the elderly and obese patients. Despite evidence that consider LA safe in pregnancy, advantages are minor when compared to the risk of fetal loss, which seems greater with LA than with OA.

The disvantages of LA than OA is higher cost and difficult technique and surgical skills if compared to OA. Operative times are predominantly surgeon dependent and increases in the learning curve correlate with a reduction in surgical time. Much of the costs for LA result from the routine employment of staplers as well as disposable devices[50].

Stapler reduces operative time and superficial wound infection, but not significant differences are evidenced in the rate of intra abdominal abscesses6

Although staplers are easy to use, quick and provide a secure closure of the appendicular stump, equally safe and inexpensive options have been described to secure the stump. Endoloops and intracorporeal knotting have been shown to be alternative methods[7]. Loops are not recommended in cases where there is a perforated base or when inflammation occurs on the caecum wall. In such cases a stapler is preferred as the safer method of closure. Economic analyses have been performed for the use of staplers and other disposable devices as well as for the indirect costs associated with lost productivity during hospitalization and subsequent recuperative periods. Considering these costs, studies indicate LA to be less expensive than OA overall. Even when high costs of Laparoscopic conversions to open procedures are factored into the cost analysis, LA remains the most cost-effective procedure in use today[41-47].

ACUTE CHOLECYSTITIS

All the recent guidelines consider laparoscopic cholecystectomy as the gold standard for the treatment of acute calculous cholecystitis

Acute calculous cholecystitis is one of the most common conditions faced by a general surgeon. Gallstones are estimated to affect about 10%-15% of Western populations, of which 1% to 4% will develop acute cholecystitis or symptomatic cholelithiasis every year. In the US about 1.5 million cholecystectomies are performed annualy, of which 70%-90% are carried out laparoscopically[9].

The superiority of laparoscopic cholecystectomy (LC) over the standard open procedure for the treatment of acute cholecystitis is well accepted such as has been demonstrated in four randomized controlled trials (RCTs). They show that wound infection and pneumonia rate favored LC, while bile leakage did not differ significantly between the two group. Nowadays there are many data that declare laparoscopic cholecystectomy as the gold standard in the treatment of the acute calculous cholecystitis

The optimal timing of surgery in cases of acute cholecystitis has always been a topic of debate. Because until recently laparoscopic cholecystectomy is associated with higher morbidity rates and higher conversion rate to open procedure in emergency procedures. For this reasons, in the past, patients were managed conservatively with initial antibiotic treatment and resuscitation for the pourpose of cooling down the inflammatory process and followed by elective laparoscopic surgery about 6 weeks after the acute attack [12]. Current data suggest that early laparoscopic cholecystectomy for acute cholecystitis is superior to late or delayed laparoscopic cholecystectomy in terms of outcome and costs. During the first 72 h surgical dissection may be easiest because of the lack of organized adhesions, reducing the risk of bile duct injuries and decreasing the rate of complications. The concept of early cholecystectomy has now been discussed by some authors: although guidelines recommend laparoscopic cholecystectomy within the first 48-72 h after symptom onset, should be considered the “golden hours”, a recent randomized trial has showed laparoscopic cholecystectomy performed within 24 h of admission to be superior when compared to delayed laparoscopic cholecystectomy.[13]

Several studies confirm that laparoscopic cholecystectomy, like EAES guidelines published in 2012, is indicated also for empyema, perforated or gangrenous cholecystitis, despite likely to be associated with increased operative difficulty[41].

PERFORATED PEPTIDIC ULCER

Peptic ulcer remains the most common cause of gastroduodenal perforation, with incidence ranging from 2 % to 10 % of abdominal emergencies. This are many cause like increasingly use of anti-inflammatory drugs (NSAIDs), especially in the elderly with considerable comorbidity, where a high mortality rate (up to 25 %) and a morbidity rate of up to 50 % have been reported, even in recent studies[15].

The surgical treatment of PPU consist of the repair of gastric or duodenal defects by primary suture, omentum patch, synthetic material patch or resection. There is some variability of the techniques used in laparoscopic repair of the PPU and the ideal technique should respond to some basic requirements, such as the relative easy of implementation with reduced operating times and reliability, in terms of reduced morbidity (in particular of reducing the risk of leakage). The criteria to choose the method of closure basically depend on the characteristics of the lesion: in case of ulcer edges easily closed without tension, just the simple suture with any omentum plastic is enough; instead, if the margins are edematous or little sliding, the repair will be done by affixing omental patch.

The first repair a PPU was described at the beginning of the laparoscopic era many years ago16. The laparoscopic approach to PPU has several advantages including the confirmation of the diagnosis, the subsequent identification of the ulcer and possibly its closure, with lavage of the peritoneal cavity. Notwithstanding, only a few randomized trials were conducted comparing laparoscopic vs open repair of PPU and none of them reported statistically significant differences with regard to post-operative pain or complications18. The exception to this is a recent randomized, controlled trial showing laparoscopic repair of PPU to be associated with decreased post-operative pain, hospital length of stay and morbidity. Although laparoscopy for PPU provides potential advantages over open repair in terms of postoperative morbidity and mortality, published data are sparse and further randomized controlled trials with larger sample sizes are needed to arrive at substantiated conclusions[17-41].

ACUTE DIVERTICULITIS

Colonic diverticula is a very common disease, approximately 60% of people over 80 years old, but of these only 4% of them will eventually develop an acute episode of diverticulitis.

Uncomplicated diverticulitis should be treated conservatively with antibiotics and not undergo emergency surgery.16 Complicated cases of diverticular disease are classified according to the modified Hinchey classification. Stage I indicated the presence of a pericolic abscess of less than 4 cm without peritonitis and can be managed successfully with broad-spectrum antibiotics, bowel rest and observation only. Stage IIa indicates distant abscess, it can be treated with percutaneous drainage, stage IIb indicates complex abscess with or without fistula, and diffuse peritonitis is classified as stage III (purulent) or stage IV (fecal).

Since some years ago the traditional surgical treatment of Hinchey III and IV patients includes open sigmoid colon resection with end colostomy and left hemicolectomy with primary anastomosis with or without diverting stoma, with hight mortality rate, about 10–20 %, and morbidity rate, like anastomotic leakage[17], up to 14%[48].

From 1996 for stage IIb and III laparoscopic lavage is indicated, with the aim to potentially spare the patient from a major bowel resection and stoma creation. Abundant lavage of the peritoneal cavity and positioning of multiple (at least 2) drains is indicated with adeguate antibiotic therapy.[18,19,20,41]

In Hinchey stage IV colonic resection can be performed laparoscopically by experienced hands[52].

SMALL BOWEL OBSTRUCTION

Abdominal adhesions are the most common cause of intestinal obstruction, responsible for 60-70% of small bowel obstruction. Laparotomy is one of the most important causes of adhesions in the abdominal cavity. The first adhesiolysus for small Bowel obstruction is reported in 1990. The main advantages of laparoscopy vs open

surgery for SBO concern the postoperative recovery, as well as the reduced rate of postoperative laparotomy-related adhesions and ventral hernia.[21]

Higher rates of reoperation, unrecognized enterotomy, and inability to properly evaluate compromised bowel have all been cited as disadvantages to laparoscopic intervention for SBO. In addition, a higher rate of bowel injury associated with laparoscopy for SBO has been reported[22]. This likely depends on the grade of adhesions, surgeon experience, the use of thermal coagulation for dissection and the impaired tactile feedback during laparoscopic manipulation[43].

Laparoscopic adhesiolysis for SBO is recommended in selected patients with no more than two prior operations, especially in cases of appendectomy or cholecystectomy, with a suspected single band obstruction and early onset of symptoms, and small bowel loop diameter > 4cm[23-25-41].

VENTRAL HERNIAS

Ventral Hernias is the second most common cause of occlusion of the small intestine after bowel adhesions. Urgent surgical procedures may be required in 5–13% of incarcerated abdominal wall hernia cases and intestinal resections may be required in 10–15%[26-27].

In 2012, the Consensus Development Conference on Laparoscopic approach to acute abdomen (SICE, ACOI, SIC, SICUT, SICOP, EAES) confirmed that the laparoscopic approach to incarcerated ventral and incisional hernias may be performed in selected patients. Good experience in emergency surgery and in laparoscopic repair of the abdominal wall in elective patients is always strictly required.

Patients should be selected for laparoscopic repair according to the following criteria:

- Absence of marked abdominal distension, bowel distension with a diameter > 5 cm increase risk for conversion to open surgery.

- Absence of peritonitis and absence of clinica signs od intestinal ischemia.

- Absence of high-septic-risk situations, such contaminated skin lesions or enterocutaneous fistulas

- Absence of major defects with loss of domain or hernias that do not allow the laparoscopic approach with adequate overlap of the mesh

- Absence of hemodynamic instability and severe comorbid conditions

- Morbid obesity 41

INCARCERATED/STRANGUALTED HERNIAS

Only 0,29-2,9% of cases of hernias became incarcerated.

From 1993, is demonstrated the superiority of hernia laparoscopyc repair, in particular for inguinal or femoral hernia.

The mini-invasive repair of rare abdominal wall acute hernias, such as supravesical and spigelian, is rarely described. Althout there are several articles on the laparoscopic repair of incarcerated internal hernias such as the paraduodenal, paracecal, broad uterus ligament, transmesosigma, and iatrogenic (caused by surgical changes to the anatomy) hernias.

The acute incarceration of paraesophageal hernias can be a life-threatening surgical emergency; it often occurs in elderly patients with significant comorbidities who have historically been treated with open abdominal or thoracic incisions, both of which are associated with significant morbidity and mortality. However, emergent laparoscopic repair of acutely symptomatic paraesophageal hernias, even when large and incarcerated or strangulated, is feasible, safe, and effective and may achieve better outcomes. This advantage is even more significant in elderly patients with comorbidities who may receive the greatest advantages from minimally invasive surgery and experience less postoperative pain[1,41].

ABDOMINAL TRAUMA

Trauma patients are particularly frail since most of them have multiple organ injuries.

Laparoscopy may be an accurate diagnostic tool for abdominal trauma, because it is particularly useful in the diagnostic of intra-abdominal organ injuries for hemodynamically stable trauma patients with doubtful clinical or imaging findings and it is has been demonstrated to be able to decrease the rate of nontherapeutic laparotomies and minimize patient morbidity[38-39]. The peritoneal cavity should be examined systematically, beginning with the right-upper quadrant and proceeding clockwise, taking advantage of patient-positioning manipulations. Suction/irrigation may be needed for optimal visualization, and methylene blue can be administered to help identify gastrointestinal injuries. In penetrating injuries, peritoneal violation can be determined. The surgeon should not hesitate to convert to an exploratory laparotomy if he or she is not confident that there are no missed injuries[40.] Therapeutic laparoscopic options have increased in the last few years to manage hemoperitoneum, diaphragmatic, mesentery, and hollow viscus injuries and to avoid nontherapeutic laparotomy, and to treat perforating stab wounds of the gastrointestinal tract that can be sewn or stapled safely when laparoscopic expertise is available[41]. Procedure-related complications occur in up to 11 % of patients. Tension pneumothorax in patients with diaphragmatic injury from positive-pressure pneumoperitoneum ; gas embolism in patients with intra-abdominal venous injuries, especially in liver lacerations; and the transperitoneal absorption of carbon dioxide (which may cause metabolic and hemodynamic changes such as acidosis, cardiac suppression, atelectasis, subcutaneous emphysema, and increased intracranial pressure) might result in more profound and in some cases life-threatening consequences for the trauma patient and, as a consequence, clearly limits the potential indications for exploratory laparoscopy to a small number of very selected cases[44].

In these patients in fact, inflicting less trauma by using laparoscopy may represent a significant potential for decreasing the further release of proinflammatory elements with secondary injury to lungs and kidneys, in addition to what is already caused by their primary traumatic injury[41].

CONTRAINDICATION

The only real contraindication to the use of laparoscopy in an emergency setting as an acute care surgery procedure is in patients exhibiting hemodynamic instability and severe hemorrhagic or septic shock. The induction of pneumoperitoneum and venous flow return compromise may be easily fatal in such cases. A further relative contraindication to be considered remains a severe respiratory failure with severe hypercapnia, owing to the possible reabsorption of CO2 and development of malignant hypercapnia and toxic shock syndrome. However, a wise ventilatory strategy, increasing the minute volume of ventilation, and further measures by decreasing the intra-abdominal pressure and the angle of Trendelenburg position might be helpful in mitigating these challenges. For the remaining categories of patients, provided that they are hemodynamically stable and not in septic or hemorrhagic shock, the benefits of laparoscopy and minimally invasive techniques result in an exponential increase of the advantages in terms of postoperative recovery and fewer wound complications52-51. These benefits are relevant not only in young patients but, contrary to commonly held beliefs, even more significant in the elderly patients. The advantages of laparoscopy will be greater in an elderly patient presenting with diffuse peritonitis, who may avoid a large and painful laparotomy incision. Avoiding a median laparotomy incision can also significantly decrease the risk of wound infection and dehiscence45. Laparotomy is invariably associated with significant postoperative pain, which can cause cardiovascular and respiratory complications (less depth and effectiveness of breathing as a consequence of attempting to reduce pain at every movement, ultimately leading to an increased risk of atelectasis and pneumonia) as well as circulatory complications (delayed mobilization with consequent increased risk of deep venous thrombosis and possible pulmonary embolism). All these negative consequences will be much more significant in an elderly patient compared with a young patient who undergoes a small open appendectomy for a slightly inflamed appendix or a simple open cholecystectomy for gallstones, requiring limited open surgical incisions (i.e., Mc Burney or Lanz incision or a right subcostal)1,41.

CONCLUSION

Surgery is a evolving discipline and laparoscopy is the direct result of surgical progress.

If the recent concept of emergency surgery has evolved and merged into the entity of acute care surgery29, where the surgeon has specific skills and dedicated education30, the new concept of ‘‘acute care laparoscopy’’ is emerging, where the surgeon should be able to combine the skills and experience of both acute care emergency surgery with laparoscopic ability and minimally invasive techniques. Emergency laparoscopy is now becoming a new discipline, aiming to join together the difficult issues of emergency surgery with the potential advantages of minimally invasive surgery techniques. This new branch, bridging laparoscopy and emergency surgery, has the potential to extend advantages,

traditionally limited to the elective patients, to a wider population of patients, often older and with comorbidities, presenting with acute abdomen or acute surgical conditions[1,41].

Table 7.1 EAES 2006 and 2012 Guidelines "evidence" of the effectiveness of laparoscopy in acute abdomen

	2006 consensus	2011 consensus
Perforated gastroduodenal ulcer	+++	++
Acute cholecystitis	+++	++
Acute pancreatitis	+	++
Acute appendicitis	+++	+++
Acute diverticulitis	–?	+
Small bowel obstruction	+?	+
Incarcerated hernia	+?	+
Ventral hernias		+
Mesenteric ischemia	–?	–
Gynecologic disorders	+++	+++
Nonspecific abdominal pain	+++	+++
Abdominal trauma	+?/–?	+

+, effectiveness from strongest (+++) to weakest (+); –, no effectiveness; ?, doubtful effectiveness

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Teaching living donor nephrectomy: from learners to leaders

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Abbreviation:

LDN: laparoscopic live donor nephrectomy

Since its first description in 1995[1], laparoscopic live donor nephrectomy (LDN) has evolved with regards to number of ports inserted (3/4) and incisions to retrieve the kidney (via Pfannestiel, McBurney etc). Lots of different instrumentations also played a major role, from bipolar cautery to ultrasounds and thermic scalpels.

The purpose of this manuscript is to describe a simple and standardised approach to train to the acquisition of minimally invasive skills in minimally invasive LDN.

As an essential requirement to start a training program, the volume of the centre should be at the upper limit, i.e. >50 procedures/year; only in this way in fact a rigorous process of safety in delivering essential knowledge and competency towards efficiency and independency of the learners could be guaranteed. Furthermore, a deep understanding not only of the surgical technique, but also of the whole renal transplant process and its potential pitfalls/complications is mandatory to fully embrace the reality of live donation.

As a unique operation where the margin for error is nearly nil, meticulous attention to technical details should be a constant during training and afterwards as an attending. Additionally, the patient is essentially harmed for an altruistic goal, therefore, the "first do not harm" principle should be really emphasized when planning every single move[2]. Every complication occurring in this scenario has in fact an increased effect, since the donor is actually a healthy individual by principle and who doesn't need an operation but is undergoing it only to benefit the potential recipient; hence s/he should really not be exposed to any additional risk.

The extra carefulness to prevent any "never event" is indeed one of the reasons why some surgeons find particularly stressful to perform LDN or to train other colleagues, therefore, to learn well ahead how to manage early not only the pressure, but also the technicality of the operation, is foremost to succeed.

As prerequisites for the learners, a previous good exposure in laparoscopic surgery, such as several laparoscopic cholecystectomies, is fundamental before approaching a more complex procedure as it is LDN, therefore its training should be reserved to senior general surgical/urological posts[3].

Knowing the patient's history in advance, as well as having reviewed the CT angiogram or any other relative imaging, as for example the split kidney function, and having visited the patient her/himself is also good practice, to mentally visualise the possible development of the procedure and let the trainee gain confidence in understanding the case. Finally, it is always recommended to check the instrumentation ahead with the theatre staff and ensure a valid replacement is available, particularly in the eventuality that staplers misfire and/or a rapid conversion could urgently happen. In this unfortunate event, aside from firmness and correct decision-making skills, to know how to operate as an open surgeon to fix a major bleeding or another damage (i.e., bowel injury), requires advanced expertise and the presence of an experience attending to ensure patient's safety.

As mentioned above, to mentally visualise the procedure is key to foresee and handle unpredicted events: from simply knowing the steps, a more reasoned approach will imply to choose the best way to deal with an anatomic variation or control an additional unusuality to prevent damage. These will all translate into skills that will let the trainee progress through the different cases, as for example from the left sided single vessels LDN in a previous naïve abdomen to start with, towards a right-sided operation in an overweight man with previous abdominal surgeries.

One of the initial phases that could potentially be underestimated, but that it is crucial for the smooth proceeding of the rest of the LDN operation, is the positioning of the patient and the ports incision. The correctness of this will generally allow a quicker and easier individuation of the main structures, so extra time, particularly for the new starters, to dedicate at these aspects could result in greater gain at the end of the procedure.

To break down the operation into different steps allows the trainee(s) to better learn each of those, as focusing only on that one, and also guarantees the maximum of concentration to every technical detail, as of course extra difficulty is required from the trainee before reaching the point on which s/he could master the operation with confidence. This approach might also allow multiple learners to experience and advance on a single case, to ensure the same principle of patient's safety with the minimal exposure risk, as well as the possibility to scrub on multiple procedures at different stages.

The main stages of LDN could be summarised as below:

1) Mobilisation of the colon

2) Identification of the ureter and gonadal vein

3) Dissection of the ureter

4) Identification of the renal vein

5) Mobilisation of the lower pole of the kidney

6) Dissection of renal vein and division from lumbar branches

7) Dissection of the renal artery

8) Dissection of the adrenal vein

9) Mobilisation of the upper pole

10) Division from the adrenal gland

11) Division of the gonadal vein

12) Freeing the kidney form the medial and lateral adhesions of the Gerota's

13) Creation of the incision

14) Stapling of vessels

15) Kidney retrieval

16) Haemostasis

17) Check/repair of the mesentery

18) Closure of the ports and the skin incisions

The principle is to let the trainee familiarise and acquire confidence with each of the phases before performing the whole procedure; this will also guarantee the required efficiency for theatre time and patient's safety. The more frequent is the succession by which the trainee will progress through the cases, the more rapid will be his/her learning curve, as of course the experience of the previous cases will still be robust enough to enhance the following performances.

Additionally, to let the trainee start with the most difficult phases first could be useful, as s/he will have full concentration to learn on these and their understanding will facilitate the completion of the remnant training.

Most of the initial approaches require for the trainer/leader to assess the laparoscopic skills of the future trainee: his/her capability to handle the laparoscopic instruments, the use of both hands, the correct amount of force to precisely and efficiently handle tissues and the knowledge of the anatomy. This could be for example assessed during phases 11, 13 or 15.

Once the above is reached with confidence, the vascular dissection could be the following step: identification of the renal hilum, with renal artery and vein completely freed up and ready to be stapled (phases 4,7,8,11 and 14). The guide in this phase is to keep the instruments not too high on to the hilum, as division of unseen ramifications could happen with kidney damage or major bleeding. Good practice imposes to be prepared for this eventuality and think ahead how to handle the potential complication, to better see and retract with additional ports, to change grip or for eventually to convert. Having this conversation during the operation could help in prevent potential harmful situations and correct avoidable mistakes accordingly.

As a third step, phases 9 and 10 could follow on and finally step 4 would be the mobilisation of the colon (phase 1), as in this way, the trainee will have already learnt the most difficult parts, so s/he will find easier to progress to the end as a whole procedure until the very last phases.

The haemostasis, check of the mesentery, and closure of the skin incisions should importantly not be underestimated as attention to details is mandatory to avoid internal or incisional hernias, as well as return to theatre for uncontrolled

The haemostasis, check of the mesentery, and closure of the skin incisions should importantly not be underestimated as attention to details is mandatory to avoid internal or incisional hernias, as well as return to theatre for uncontrolled bleeding, once more on someone who actually did not need the original operation, as a healthy live donor. These final phases often require the mastering from the leader her/himself, as the responsible for the patient care.

In conclusion, the main difficulty in training for minimally invasive LDN is that the individual on which practice is going to be made is a healthy person, therefore extra meticulousness and attention to details are mandatory. A standard approach, repeatable and simple in its succession is key for a proper understanding together with the enhanced frequency on the cases in which the trainee will scrub. For this reason, only a high-volume centre could be a training centre. Finally, to start with the most difficult phases might be helpful to help the mentee navigate with progressive confidence towards the whole procedure, but the leader might have to adjust the mentoring approach to different skill sets.

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ASGBI Surgery Articles

We have included the latest three articles of ASGBI Surgery which are most interesting for all general surgeons to give a flavour of the submissions. Further articles can be found here.

The impact of the Surgical Assessment Unit on Emergency and Ambulatory Surgical Care in a District General Hospital

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Introduction

The concept of a single door policy for surgical emergency admissions via the ED is gradually becoming outmoded. Due to sheer necessity, there has been a paradigm shift as the emergency surgical services have evolved into a more efficient and expedited pattern of surgical assessment and management. There have been several factors which have determined the increased use of the emergency department. Heightened patient awareness and a change in access to the family practitioners have led to increased number of self-referrals to the ED in secondary care. An ageing population and increasing and improved treatment of pathologies combined with the practice of defensive medicine has compounded the problem, increasing the number of admissions. This in turn has had a detrimental effect on health economics. The prevalent COVID-19 environment has also heightened the awareness of all the above factors and their impact.

Traditional concept of emergency care involved all attendees including referral from primary care to be routed and assessed via the ED. Initially the physicians were the first to embrace the concept of ambulatory care treatment in tackling the problem of increased emergency admissions by stratifying them and probing means to managing them without admission. It was also effective in reducing the ED assessment burden and had an effect on the timing targets[1].

The increase in sheer numbers accessing secondary care for surgical pathologies and an increase in timescale of patient flow due to paucity of beds has inevitably led to a delay in patients receiving medical attention and treatment. This in turn has led to trusts not meeting the government targets leading to financial penalties! Guidelines for best practice also dictate that patients are better treated if assessed in appropriate specialist units with improved specific skillsets. It is known that outlying ward patients had increasing complication rates and inpatient mortality rates[2].

The secondary or snowballing effects of increased emergency admissions meant that scheduling of elective operations could not be adequately planned leading to increased number of last-minute cancellations, patient dissatisfaction and customer complaints. There was also escalation of waiting times for outpatients' appointments and no provision for expeditious post investigation management decision for semi-urgent surgical admissions.

The majority of the surgical patients seen on an emergency basis can be safely managed as 'ambulatory care'. It is known that only 25% of patients with abdominal pain would need emergency surgery[3]. With the above facts considered in the delivery of emergency surgical care, demands literally dictated the decision: the idea of an SAU was conceived, and the unit came into existence.

The unit was staffed by a Physician Associate and 4 Advanced Nurse Practitioners, and the pattern of work was fitted formally on a 5 day/12-hour schedule.

Aims and Objectives

The SAU was created with the following aims and objectives in mind:

1. Reduction in the number of 4-hour breaches in ED.

2. Reduction in the number of semi-urgent admissions being admitted purely for investigations.

3. Provision of direct access for emergency surgical admissions seen and referred from primary care; Expeditious service for surgical patients by facilitating early assessment by senior clinicians.

4. Demonstrate a reduction for follow up appointments in the outpatient setting.

5. Providing a location for Day of Surgical Admission (DOSA) patients for preoperative assessment by anaesthetic and surgical staff.

The impact of the SAU was assessed by objective measurement of some of the above factors during a specific timescale and this was compared to a similar time period before the existence of the SAU.

Methodology

The audit plan was approved by the hospital audit committee. No ethical clearance was required for this study. Data collection was performed by SAU staff over a 2-month period (June – July 2019). This was done prospectively and consisted of all the patients admitted into the SAU during this period and was done with the help of proformas, ward diaries and electronic patient record (EPR). All the figures were populated onto an Excel spreadsheet.

The patients were categorised into the following groups: emergency surgical / urology admissions from ED /direct referrals from primary care/ patients attending for and after investigations with set appointment times / DOSA patients. All patients had their time of arrival and departure from the unit logged and also the reason for attendance and outcome.

The pre-SAU and post-SAU figures were compared to evaluate any quantitative improvement in the surgical services consequent to the formation of SAU. The pre-SAU data was acquired from the hospital data system.

Results

During the audit period over 2 months there were 156 patients attended for emergency care and there were 190 ward attenders for follow up care. There were also 172 patients routed through the unit as DOSA (Table 1).

Table: 1

	Emergency Patients	Ward Attenders	DOSA
June 2019	71	86	84
July 2019	85	104	88
total	156	190	172
percentage	30.1	36.7	33.2

Breakdown of patients of seen in SAU over June and July 2019. Percentages represent the breakdown of the total number of patients. (DOSA= Day of Surgery Admission).

Of these emergency patients, majority of them were either ambulated with a definite plan for follow up or discharged. The latter decision was executed within 4 hours stay at the Unit in the majority of cases facilitated after being seen by a senior clinician (Table 2).

Table: 2

	Admitted	Ambulated	Discharged	Total
June 2019	29	26	16	71
Average time	5hrs 44mins	3hrs 10mins		
July 2019	18	17	50	85
Average Time	6hrs 18 mins	3hrs 3 mins		

Outcomes of emergency patients. Average time shows the amount of time patients spent on SAU. Longer times for patient admission were due to bed availability on the surgical wards.

Audited figures were obtained from the ED with regard to their four-hour breaches of surgical attendees and the percentage of compliance with the government target during the period of our SAU audit and compared with a corresponding period in the pre-SAU era. (Table 3).

Table: 3

	Surgical Attendees	4hr Breach	% Compliance
June 2018	248	112	54.8
July 2018	307	234	23.8
June 2019	275	209	24.0
July 2019	256	174	32.0

Number of patients attending the Emergency Department (ED) Comparison of 4hour Emergency Department breaches year on year.

The non-emergency SAU ward attenders consisted of ambulated patients attending after or for investigations, referrals from surgical wards for post-operative check and also surgical patients discharged from ED. The majority of these attenders were discharged without follow up while a few needed further surveillance attendances. A small number of patients were referred to the outpatient clinic or admitted (Table 4).

Table: 4

	June 2019	July 2019
Ambulatory outcomes	**Number of patients**	
Discharged without follow up	57	53
Further appointment at SAU	20	46
Referred to OP clinic	7	2
Directly admitted	2	3
Total number of patients	86	104

Outcomes of ambulatory patients moving through SAU

The numbers of patients being admitted overnight purely to facilitate investigations showed a reduction after the establishment of the SAU (44.6% difference). There was also a reduction of new surgical patients referred to OPD post discharge when compared to a similar time period pre-SAU era (Table 5).

Table: 5

	June-July 2018	June-July 2019	
	Number of patients		**%difference**
Number of patients admitted with one day LoS	103	57	44.6
New surgical OP requests	50	43	14

Year on year comparison showing the reduction in the number of patients admitted for investigations with a one-day length of stay (LoS) and the number of new surgical patients referred to the out-patient (OP) clinic post discharge.

Discussion

The concept of an SAU although initially designed purely out of increasing demand and inability to cope with increased admissions and breach of targets has developed into a fully functional unit contributing efficiently towards emergency surgical care. It is not without inherent or potential problems.

We are unable to explain that the existence of the SAU has had absolutely no impact on the ED 4 hour waiting target. In fact, in one of the months, compliance had actually decreased in comparison.

While this could be purely due to a mismatch in supply and demand, it does not meet existent targets and may need focussing on staffing levels and triaging schedules and protocols. However, on a nationwide basis it is notable that in 2018-2019 only 88% of the ED patient attenders were managed within 4 hours. According to the nationwide ED survey the standard of 95% has not been met since 2013 although in some months this was possible[4].

A previous study by Mohammed and Mufti found that the analysis of their admissions after creation of an SAU, demonstrated that the majority of their patient admissions (64%) came from non-ED sources[5]. These patients would have been seen primarily in the ED thus delaying their time to treatment and management by senior clinicians. It was certainly advantageous for primary care to refer straight onto SAU and the patients assessed expeditiously by senior nurses and clinicians with specialist skillsets. Management decisions were not deferred and surgical admissions with zero length of hospital stay increased when compared to a pre-SAU era.

The audit proved that the patients received urgent assessment and were dealt with earlier than if they travelled through ED. It created a better bed flow in the surgical unit by providing a venue for same day care. It reduced the number of outlying surgical patients. Studies have proven that efficiency of care is provided if patients are lodged in in-house speciality wards. Patients treated in outlier wards of different speciality had more complications and higher mortality rates[6].

Snapshot comparison of pre-SAU and post-SAU periods showed an increase in the number of surgical patients seen. However, 78% were either discharged or managed as ambulatory care patients. The patients with decision for admission did stay longer in the unit. However, it is to be noted that they were being treated and cared for in a specialist surgical environment while waiting for a bed in a surgical ward.

The new SAU also functioned as a reception venue for DOSA patients. The functionality parameters of the unit for this have not been evaluated in this study. However, the unit facilitated the streamlined flow of surgical patients functioning as a reception area for pre-operative workup. It also helped by providing postoperative bedspace for a small number of patients undergoing minor surgery. Simulation studies have shown that design of such a unit could eliminate the bottlenecks precluding efficient day of surgery case management[7].

Emergence and continued existence of an SAU has revolutionised emergency surgical caseload management. In fact, it has become a victim of its own success with rapid expansion of facilities provided. It was also vital during the COVID-19 pandemic when the ED was bypassed for all surgical admissions and surgical cases were assessed in a streamlined manner in a controlled PPE rich environment.

Conclusions

SAU in our setting has clearly demonstrated its benefits by qualitative and quantitative improvement of emergency care delivery as anticipated.

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Case Matched Study Exploring Differences in Outcomes between Elective and Non-Elective Laparoscopic Cholecystectomy

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Introduction

Laparoscopic cholecystectomy is one the most commonly performed abdominal surgeries worldwide[1]. It is not only considered one of the most routine but also that of low risk. Laparoscopic cholecystectomy introduced in 1989 revolutionised treatment for gallstone disease[2]. About 750,000 Cholecystectomies are performed in the USA every year and the vast majority of those are by laparoscopic approach[3]. Gallstones are at the top reasons leading to gallbladder removal surgery. However other reasons include acute cholecystitis, symptomatic chronic cholecystitis, gallstone pancreatitis, choledocholithiasis and cholangitis, gangrenous cholecystitis, acalculous cholecystitis and Mirizzi's Syndrome –Type1. Previous studies have shown an excellent safety profile in the elective laparoscopic cholecystectomy setting however some now advocate this to be extended into the non-elective setting[4,5].

Due to concerns about poor surgical outcomes and higher rates of severe disease, patients with cholecystitis are more likely to forego definitive surgery in favour of conservative management[6,7]. However, in these patients long term outcomes after surgery compare favourably with prolonged conservative management, with lower 90-day mortality in those having laparoscopic cholecystectomy than those managed conservatively[5]. Although the procedure carries risk, subsequent complications of gallstone disease are prevented. Post-operative morbidity and mortality are slightly higher in patients undergoing laparoscopic cholecystectomy than in the general population[5,7]. It is therefore important that effective strategies are employed to improve safety in these patients.

When cholecystectomy is performed in the context of acute cholecystitis, current Association of Upper Gastro-Intestinal Surgery (AUGIS) guidelines advocate for early surgery within 72 hours of the onset of symptoms. In the general population, this is associated with similar complication rates to delayed elective surgery but has the benefit of reduced overall hospital stay and prevention of further episodes of cholecystitis[8,9].

Non-elective laparoscopic cholecystectomy is being carried out increasingly with evidence being published suggesting that earlier operative management minimises the risk associated with the disease and provides easier technical approach to the surgeons since the inflammation has not progressed[10]. However, earlier approach carries out the risk of operating on a systemically unwell patient and gives less time for pre-operative optimisation. The outcome of laparoscopic cholecystectomy performed in the non-elective setting have shown mixed results with certain studies advocating that this is as safe as elective procedures[11,12] whereas some have shown increased morbidity and mortality[5,7].

Delaying surgery can put the patient through unnecessary delay and potential complications and risks of pancreatitis, cholangitis, and recurrent episodes of acute cholecystitis. The aim of this study is to compare outcomes in non-elective and elective laparoscopic cholecystectomies in terms of outcomes such as major complication rates (bile leak, bleeding, bowel injury, collections, retained stones, sepsis), conversion to open surgery and length of stay.

Methods:

This study was a 2:1 case-controlled study matched for aged and was performed using data from both sites which was prospectively maintained over a 5-year period at the West Hertfordshire Hospitals NHS Trust, UK and St George Hospital, Sydney, New South Wales, Australia.

All patients who required a laparoscopic cholecystectomy for acute cholecystitis or biliary colic were included in this study. As per the hospital's policy, all laparoscopic cholecystectomies were performed by a dedicated upper gastro-intestinal surgical team consisting of four Consultant Surgeons, a full time Surgical Fellow and junior staff. Theatre records detailing information such as patients' demographics, duration and time of procedure, whether the procedure was performed on an elective or non-elective basis, were entered electronically into a hospital database by members of staff in real time. An electronic search of this database was carried out to identify all laparoscopic cholecystectomies at this centre during the time specified.

Demographic characteristics such as patient demographics, date of surgery, surgical approach (elective or non-elective), complications (including bleeding, bile leaks, bile duct injury, sepsis, retained stones) were obtained. The primary outcome of this study was the rate and type of complication, and the secondary outcomes were conversion to open surgery and post-operative length of stay. Clinical data included number of patients with associated acute cholecystitis, gallstone disease and fever (tympanic temperature ≥ 38.3°C) on admission. The primary outcome of this study was whether procedures performed in non-Elective or elective setting, the rate and type of complication and the secondary outcomes were conversion to open surgery and post-operative length of hospital stay.

Patient Selection Criteria

All patients presenting to the emergency room with one of the following acute gallstone-related conditions were included: intractable biliary colic, acute cholecystitis defined by clinical (fever, presence of Murphy sign) and ultrasound (gallbladder wall thickness >4 mm, striated gallbladder wall, peri-vesicular fluid) criteria, suspected CBD stone migration (sudden RUQ and/or epigastric pain, associated with elevated LFTs). All patients were planned for laparoscopic cholecystectomy with intra-operative cholangiography during the same hospital stay. Patients with the following conditions were excluded from the study: acute cholangitis (as defined by the 2013 revised Tokyo guidelines), patients with gallstone pancreatitis (as defined by the revised Atlanta classification), associated liver, bile duct or pancreas neoplasia. Data on patient demographics, date of surgery, surgical approach (elective or non-elective), complications (including bleeding bile leaks, bile duct injury, sepsis, retained stones) were obtained.

Laparoscopic Cholecystectomy Technique

In brief, a four-port laparoscopic approach was undertaken, and cholecystectomy was performed. After exposure and identification of the elements of the Calot triangle, a clip was placed at the neck of the gallbladder and a small transverse cut was performed in the cystic duct close to the gallbladder infundibulum with laparoscopic scissors. A cholangiogram catheter was then inserted into the cystic duct. After verifying the absence of leakage at the catheter insertion site with 0.9% saline flush, contrast media was injected and intra-operative cholangiography was performed, attempting to visualise the following filling defects along the bile ducts corresponding to calculi, the anatomy of the proximal biliary tree and the passage of contrast into the duodenum.

Statistical Analysis

A statistical software (Statistical Package for the Social Sciences (SPSS, IBM Subscription Version, 2019) was used to perform case matching of the two groups (elective and non-Elective) as well as all statistical analyses for this study. Scale variables were reported as medians with their accompanying Interquartile Range (IQR). The two groups were compared using Chi Square analysis. Binary logistic regression analyses were undertaken to determine whether non-elective surgery was associated with a higher rate of complications (primary outcome) or conversion to open surgery and increased length of stay (secondary outcomes). At univariable analyses, variables that demonstrated a significant association with the outcomes were entered into a multivariable binary logistic regression model, in which an association demonstrating a P value of 0.05 or less was considered independently associated with the outcome.

Results

A total of 1,000 cases were included in this study of whom 53.6% (n=536/1,000) were females (Table 1). The median age group across the entire population was 52 years old (IQR 37-67). Most of the patients were under the age of 60 years old (63.1%) whilst 8.2% (n=82/1,000)

were over the age of 80 years. Non-elective laparoscopic cholecystectomies accounted for 67.6% (n=676/1,000) of the population. Given that case matching was performed based on age, the median age for both groups was 52 years old.

n=1,000		n
Sex	Female	536
	Male	464
Age	<40 yrs	308
	40-59 yrs	323
	60-79 yrs	287
	80+ yrs	82
Admission Type	Elective	324
	Non-Elective	676
Conversion	Laparoscopic	987
	Converted to Open	13
Complication Type	No Complication	949
	CBD Injury	4
	Bile Leak	7
	Retained Stone	12
	Bleeding	9
	Intra-Abdominal Collection/Sepsis	16
	Other	3
Length of Stay Post Surgery (Days)	0	134
	1	375
	2-3	278
	4-5	105
	>5	108

Table 1 – Demographics and outcomes of the study population

The overall major complication rate amongst all our cases was 5.1% (n=51/1,000) with a CBD injury rate (all treated with ERCP and stenting) of 0.4% and bile leak rate of 0.7%. Retained stones were present in 1.2% (n=12/1,000) of the population. Major bleeding requiring either transfusion or return to theatre occurred in 0.9% (n=9/1,000) of the study population. Post-operative intra-abdominal sepsis/collection occurred in 1.6% (n=16/1,000). Two patients (0.2%) had a myocardial infarction post-op and one patient (0.1%) had to go back to theatre for a diathermy injury to small bowel. The median length of stay across the entire population was 1 day (IQR 1-3 days).

Outcomes in Elective vs Non-Elective Laparoscopic Cholecystectomy

A greater proportion of patients in the non-elective group were males (51.6%) compared to the elective group (35.5%, p<0.001, Table 2).

(n=1,000)		Admission Type			
		Elective (n=324)		Non-Elective (n=676)	
		n	%	n	%
Sex	Female	209	64.5%	327	48.4%
	Male	115	35.5%	349	51.6%
Age	<40 yrs	91	28.1%	217	32.1%
	40-59 yrs	109	33.6%	214	31.7%
	60-79 yrs	102	31.5%	185	27.4%
	80+ yrs	22	6.8%	60	8.9%
Conversion	Laparoscopic	323	99.7%	664	98.2%
	Converted to Open	1	0.3%	12	1.8%
Complication Type	No Complication	318	98.1%	631	93.3%
	CBD Injury	2	0.6%	2	0.3%
	Bile Leak	1	0.3%	6	0.9%
	Retained Stone	1	0.3%	11	1.6%
	Bleeding	0	0.0%	9	1.3%
	Intra-Abdominal Collection/Sepsis	2	0.6%	14	2.1%
	Other	0	0.0%	3	0.4%
Length of Stay Post Surgery (Days)	0	118	36.4%	16	2.4%
	1	150	46.3%	225	33.3%
	2-3	32	9.9%	246	36.4%
	4-5	11	3.4%	94	13.9%
	>5	13	4.0%	95	14.1%

Table 2 – Differences in outcome between elective and non-elective patients

There were no differences in terms of age between the two groups. There were no significant differences in terms of conversion rate between the two groups (1.8% vs 0.3%, p=0.05). A higher rate of complications was apparent in the non-elective group (6.7%) compared with the elective group (1.9%, p=0.030). Specifically, there was a slightly higher rate of bile leaks (0.9% vs 0.3%) retained stones (1.6% vs 0.3%), intra-abdominal collection/sepsis (2.1% vs 0.6%) in the non-elective group. The length of stay was also significantly higher in the non-elective group with 28.0% of them staying more than three days in hospital after surgery.

Multivariable Regression Analysis

Binary logistic regression was undertaken to determine whether the mode of presentation (elective vs. non-elective) was significantly associated with higher rates of complications occurring. At univariable analysis, age, surgical approach (laparoscopic or conversion to open) and admission type (elective or non-elective) were significantly associated with the complications (Table 3) and were therefore entered into a multivariable regression model.

(n=1,000)		Univariable OR	Multivariable OR	95% CI	p
Sex	Female Male	0.597			
Age	<40 yrs 40-59 yrs 60-79 yrs 80+ yrs	**0.023**	1 (Ref) 1.04 1.44 1.88	 0.58-1.86 0.82-2.53 0.89-3.99	 0.896 0.205 0.099
Conversion	Laparoscopic Converted to Open	**<0.001**	1 (Ref) 13.91	 43.92	 **<0.001**
Admission Type	Elective Non-Elective	**<0.001**	1 (Ref) 2.63	 1.48-4.65	 **<0.001**

Table 3 – Uni and multivariable analysis demonstrating factors associated with any complication (OR – Odds Ration, CI – Confidence Interval).

Gender was not significantly associated and was therefore excluded from the multivariable analysis. At multivariable analyses, age was not a significant factor in predicting potential complications once adjusted for surgical approach and admission type. Conversion to open however, was associated with a nearly 14-fold increase in the likelihood of any post-operative complication (OR 13.91, 95% CI: 4.41-43.92, p<0.001). A non-elective procedure was also independently associated with a higher chance of complications compared with elective surgery (OR 2.63, 95% CI: 1.48-4.65, p<0.001).

Sub-group analyses were performed to determine whether admission modality (elective or non-elective) was specifically associated with biliary complications such as CBD injury, bile leak or retained stone. In total 23 patients (2.3%) of the population sustained a biliary complication, of these 19 patients were in the non-elective group. However, there were no association between any of the variables (gender, age, admission type, conversion to open) and biliary complications of CBD injury, bile leak and retained stones.

Discussion

The main findings of this study are that non-elective laparoscopic cholecystectomies are associated with a statistically higher rate of complications compared to the elective group. Specifically, the non-elective group had higher rate of bile leaks (0.9% vs 0.3%) retained stones (1.6% vs 0.3%), intra-abdominal collection/sepsis (2.1% vs 0.6%) compared to the elective group. Furthermore, the length of stay was also significantly higher in the non-elective group with over a quarter of them staying more than 3 days in hospital. At univariable analysis, age, surgical approach (laparoscopic or conversion to open) and admission type (elective or non-elective) were significantly associated with the complications.

Similar to the current study, several other authors have attempted to determine whether there are true differences in outcomes between elective and non-elective laparoscopic cholecystectomy[13–19]. The issue remains contentious and there are undoubtedly competing risks and benefits to undertaking routine non-elective laparoscopic cholecystectomy upon the initial presentation of the patient acutely through the emergency department or an acute admission. Early vs late laparoscopic cholecystectomy is synonymous with non-elective vs elective laparoscopic cholecystectomy. The literature is not always clear, with authors categorising anything from 1-10 days as being early. Proponents of early laparoscopic cholecystectomy i.e., on the initial admission that the patient develops symptoms, argue that an early procedure is the most cost-effective, and the safest in that it avoids the potential serious complications (recurrent cholecystitis and pancreatitis). In a large study using population datasets of over 95,000 patients, Zafar and colleagues found that an early laparoscopic cholecystectomy within two days of acute admission provided the safest and most cost-effective method for dealing with acute cholecystitis. A delay beyond this was associated with higher morbidity, mortality and cost[20].

A smaller study of 60 patients randomised into an early (<24 hours) and late (6-8 weeks) groups found that whilst there may be a higher rate of complications in the early group, the rate of conversion to open was no different, the length of stay was shorter in the early group and the costs were much lower[21]. Further trials have demonstrated that early could mean a lot longer than 24-48 hours and that laparoscopic cholecystectomy on patients even up to 72hrs yields shorter length of stay, less antibiotic use and reduced cost with no difference in complication rates or operative time[17]. Other studies have stated that conversion to open rate was higher in non-elective laparoscopic cholecystectomy compared to Elective surgery[10]. However, they advised laparoscopic cholecystectomy for acute cholecystitis to be performed as soon as possible following diagnosis to avoid the increased level of difficulty of laparoscopic approach once the inflammation has progressed. A different study of 60 patients with acute cholecystitis who underwent elective vs non-elective laparoscopic cholecystectomy has discovered no difference in length of operating time or conversion to open rate. However the elective cases had longer hospital stay and higher cost of treatment compared to the acute operations[21]. A similar study has reported 5% higher incidence of major complications in delayed operations compared to elective ones. However, rates of bleeding in the acute cases were slightly higher compared to the elective ones[22] and still advised in favour of acute surgery since it provides shorter hospital stay.

The current study 1,000 patients undergoing a laparoscopic cholecystectomy (with a 2:1 non-elective to elective) had an overall complication rate of 5.1%. This is very comparable to the published data. In the non-elective group, there was higher rate of complications compared to the elective group (6.7% vs 1.9%, p=0.030). Specifically, there was a slightly higher rate of bile leaks (0.9% vs 0.3%) retained stones (1.6% vs 0.3%), intra-abdominal collection/sepsis (2.1% vs 0.6%) in the non-elective group compared to the elective group. The length of stay was also significantly higher in the non-elective group with 28.0% of the non-elective patients staying more than three days post operatively.

Conversion to open remains a key consideration in assessing the safety of non-elective and elective laparoscopic cholecystectomy with advocates of delayed/elective surgery citing a higher rate of conversions in patients who undergo early laparoscopic cholecystectomy. However, some studies have demonstrated the contrary, and they quote a higher rate of conversion to open in delayed/elective compared to the early laparoscopic cholecystectomy[23].

There are many health, social and economic benefits associated with performing non-elective vs. early laparoscopic cholecystectomy. Patients admitted with acute cholecystitis are subjected to protocols and recommendations from organisations such as Association of Upper GI Surgery of Great Britain and Ireland (AUGIS) who advocate a non-elective laparoscopic cholecystectomy in the same admission and/or more importantly within 72 hours of symptom onset. This has the benefits of a single admission, reduced hospital waiting lists, a reduction in the risk of recurrent symptoms and morbidity, less time off work and less disruption to work and family life. However, opponents of early/non-elective laparoscopic cholecystectomy state that with the modern NHS, it is not possible to perform non-elective laparoscopic cholecystectomy due to over utilisation of theatre capacity and a lack of adequately trained personal. It has become common place to provide a dedicated day-case service with low complication risks, low rate of conversion, rendering non-elective/early laparoscopic cholecystectomy potentially unnecessary.

Whilst it is quite true that day case 'cold' i laparoscopic cholecystectomy in the elective setting is associated with a very low complication and conversion to open rate, what this argument does not address is all the problems and complications that can occur in the intervening period. These issues can range from episodes of biliary colic causing nausea, pain, repeated hospitalisation to more serious complications of choledocholithiasis, recurrent cholecystitis or cholangitis and pancreatitis. The data in this regard is lacking. The NHS Institute for Innovation and Improvement published its paper Delivering Quality and Value Focus on: Cholecystectomy investigating the costings associated with conservative and early laparoscopic cholecystectomy. It shows clearly that a laparoscopic cholecystectomy in the index admission was the best and cost-effective method. If patients are sent home and given a date for an elective laparoscopic cholecystectomy and have an admission in the intervening period, this admission costs on average an extra £1,875 per admission.

Further economic aspects of non-Elective versus elective laparoscopic cholecystectomy have also been investigated. Seager et al looked at 84 patients undergoing non-elective laparoscopic cholecystectomy. For all their admissions they would expect a saving of around £700K over 12 months. The implementation of a non-elective laparoscopic cholecystectomy service for all patients would result in a small loss in revenue when compared with elective laparoscopic cholecystectomy (£15k) provided that all operations could be accommodated on established operating lists. They concluded that by setting up an non-elective laparoscopic cholecystectomy service for all appropriate biliary admissions this may generate up to 3 extra cholecystectomies daily for a population base of 1 million[24]. Indeed, the costs incurred for adopting a conservative approach to acute cholecystitis was assessed. Garner et al conducted a study with 259 patients who underwent laparoscopic cholecystectomy Notably, there were 112 patients who initially presented acutely and were managed conservatively. Importantly, of these 24 patients were re-admitted 37 times, which utilised 231 hospital bed-days and repeat investigations costing over £40,000. They showed that an non-elective laparoscopic cholecystectomy service on the index admission would result in substantial cost savings[25].

Our study supports the limited work showing that not only non-elective laparoscopic cholecystectomy is safe and effective with acceptable rates of morbidity and mortality. Non-elective laparoscopic cholecystectomy service has health, economic and social benefits. Our study supports the notion that a dedicated non-elective s laparoscopic cholecystectomy service can work effectively and safely. There is a good argument that sub-specialisation is not required for laparoscopic cholecystectomy but what is clear is that volume is crucial. Andrew et al compared 1,605 laparoscopic cholecystectomies performed in a department with varying caseloads to 1,820 laparoscopic cholecystectomies performed by a dedicated team with high caseload and found that overall the rates were lower for conversion to open surgery (3.5 vs 4.9%), common bile duct injury (0.1 vs 0.31%), bile leak (0.9 vs 0.75%), bowel injury (0.21 vs 0.25%), haemorrhage (0.16 vs 0.44%). Conversion rates were significantly lower in re-specialist Group (p=0.027) but remained lowest for the highest volume sub-specialist surgeons (p=0.016)[26].

In the current study our data which is collected from a dedicated only upper GI team performing non-elective and elective laparoscopic cholecystectomy it is very similar to the above conversion to open surgery (1.3%), common bile duct injury (0.3%), bile leak (0.9%) and haemorrhage (1.3%). Thus, it shows that improved outcomes can be achieved when laparoscopic cholecystectomy is performed a specialist interest surgical team.

There are several strengths to this study: consecutive non-elective patients recruited under general surgeons in large two acute hospital in the UK and Australia with combined very large catchment area which results in inclusion of differing populations and minimising of any influence of local population or admission practices; patient characteristics and outcome data demonstrated that the patients were similar and finally, less than 4% of outcome data were missing. This study looked at 1000 cases, which were controlled 2:1.

The main limitation of this study is its retrospective nature and as such, suffers from the usual criticisms inherent to such methodology. Data collection of data from electronic coding database is always problematic in that it relies on the accuracy of the data input in the first instance and the accuracy of its retrieval. Further, limitations of this study include lack of randomisation and matching between the non-elective and elective group who underwent laparoscopic cholecystectomy. Indeed, data presented in this study is from two centres in different healthcare systems which may influence results. This practice may be different to the experience of other colleagues around the world and therefore extrapolating these findings to other institutions with different patient populations, healthcare economies, clinical practices, and administrative models maybe difficult.

The main findings of this study are that non-elective laparoscopic cholecystectomy is safe and should be performed by specialist upper GI teams or surgeons with a high-volume practice. Compared to elective procedures non-elective laparoscopic cholecystectomy are associated with a statistically higher rate of complications. Specifically, the non-elective group had higher rate of bile leaks (0.9% vs 0.3%) retained stones (1.6% vs 0.3%), intra-abdominal collection/ sepsis (2.1% vs 0.6%) compared to the elective group. Furthermore, the length of stay was also significantly higher in the non-elective group with over a quarter of them staying more than 3 days in hospital. Even so there is a financial, social and workforce case in performing non-elective laparoscopic cholecystectomy.

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Minimally Invasive Surgery for Gastric Cancer

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Introduction

Surgical epidemiology of gastric cancer

Although the incidence has inexplicably been falling for several decades, this advanced cancer is the sixth most common cancer[1]. The incidence and mortality of advanced gastric cancer have decreased in the last decade in Japan because of endoscopic screening and early diagnosis. Gastric adenocarcinomas are divisible into two subtypes which are distinct in their natural history and aetiology. The subtype that remains endemic in Far East, parts of South America and Eastern Europe is principally a disease of the distal stomach associated with chronic gastritis, intestinal metaplasia and atrophy of mucosa. The high incidence rates in these regions is thought to be due to continuing high rate of Helicobacter pylori infection, adverse dietary factors (nitrosamines) and genetic predisposition[2]. The increasingly occurring subtype found in Western countries is commonly found near the GOJ and is associated with significant reflux gastritis[3]. Associated with the marked increase in incidence of GOJ cancer over the last 30 years is the downward migration of oesophageal tumours and proximal shift of gastric tumours. GOJ cancer is the fastest increasing solid malignancy of adult life in the West with an increasing incidence of 3-4% per annum[4]. Siewert and Stein proposed a classification system of GOJ cancers in an attempt to simplify the conundrum (Table 1)[5]. However, only specialist oesophagogastric surgical centres can accurately classify the tumour of GOJ as arising in distal oesophagus (type 1), gastric cardia (type 2) or subcardinal stomach (type 3)[6].

Table 1. Siewert's classification of GOJ adenocarcinomas *(with permission- Siewert JR et al Ann. Surg. 2000;232(3):353–361*

Type 1	Adenocarcinoma of distal oesophagus arising in Barrett's segment, which may infiltrate GOJ from above
Type 2	True junctional carcinoma of the cardia
Type 3	Subcardinal carcinoma, which may infiltrate GOJ from below

Treatment or Cure:

Gastric cancer is a locoregional disease. Surgery is the only curative therapy but most operable gastric cancer presents in a locally advanced stage characterized by tumour infiltration of the serosa or the presence of regional lymph node metastases[6]. Adequate surgery is for loco-regional control which is 'treatment' only. 'Cure' requires neoadjuvant/ adjuvant chemotherapy to attack the putative micro-metastases and prevent local recurrence[7]. Peri-operative chemotherapy for gastric cancer is currently the standard of care for localized gastric cancer and type 2 and 3 gastro-oesophageal junction (GOJ) adenocarcinoma (Table 1)[8, 9]. The overall 5-year survival rate for resected gastric patients remains poor due to loco-regional recurrence (Tables 2, 3). Thus, neoadjuvant/ adjuvant chemotherapy in conjunction with adequate surgery (multimodal therapy) improves outcome in gastric cancer. In addition, pre-operative chemotherapy may, increase the proportion of tumours for which surgery is not possible[9]. Perioperative FLOT (fluorouracil plus leucovorin, oxaliplatin, and doceta/el) for locally advanced, resectable gastric or gastro-oesophageal junction adenocarcinoma resulted in superior overall survival (OS) compared with ECF/ECX (epirubicin, cisplatin and continuous 5-fluorouracil) -median OS, 50 vs 35 months. Patients in the FLOT arm had a 9% improvement in 5-year OS rates (45% vs 36%) [10]. Without surgery all treatment is palliative being directed at improving quality of life[6, 11]. MIS has the advantage over open gastrectomy in reducing surgical trauma, postoperative pain, rapid return of gastrointestinal function, improved nutrition, shorter hospital stay, earlier perioperative chemotherapy and no reduction in curability[12-15]. An international survey in 44 countries showed that perioperative chemotherapy and a D2 lymphadenectomy have now become the preferred treatment for gastric cancer and minimally invasive surgical approach has gained popularity[16].

Table 2. TNM 7 classification of gastric cancer (*with permission: Allum WH et al, Gut 2011;60:1449-72)*

T
T1 : invades lamina propria or submucosa
T1a : invades lamina propria or muscularis mucosa
T1b : invades submucosa
T2 : invades muscularis
T3: invades subserosa
T4: invades serosa
T4a- perforates serosa
T4b- invades adjacent structures
N0: no involved regional lymph nodes
N1: 1-2 regional lymph nodes involved
N2: 3-6 regional lymph nodes involved
N3a: 7-15 regional lymph nodes involved
N3b: > 15 regional lymph nodes involved
M0: no distant metastases
M1: distant metastases

Table 3. TNM 7 staging of gastric cancer: 5-year survival rates (*with permission: Allum WH et al Gut 2011;60:1449-72)*

Stage 0	**Tis, N0, M0**	**Greater than 90%**
Stage 1A	T1,N0,M0	60-80%
Stage 1B	T1/T2, N0/N1, M0	50-60%
Stage II	T1/T2/T3/T4a, N0/N1/N2/, M0	30-40%
Stage IIIB	T3/T4a/T4b/N0/N1/N2/N3. M0	20%
Stage IIIC	T4a/T4b, N2/N3,/M0	10%
Stage IV	Any T, Any N,M1	Less than 5%

Selection for gastric cancer surgery

In all cases microscopic proof of malignancy is required. Once staging investigations are complete, the patient is discussed at the specialized MDT, to propose an individually tailored management plan[6]. The primary objective of surgery is to excise the primary tumour with clear longitudinal and circumferential resection margins (R0 resection), then safely restore intestinal and biliary continuity to allow adequate nutritional intake[6, 11]. The observation that gastric cancer commonly localized to stomach and adjacent lymph nodes corroborates the Japanese view that radical systemic D2 lymphadenectomy (distant perigastric nodes N1 and nodes along main arteries supplying stomach [N2] are systematically removed en bloc with stomach) has an increased survival benefit[17]. The Western non-radical view is that more radical lymphadenectomy only gives more accurate pathological staging, rather than confer improved survival benefit. However D2 resection without pancreatico-splenectomy may be better than standard D1 (perigastric lymph nodes closest to the primary N1) removed en bloc with the stomach[6, 18]. Overall D2 has lower locoregional recurrence and gastric cancer- related death rates but significantly higher postoperative mortality, morbidity and reoperation rates. Extended D3 lymphadenectomy is a more radical en bloc resection including N3 nodes outside normal lymphatic pathways from stomach , involved in advanced stages e.g., station 12 (hepatoduodenal) or by retrograde lymphatic flow due to blockage of normal pathways. There is no advantage of D3 vs D2, but D3 vs D1 showed improved overall survival [19-21]. The current European description of D2 lymphadenectomy involves removal of > 15 lymph nodes, irrespective of node stations[6, 11]. Uptake of radical resection remains poor in the West due to relative technical difficulty of achieving nodal clearance, adiposity and lack of formalized training in systematic lymphadenectomy. Practice is likely to change as training is increasingly centralized at high volume centres with lower operative mortality and lower failure to rescue rates due to

acute management of complications[5, 22]. The future trend is towards lymphadenectomy being tailored to individual preoperative and operative staging, age and fitness[6, 17]. The majority of recurrences occur locally either in gastric bed, retroperitoneum or anastomosis, rather than distant metastases. Strategies to prevent gastric bed recurrence include a meticulous surgical technique with en-bloc resection of stomach, affected adjacent organs and intact gastric lymphatic chains to prevent iatrogenic cell spillage and prevent peritoneal dissemination[23]. The final pathological stage, following curative surgery assists in determining prognosis. Survival is significantly poorer among patients with pathological stages II, III and IV[24].

Types of gastrectomy

The type of gastrectomy depends on the site of the primary tumour with the resection margin aimed at a 5cm minimum from the palpable edge of the tumour. Total gastrectomy is for the 'diffuse' (according to the Lauren classification) type tumours which are more prone to lateral spread[6, 11, 23]. Total gastrectomy may not be necessary for distal tumours as long as adequate staging, mapping biopsies, careful radiological review, on- table oesophago-gastro-duodenoscopy (OGD) with or without frozen section are satisfactory[11, 24]. Distal third cancers (tumours of the gastric antrum) will require a subtotal (80%) gastrectomy , including division of the left gastric artery and vein, and excision of regional lymphatic tissue [6]. Total gastrectomy is performed only when there is a large distal third tumour or when submucosal tumour infiltration is within 7-8cm of GOJ[11]. Proximal partial gastrectomy is associated with severe reflux oesophgitis and a total gastrectomy with a Roux-en-Y reconstruction (2% vs >30%) is preferable[6, 11]. Limited gastric resections is suggested only for palliation or in the very elderly. The distal pancreas and the spleen are not resected for a cancer in the distal two-thirds of the stomach as there is no oncological advantage but increased morbidity[23, 24]. The middle third cancers (tumours of the gastric body) often require total gastrectomy as it depends on the proximal margin of the tumour. The amount of stomach remaining below GOJ should be a minimum of 2cm. Serosa negative cancer requires 7cm margin from GOJ and serosa positive cancer requires 8cm from GOJ. Smaller margins are acceptable in elderly patients especially in 'intestinal type' tumour (according to the Lauren classification[23, 24]. Proximal third cancers are tumours of the gastric cardia. Siewert 3 GOJ tumours may be amenable to total gastrectomy if enough proximal clearance is possible. True junctional tumours (Siewert 2) is treated with extended total gastrectomy or cardio-osophagectomy[4]. The overall aim of surgery is adequate local clearance, appropriate lymphadenectomy (formal D2 and posterior mediastinal, peri-oesophageal nodes) and an uncomplicated anastomosis with low morbidity[6, 11, 24]. Ex vivo proximal margin of > 3.8cm of normal oesophagus (5cm in vivo) is associated with minimal risk of anastomotic recurrence and an independent predictor of survival. Intraoperative frozen section is standard. Splenic and hilar node resection should only be considered in patients with tumours of proximal stomach located on greater curvature/ posterior wall of stomach close to splenic hilum where incidence of splenic hilar nodal involvement is likely to be high[11,24,26]. There is marked health - related quality of life (HRQL) deterioration after gastrectomy, and total gastrectomy has greater long-term HRQL deficit than sub-total surgery[23]. However, 95% near- total gastrectomy which includes complete resection of the gastric fundus and complete cardial lymphadenectomy(groups 1&2) with a little (2cm) gastric pouch has similar oncological outcome but offer best short-term results such as lower anastomotic leak rate and a better quality of life than total gastrectomy. This is because of the limited disruption of the oesophago-gastric junction[27].

Minimally Invasive Surgery

Although perioperative chemotherapy is currently standard treatment for resectable gastric cancers, neoadjuvant and adjuvant therapies are no substitute for inadequate surgery, whether minimally invasive or open [9, 23, 26]. For patients whose gastric cancer is diagnosed at a stage that is amenable to surgical treatment, the options include open or laparoscopic gastrectomy. Laparoscopic surgery had been slowly introduced in surgical oncology because of the concern of inadequate margins, low lymph node yield, tumour port seeding, missing small metastases, and poor pathological and oncological outcomes. The purposes of laparoscopic surgery for gastric cancer are to minimize surgical insults and to maximize patient's quality of life, while not compromising the oncologic clearance. Current safety and efficacy evidence suggests adequate support for the use of minimally- invasive surgery for gastric cancer, providing normal arrangements are in place for clinical governance, consent, and audit[28]. A patient who is 'unfit' for an open procedure does not become 'fit' for a laparoscopic procedure. Patient selection and management should be carried out in the context of a multidisciplinary team (MDT) with established experience in the treatment of gastric cancer[23].

Indications

Western patients are relatively obese with an increased risk of bleeding if lymphadenectomy is performed. LG is technically difficult in the obese than in the normal weight patients due to reduced visibility, difficulty retracting tissues, dissection plane hindered by adipose tissue, and difficulty with anastomosis. Open gastrectomy is thus preferable for the obese patients[29]. Obesity is not a risk factor for survival of patients but it is independently predictive of post-operative complications. Careful approach is being needed, especially for male patients with high BMI[6, 38]. The oncological efficacy and safety of laparoscopic gastrectomy are thus under debate for the western population with predominantly advanced proximal gastric cancer undergoing multimodal treatment such as pre-operative chemotherapy. The first western multicentre randomized clinical trial comparing laparoscopic versus open gastrectomy for gastric cancer (LOGICA) demonstrated that postoperative complications and oncological efficacy did not differ in patients with predominantly advanced gastric cancer (cT1-4aN0-3bM0) in the Netherlands. R0 resection rate, lymph node yield, hospital stay, 1- yr overall survival and quality of life did not differ between the treatment groups[39]. This may indicate that despite the concerns of more advanced tumour stages, a reduced lymph node yield in patients with advanced gastric cancer, higher age, more comorbidities, higher body mass index in the western population, laparoscopic gastrectomy may still suffice as a safe alternative to open gastrectomy in experienced centres. A meta-analysis of 17 randomized controlled trials (RCTs) on surgery for gastric cancer as a whole in the East also showed no differences in the primary outcomes including the number of lymph nodes resected, severe complications, short-term and long-term recurrence, and mortality. However, for the secondary outcomes longer operative time was required for patients in the laparoscopic group but with less intraoperative blood loss and less analgesic administration[40].

Principles

The same principles that govern open surgery are applied to laparoscopic surgery. In order to ensure the same effectiveness of LG as conventional open gastrectomy, all the basic principles such as properly selected patients, sufficient surgical margins, standardized D2 lymphadenectomy, no-touch technique et. should be followed[12, 41]. For proximally advanced tumours or large tumours a total gastrectomy is performed. For distally- located tumours that do not involve the proximal one-third of the stomach a subtotal gastrectomy is preferred. There are several methods of restoring intestinal continuity post total gastrectomy. The simplest and most commonly used is Roux-en-Y oesophago-jejunostomy. As laparoscopic experience has accumulated, the indications for laparoscopic gastrectomy (LG) have been broadened to patients with advanced gastric cancer. Commonly five operative ports are used in laparoscopic gastrectomy: one 10-12-mm port peri-umbilically, three 10 -12mm ports in the right and left flank, and wide left flank, with a further 5-mm port at epigastric level. The positions and sizes are open to local preference[42]. The series of steps described in open gastrectomy are identical in LG, except performed through much smaller incisions with specialized and expensive laparoscopic equipment[29, 43]. These include a liver retractor, e.g. Nathanson's, gastric retraction maintained by combination of elevation with atraumatic prospers e.g. Johan's, and 'tenting' the stomach from the lesser sac. Vascular pedicles are divided using vascular haemostatic staplers, ligaclips, haemolocks, or laparoscopic ligation. Laparoscopic anastomosis following total gastrectomy utilizes the Orvill anvil introduced orally and laparoscopic linear staplers used in partial gastrectomy[43]. A larger incision may facilitate a hand being introduced into the peritoneal cavity for hand-assisted gastrectomy or laparoscopically-assisted

subtotal gastrectomy depending on the size of the tumour. Removal of the draining lymph nodes is an integral part of the procedure. A slightly larger incision (3.5cm) may be required in order to remove diseased stomach (through wound protector), but the location should be cosmetic and less likely to cause pain or respiratory complications[29]. Laparoscopic pylorus preserving gastrectomy is advocated in Korea and Japan for early tumours with minimal risk of station 5 lymph node metastasis i.e. minimally 6cm from pylorus[15].

Robotic surgery

Robotic surgery will become an additional option in minimally invasive surgery (MIS). The importance of performing effective extended lymph node dissection may provide the advantage of using robotic systems. The three dimensional (3-D) view and greater range of movement can be useful for complex resections. Such developments will improve the quality of life of patients following gastric cancer surgery. A multicenter study with a large number of patients is needed to further investigate the safety and efficacy as well as long-term outcomes of robotic surgery, traditional laparoscopy and the open approach[29, 43].

Efficacy of MIS

Multicentre case series have reported 5-year disease-free survival rates for early gastric cancer treated with LG as 99.8, 98.7 and 85.7% for stage 1A,1B and II, respectively. For advanced disease the 5-year overall survival is 59% and disease-free survival of 57%. The conversion rate from laparoscopic to open surgery is 2-3% and the reasons include anatomical constraints, bleeding, and mechanical problems. The key efficacy outcomes include 30-day mortality, cancer-free survival rates, adequate surgical margins, and number of lymph nodes removed. Early results had suggested lower lymph node harvest particularly in the laparascopic subtotal gastrectomy group compared with open surgery[29, 30]. Laparoscopy- assisted distal gastrectomy (LADG) for early gastric cancer (EGC) reduced surgical trauma, improved nutrition, reduced post-operative pain, provided rapid return of GI function, shorter hospital stays, and no reduction in curability[44]. Kim et al demonstrated an improved QOL in the LADG group followed for up to 3 months as compared to the open procedure [23]. LADG for patients with clinical stage I gastric cancer is safe and has a benefit of lower occurrence of wound complication compared with conventional ODG. There are few randomized control trials comparing open versus laparoscopically-assisted distal gastrectomy (LADG) and most have small sample sizes and limited follow-up. KLASS phase II multicenter prospective RCT trial (Korea) showed no significant differences between LADG and ODG. Post-operative complications were 10.5% and 14.7% respectively. There were three re-operations in each group and post-operative mortality was 1.1% and 0% respectively[44]. Although laparoscopically-assisted distal gastrectomy (LADG) has several advantages over open distal gastrectomy, there is also safety, feasibility and advantages of totally laparoscopic distal gastrectomy (TLDG)[44-46]. TLDG is as safe and feasible as LADG but it was difficult to identify the clinical advantages based on a study[47]. Thus, the choice of surgical approach mainly depends on the patient's conditions and the preference of the patient or surgeon[48]. Usui et al reported laparoscopy -assisted total gastrectomy (LATG) successfully in 20 patients, with equal operating time, but reduced blood loss and time to ambulatory status, first flatus, first oral intake and post-operaive hospital stay were significantly shorter[49]. The frequency of analgesics given in LATG group was lower than that on OTG group.

Safety of MIS

Complications following surgery for gastric cancer include bleeding, infection, wound complications, chest complications, (atelectasis/ pneumonia), cardiovascular complications, venous thromboembolism, anastomotic leak, and duodenal stump leak. Meta-analyses have shown fewer complications overall following laparoscopic subtotal gastrectomy compared with open gastrectomy. However, there were no differences between groups with respect to mortality, anastomotic leak, stricture or wound infection. Pulmonary complications were surprisingly non- significantly higher in the open gastrectomy group. Post- operative ileus was significantly reduced following laparoscopic gastric resection[29-31]. Expected mortality/ major morbidity was < 5% and 5-10% respectively in high volume specialist centres[27, 29, 30].

As minimally invasive distal gastrectomy (MIDG) and minimally invasive total gastrectomy (MITG) are procedures with different complexity, outcomes may differ. Gertsen et al[50] carried out a population-based cohort study in the West to evaluate the safety of MIDG and MITG. The overall postoperative morbidity, mortality and hospital stay were similar whereas the anastomotic leakage rate was higher after MITG (10% vs 17%, p=0,030). 'Failure to rescue' is a significant cause of mortality but critical complications are recognized early and managed proactively in specialist centres[51, 52]. Overt signs of sepsis, failure to progress as expected, or subtle signs such as new onset cardiac arrhythmias should heighten suspicion of complication and require investigation in first instance with contrast-enhanced CT (oral contrast)[21, 53]. Close multidisciplinary follow-up with surgeons, specialist nurse and dietitians for late complications following oesophago-gastric surgery is crucial to optimize both physical and psychological quality of life.

Conclusions

Minimally-invasive surgery has revolutionized the surgical approach to gastric cancer for the past two decades, leading to improvements in patient's quality of life by producing less pain, less blood loss, earlier postoperative recovery, rapid return of gastrointestinal function, improved nutrition and a shorter hospital stay with no reduction in curability. Optimization of multimodal therapy especially for locally advanced gastric cancer includes adequate surgery and is based on the decision of the specialist oesophago-gastric multidisciplinary team (MDT) following the discussion of the diagnosis, stage and assessment of fitness for treatment or palliation.

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Women in Surgery: still not enough has been done!

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Hello everyone,

I hope you are safe in these challenging times and that despite the pandemic, we'll be able to come back to our daily "routine" activities soon, although a new "routine" will have to be thought and established. But what is happening for women in surgery? We know the impact the pandemic has had in terms of exacerbation of health inequalities, and this will ultimately affect women, with a detrimental impact in the long-term[1]. Just to mention some of these, let's consider quarantine decisions and the direct impact on women's freedom and their ability to work, to be operating to acquire practical skills, as theatre demands. School closures and requirements for home schooling, have led to an impairment mostly on women and thus on their capability to progress within the surgical career, as well in earnings, to obtain a financial independence. This will ultimately increase the struggle in the work-life balance and many women will be likely to be affected in their determination to pursue a demanding career.

We started our movement via social media[2] to provide a support for distance mentoring and networking for aspiring and established surgical colleagues, to increase the proportion of the female surgical work-force. We reached almost 1000 members and I am delighted to see this has proven to be an effective way to create research and collaboration[3], although it is still not enough! Surgical trainees have been seriously affected by the lack of exposure (placements, practical skills, courses) and despite the need and growing evidence for a change in the surgical norm[4] already advocated by our working group three years ago, this has not unfortunately been followed by a real translation, particularly in view of the COVID-19 pandemic.

How should we react? First, a joining common effort could result in a stronger and broader policy change. Our book on Gender Equity in the Medical Profession[5], now adopted in almost 100 institutions, among which Harvard, Yale and Brooklyn NY has proven that a global commitment is possible and a stronger intervention towards a common issue; the more we are the better! Following this initiative, I warmly invite you to submit research ideas to develop together the change we want to see to impact on organisations and institutions, showing how much this change is needed and how much work still needs to be done. Please kindly read the complete issue call[6].

I encourage everyone at every level and career stage to consider the importance of gender equity initiatives within the surgical profession: from reviews and perspectives on policy, to the effect of biological sex and/or gender differences in the equity of access or surgical treatment, so please join us!

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Development of a multi-organ donation & transplantation programme: a very successful initiative in a low income country like Sri Lanka

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Sri Lanka is an island, in the Indian Ocean, spanning an area of 65000 sq kilometers. It has a population of over 21 million. The average life expectancy is 77 years for males and 80 years for females which approaches the average European figure of 80 years. The Human Development Index is 0.766 with a high literacy rate of 95.7%.

Sri Lanka is a country with diverse landscapes from sandy beaches, rainforests, dry zones to mountainous terrain all in relatively close proximity. It lays claim to a rich cultural and historical heritage which dates as far back as 543BC.

The per capita Gross National Income of Sri Lanka was approximately 4000 USD in 2018. Therefore, according to World Bank categorization Sri Lanka falls in to the category of Lower Middle-Income Countries (LMIC).

Non communicable diseases are a major health issue in the 21st century and poses a significant challenge to the LIM in achieving the envisaged, 2030 Agenda for Sustainable Development. Chronic Kidney Disease (CKD), of all non-communicable diseases, is one of the major health burdens that Sri Lanka carries.

Considering the rapid changes in the environment due to urbanization as well as numerous prevailing communicable and non-communicable risk factors, it is unsurprising that an estimated 60,000 patients suffer from CKD in Sri Lanka. The actual figure may even be far greater, as epidemiological data remain poorly authenticated due to, low numbers of community based studies, inconsistent assessment of kidney function and non-standardized non-calibrated approaches in obtaining data for CKD.

In keeping with the global perspective diabetes, hypertension and glomerulonephritis are the commonest aetiological factors attributed to CKD. But, a newer category of CKD of uncertain aetiology (CKDu) has been identified in a few LMIC like Nicaragua, El Salvador, Tunisia, India, Egypt and Sri Lanka. (CKDu) has reached endemic proportions in Sri Lanka;- in-fact in certain regions like the north central province it has become the predominant cause of renal failure. However, it is noteworthy that obstructive uropathy due to stone disease is also a very prevalent cause for CKD in Sri Lanka.

The management of these patients is causing a huge additional burden to the LMIC including Sri Lanka. The limited availability of Renal Replacement Therapy in developing countries is one of the greatest challenges in managing these patients due to the high cost and low affordability of such services at a personal and societal level. Many workers are not salaried and paid piecemeal, and the Gross Domestic Product of the country is low and cannot bear the cost.

While dialysis is expensive and can be a serious drain on a country's finances, the cost of maintaining a functioning grafted kidney is found to be much lower.

Organ Transplantation is one of the greatest advances of modern medicine. For people in end stage organ failure, organ transplantation truly is a matter of life and death. The demand for organ transplantation in the past decade in all parts of the world including Sri Lanka has been unprecedented. Due to the increased incidence of vital organ failure the waiting lists for transplantation is ever growing, and the unavailability of adequate suitable organs for transplantation is leading to a major organ shortage crisis. Promoting deceased organ donation has to be given the prominence it deserves. Unlike in higher income countries where successful deceased donor programmes are in existence, the LMICs like Sri Lanka are almost entirely dependent on live donors. Therefore, these countries have a higher demand for live donors, which by far exceeds the availability.

This disparity creates major issues. It is worthy of note that the deceased donor programs in Sri Lanka are in their infancy and confined to the brain-dead donor population. This is largely due to lack of infrastructure and system coordination. The country lacks the required number of surgical expertise ands well as other supportive medical services, to develop a successful deceased donor program.

In the last decade in higher income countries, the deficit that exists after use of DBD has driven fuller use of the potential offered by the Deceased Cardiac Donor. However, the absence of a reliable legal framework protecting donors, recipients and the medical professionals involved in DCD has limited the expansion of a successful deceased donor program in developing countries such as Sri Lanka.

To add to the consternation there are numerous misconceptions and beliefs regarding brain death and organ donations. This may be largely due to lack of awareness, regarding the concept of death and poor understanding of brain death on a background of a multi religious, cultural and ethnic communities.

Sri Lanka commenced kidney transplantation in the year 1985. The need for kidney transplants has grown rapidly in the country and today we have approximately 6000 end stage kidney failure patients. Sri Jayewardenepura General Hospital is one of the very first hospitals to commence organ transplantation in the country.

Our journey began as far back as the year 2000. Two specialists were responsible for initiating the transplant program at Sri Jayewardenepura General Hospital, Dr. Chula Herath, Nephrologist and Mr. L. Piyarisi, General Surgeon. Between them, they have played a pivotal role in transforming SJGH into one of the leading kidney transplant units in the country.

Figure 1: Kidney transplants at Sri Jayewardenepura General Hospital from 2000 – 2021 (n=398)

In the past 2 decades live-donor kidney transplantation has gathered momentum and up to this point in time we have performed just over 400 kidney transplantations at SJGH.

We were the first center to introduce laparoscopic live donor nephrectomy in the country in year 2014 to give the maximum benefit to the donor (who is not a patient), reducing the morbidity seen in open donor surgery. Today we have moved towards the 3D technology for living donation. Even with these advancements we are still unable to cope with the ever-growing demand for organ transplantation.

Figure 2: First 3D laparoscopic living donor nephrectomy in Sri Lanka (2016)

Live-donor transplantation has to date been limited to kidney. In order to venture further in to multi organ transplantation including liver, pancreas and heart and to increase the numbers of kidney transplants performed, it was imperative to initiate a deceased donor program in a structured manner.

In February 2016, overcoming many hurdles we performed the very first successful deceased donor kidney transplant at Sri Jayewardenepura General Hospital. Deceased organ donation and multi organ transplantation being a well-established system in the more developed countries, demands a lot of commitment, infrastructure development, coordination and dedication. Above all it needs passion.

Encouraging this endeavor, a team of dedicated clinicians in the relevant fields conceived the idea of taking organ donation and transplantation to the next level by commencing the Organ Transplant Unit at the Sri Jayewardenepura General Hospital in 2016. Our aim was clear: to implement a systematic structure and process to encourage deceased organ donation and transplantation in Sri Lanka.

If there are NO DONORS, there are NO TRANSPLANTS!

This is the reason raising public awareness was one of our very first tasks.

Figure 3: First National Organ Donor Day and Walk in Sri Lanka (2018)

In February 2018 we organized the very first Organ donor walk in Sri Lanka. It was a huge success with the participation of an unanticipated over 3000 people spanning from university students, military personnel, healthcare professionals, societies, and well-wishers from all corners of the country. On the same day more than 2000 donor were registered for the programme. There after February 18th was declared the National Organ Donor Day in Sri Lanka.

Figure 4: Registering more than 2000 donors for the programme on the same day

The hospital has set up a donor memorial wall in its premises, which is the only donor memorial wall of its kind in the country. This is in recognition of those who donated to give the "Gift of Life" to other unfortunate fellow human beings. Each year, on the national organ donor day we continue the tradition of saluting these unsung heroes by adding a star to their name on this memorial wall.

Figure 5: Unveiling of the Memorial Wall of Deceased Organ Donors

Even though the pandemic curtailed transplants taking place in many hospitals, Sri Jayewardenepura General Hospital was able to handle almost 50 transplants in the year 2021. The first liver transplant was also done in the hospital recently.

Collaborating with the Ministry of Health of Sri Lanka, we launched the National Organ Donor Card. This initiated the commencement of database of registered donors which will be a permanent source of maintenance of organ donors in the future.

Figure 6: National Organ Donor Card in Sri Lanka

The next step was to obtain support from societies both locally and internationally to make organ donation a household name every home in Sri Lanka. Organ Donation and Transplantation Foundation was next founded by this dedicated team, in order to promote this concept island wide.

Internationally we continue to receive tremendous support from India, Spain and United Kingdom to promote and take forward this worthy cause. Prior to the pandemic multiple workshops and lately webinars were organized right throughout the past year, promoting this concept to the masses of Sri Lanka. Many workshops within the hospital are being conducted to create awareness amongst its staff regarding organ donation and transplantation.

Figure 7: CME programmes with experts from United Kingdom, Spain and India

Previously, there was a perceived lack of need for young surgical trainees to take up multiorgan transplantation as a carreer and to understand multi organ procurement. To counter this, we commenced an annual cadaveric workshop in order to gain hands-on surgical skills in organ procurement and transplantation with the participation of transplant surgeons.

Figure 8: Cadaveric workshops with hands-on surgical experience in organ procurement and transplantion

Also, the First edition of an Organ Procurement Transplant Manual was launched in November 2021.

Figure 9: Manual of Multi-Organ Procurement and Transplantation

The new concept of deceased organ donation and transplantation required many of the country's administrative coordination facilities to be strengthen. A centralized transplant directive was established tasked with the development of a structured transplant procurement managerial system, electronic database, organ registry and allocating system. It is here that international support and guidance is required in order to move forward.

Even though Sri Lanka is limping with the pandemic causing economic hardships, the young clinicians with a group of other interested individuals in the society are striving hard to continue with this worthy cause.

One must not forget that organ donation not only changes the life of the recipient, it also changes the lives of the loved ones, families, friends and colleagues. Sri Lanka is a Buddhist country, and our culture permits organ donation and transplantation wholeheartedly. This act of merit "dana" is embedded in our hearts which makes this concept a willing act.

Our journey has only just begun...

Our objective is to continue to develop Sri Jayewardenepura General Hospital as a model organization in multi organ procurement & transplantation for Sri Lanka. We shall strive hard to eventually become a center for clinical excellence in deceased donation and transplantation by offering state of the art facilities such as robotic transplantation. Although the journey thus far has been long and tortuous, our enthusiasm and determination to see this grow in to a successful national program has only picked up momentum.

It is with this mind that we formulated the Organ Donation & Transplantation Foundation (ODTF). We will continue to change the social attitudes toward deceased donation in the Sri Lankan community by making them realize that organ donation not only changes the life of the recipient but the entire act of donation helps the bereaving family to find solace in a time of despair.

Figure 10: Organ Donation and Transplantation Foundation & Trust Fund

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PROUDLY PRESENTING OUR TEAM

2021 Photographic Competition Submissions

Look at yourself in the mirror and don't be afraid to notice how amazing you are.
by Ali Yasen Mohamedahmed

Be patient with yourself.
by Sangramsingh Patil

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ART AND SURGERY

Look at yourself in the mirror and don't be afraid to notice how amazing you are.
by Mohamed Rabie

Reflection of Sabrina, Donegal Ireland
by Michael Sugrue

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ART AND SURGERY

The journey
by Mohan Singh

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ART AND SURGERY

coress feedback

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

CORESS Feedback: Cases from the Confidential Reporting System for Surgery

CORESS is an independent charity, supported by the AXA Health, the MDU and the WPA Benevolent Foundation

The series of cases in this edition of Surgical Life illustrates adverse incidents arising out of technical errors, and kit problems and emphasises the importance of the "duty of candour". Poor communication contributes to many adverse incidents or near misses. These cases have occurred in a number of specialties, emphasising the need for good communication as a central theme across surgical practice in general.

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 (ARCP) portfolio documentation. Trainee contributions are particularly welcome.

CORESS would also welcome any reports which may have arisen as consequences of the COVID pandemic.

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

Tunnelling device mishap

(Case ref: 287)

A 68-year old man underwent an obturator bypass for critical limb ischaemia, to avoid a groin scarred by chronic infection from previous surgery. This involved retroperitoneal exposure and placement of a tunnelled prosthetic graft from the iliac artery, through the obturator foramen to the medial thigh, with distal anastomosis to the superficial femoral artery. A standard tunnelling device was used with a "screw-in" blunt olive, matched to the Dacron graft 8mm diameter. As the tunneller was introduced through the obturator foramen of the pelvis, from the thigh, the olive tip of the tunnelling trocar became unscrewed and disconnected from the rod of the trocar, ending up lodged and inaccessible somewhere in the deep pelvic tissues.

After numerous attempts to retrieve the 1cm long bullet-shaped olive, and despite on-table imaging to confirm its position, it was deemed too potentially disruptive to attempt to extract the tip. The operation was completed using a second tunneller, and the metallic olive left in-situ when the incisions were closed.

Postoperatively, a full explanation with diagrams was provided to the patient by the operating surgeon. No complaint arose and at 6 months follow-up the graft was patent with no complications.

Reporter's comments:

With this particular tunnelling device, the correctly-sized olive had to be selected and screwed into the trocar rod. This was undertaken by the scrub nurse whilst the surgeons prepared the operative field. It is possible this was not done correctly or that the olive was mis-threaded. Nonetheless this should have been checked by the surgeon prior to use. In the event of the olive dislodgement, a team decision was eventually made to abandon attempts at retrieval because of the risk of causing injury. A full and honest explanation to the patient helped to defuse any potential complaint.

CORESS comments:

Unfortunately, kit failures do occasionally occur across all surgical specialties and it is sometimes in the patient's interests to refrain from retrieving an inaccessible foreign object if it is deemed that the risk of leaving this in place is significantly less than further, potentially injurious, surgical exploration. Key points related to this case are the importance of checking all surgical equipment before introducing this into the patient. In the event such an incident there is a duty of candour to provide a full and frank explanation to the patient. The patient should also be warned of implications of retained metallic objects with respect to potential future MRI scans.

CT Angiogram right obturator bypass

Retained tip of vein hook

(Case ref: 288)

The 38-year old wife of a local GP underwent bilateral radiofrequency ablation of incompetent varicose great saphenous veins, with concomitant phlebectomies, at a local private hospital.

The procedure was carried out under general anaesthesia at her request. Phlebectomies were undertaken via small stab incisions in skin creases using a Size 1 (larger) Oesch-style vein hook.

During the phlebectomies on the second limb, whilst removing a large anterior thigh vein varicosity, the vein hook snapped at approximately 1cm from its tip, leaving the tip embedded in the thigh tissues. Attempts to locate the hook tip with a fine arterial clip were unsuccessful and despite undertaking image intensification, using crossed 21g hypodermic needles to triangulate the hook's position, it proved impossible to remove the hook tip without potentially significantly enlarging the incision. The decision was taken to complete the procedure without retrieving the hook tip. This was done without further incident.

An explanation was provided to the patient who made a good cosmetic recovery.

Reporter's comments:

On completion of the operation the set of vein hooks were inspected, and it became apparent that all had been bent through usage and probably re-bent into shape, representing wear and tear of usage. The fracture of the hook tip had probably occurred as a result of metal fatigue, rather than the use of inadvertent force.

CORESS comments:
As in the previous case a careful check of the equipment prior to use may have revealed a potential problem. Where kit is obviously worn this should be withdrawn from use and replaced as necessary.

Vein hook

Missed anal carcinoma (Case ref: 289)

A 62-year old woman was referred to the colorectal team with a generic GP letter describing altered bowel habit, occasional rectal bleeding and "nasty piles". She was booked for fast track flexible sigmoidoscopy before being seen, with a view to an outpatient appointment after the test.

A flexible sigmoidoscopy was performed by an experienced Nurse Practitioner and reported as normal. As a result, a routine outpatient appointment was made, which the patient attended 16 weeks after the test. At the outpatients it became evident that the "nasty piles" was an anal carcinoma.

Reporters comments:
This case demonstrates the potential danger of a fast track policy in which the patient may not have been seen by a clinician with colorectal experience before the investigation. The description of "nasty piles" should have flagged up the possibility of anal or perianal pathology.

CORESS comments:

This case begs the question as to whether the patient was examined thoroughly prior to referral to the fast track colorectal clinic. Anal examination should be undertaken before any colorectal endoscopy, but if the endoscopist is uncertain of the clinical implications of abnormal appearances a second opinion should be sought.

Missed sepsis post-laparoscopic cholecystectomy (Case ref: 290)

A patient was re-admitted for pain control five days after a difficult elective laparoscopic cholecystectomy. Ultrasound was difficult because of patient habitus, but unremarkable. On the following morning, the patient still had a tender abdomen and guarding, but no rebound, with normal bowel sounds. Blood pressure and pulse were normal. Blood tests revealed an inflammatory response and after consultant review, the plan was for supportive therapy and repeat assessment over the weekend. The patient was handed over to the night on-call team for review.

On the following morning, a Saturday, the night registrar noted the patient wasn't on the list for ward review (in our hospital, in-patients are placed on a different list from post-take patients and are reviewed by a separate surgical team) and the FY1 was informed. The FY1 did not include the patient on his list and therefore the patient was not reviewed subsequently on that day by the locum registrar who was covering the wards.

The ward nurses responsible for the patient did not alert the surgical team to the fact that she had not been seen. On the Sunday morning, the night on-call registrar, who knew the patient, reviewed all the blood tests from Saturday and noted a soaring inflammatory response. The surgical team went back to review the patient and found her septic, and now, with frank peritonitis. The patient underwent urgent surgical exploration during which a subhepatic collection of old blood, bile and fibrin was washed out, and a drain placed. The patient eventually made good recovery.

CORESS comments:
As with many cases, a number of separate factors lined up to produce the adverse incident described here. The key underlying problem was poor communication between the different teams of staff responsible for the patient's care. The fact that sick in-patients and post-take patients were on separate lists for review, reflected a problem with the system. The F1 forgot to include the patient on a list for review; the locum may not have been aware of hospital procedures; and the nursing staff didn't remind the on-call team that the patient needed review.

The ASiT member of the Advisory Board commented that this was a "failure to rescue"[1.] and introduced the Board to the useful metric: "Recognise; Relay; React"[1]. It was noted that existence of an Early Warning System (EWS), or escalation protocols might have prompted earlier review of the patient.

1. Burke JR, Downey C, Almoudaris AM. Failure to rescue deteriorating patients: a systematic review of root causes and improvement strategies. J Patient Saf. 2020 May 21 doi: 10.1097/PTS.0000000000000720. Epub ahead of print. PMID: 32453105.

Late diagnosis of ruptured ectopic pregnancy (Case ref: 291)

As the general surgery SpR, I was called to the Emergency Department by the on-call locum Core Trainee covering urology and gynaecology, to see a 38-year old woman with a positive pregnancy test and right-sided lower abdominal pain. I was told that the patient was haemodynamically stable. The Core Trainee had discussed the patient with the on-call gynaecology Consultant who had requested surgical review to rule out appendicitis before seeing the patient.

When I saw the patient at 02.30, she was in a side room in the Minors section of the Emergency Department, with a blood pressure of 50/38. She had no IV access and was pale and dizzy, having been admitted at 21.00. Since admission she had experienced lower abdominal pain, distention and a number of syncopal episodes. I immediately transferred her to the resuscitation bay, gained IV access, administered fluids, cross-matched 4 units of blood and inserted a catheter. Her systolic blood pressure transiently recovered to 117mmHg before falling to around 70mmHg, with a tachycardia of 90-150 bpm. I contacted the gynaecology Specialist Trainee and asked him to see the patient and to discuss her with his consultant. The gynaecology Consultant eventually attended and obtained consent from the patient for emergency laparotomy, subsequently undertaking a right salpingectomy for ruptured ectopic pregnancy. The patient had 5 litres of blood in her pelvis. Postoperatively she made an uncomplicated recovery.

Reporters comments:

The covering Core Trainee had not been trained in cross-specialty cover and failed to recognise a critically unwell patient with clinical signs of a classical gynaecological emergency. ED staff also neglected to flag up grossly abnormal observations to other medical staff. Trainees covering specialties other than their own, in an on-call capacity, should be given adequate training in advance.

CORESS comments:
This is a similar case to that described above, in which hierarchy, in addition to poor communication, may have played a role. In a young woman with a positive pregnancy test and abdominal pain, the gynaecology team should have been involved early on and senior review was indicated if there was diagnostic doubt. An early ultrasound scan may have resolved the diagnostic dilemma and prompted earlier intervention.

Aspiration of gastric contents due to mismanagement of nasogastric tube (Case ref: 292)

CORESS was alerted to the following case, in the public domain, by the Department of Health and Social Care and ASGBI. The case was the subject of a Coroner's Report with the aim of prevention of future deaths. Details of the case and Trust involved have been anonymised in this CORESS Report.

A 60-year old woman was admitted to hospital with a 48-hour history of cramping abdominal pain, vomiting and constipation. The patient had previously required colectomy for complications of inflammatory bowel disease. The patient had a distended abdomen with tinkling bowel sounds and examination confirmed the scar of a previous laparotomy. Abdominal X-rays demonstrated distended loops of small bowel with multiple fluid levels and a diagnosis of sub-acute small bowel obstruction was made.

The patient was placed nil-by-mouth, an i.v. line was set up, she was catheterised and admitted to the ward for nasogastric tube placement, with an oral request that the tube be aspirated regularly at 2-3 hourly intervals. A request was made for a CT scan and during this the nasogastric tube was clamped to facilitate imaging. The patient returned to the ward late in the evening when the ward was staffed by agency staff with no experience of management of nasogastric tubes. No instructions were written in the notes to indicate that the tube should either have been left on free drainage or aspirated. During the night the patient developed severe respiratory distress secondary to aspiration of gastric contents, and despite transfer to the ITU and respiratory intervention, succumbed to an aspiration pneumonia.

Reporters comments:

The Trust investigated this incident and put the following remedial actions in place:

- In response to concerns about communications of clinical instructions, a structured ward round template was introduced.
- A specific teaching session for ward staff in areas managing nasogastric tubes was prepared for delivery at regular intervals.
- A Consultant Surgeon of the Week model, with a single Consultant providing ward cover Monday to Friday, and another covering the weekend, was introduced.
- The Trust Induction Policy was amended to ensure that temporary agency staff were competent to carry out the care for the patients they have been allocated to on a particular shift.

CORESS comments:

Continuity of care and communication were the key issues here. A checklist protocol for management of NG tubes and a formal handover to ward staff on return from radiology would have been useful. It was noted that similar problems have been reported with chest and spinal drains. A flag placed on the tube with specific instructions would also have been helpful.

Journal of the Association of Surgeons of Great Britain & Ireland

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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.

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Surgical Life

The Journal of the ASGBI

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

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