



Issue 04
August 2018

the **bulletin**

*Society for Cardiothoracic Surgery
in Great Britain and Ireland*



**Independent
operating:
A trainees
perspective** p18

**Living with Pectus
Excavatum** p26

**A real masterclass
in Aortic surgery** p40

**Travelling Fellowship:
A Year in Sunnybrook** p56



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Advertorial

Innovation and Heart Valve Disease

Tony Young, National Clinical Lead for Innovation at NHS England and Consultant Urological Surgeon at Southend University Hospital, Professor Jan Kovak, Consultant Cardiologist from Leicester's Hospitals and Neil Moat, Consultant Cardiac Surgeon from Royal Brompton Hospital

"With approximately 1.5 million people over the age of 65 currently affected by heart valve disease in the UK, and with the number of people in this age bracket set to significantly increase over the coming years, how we test, trial and take up new technological innovation will be more important than ever," said Tony Young, National Clinical Lead for Innovation at NHS England and Consultant Urological Surgeon at Southend University Hospital.

Innovation has had a massive impact on how valve disease is treated and is now having a big impact over how the disease is detected. Stethoscope exams are still the tried and true way to initially detect the telltale murmur associated with valve disease and echocardiograms confirm or rule out the disease. While this has always been an accurate way to diagnose heart valve disease, new technology is now allowing for technicians and clinicians to gain more insight into the severity of the disease that can help to get the patients on the correct management plan much sooner. Newer high quality

transthoracic echocardiograms provide a much clearer picture than the standard echocardiogram and hand-held echocardiography devices are also becoming an important part of the process to help make the diagnosis of valve disease much more rapid.

Innovation also plays an important role in the treatments available to patients. New minimally invasive treatments have allowed for older patients with varying co-morbidities to be treated for their valve disease and regain their quality of life back. Treatments such as Transcatheter Aortic Valve Implantation (TAVI) which was first performed in the UK in 2007 by Professor Jan Kovak, Consultant Cardiologist from Leicester's Hospitals on an 89 year old patient who went on to live nine more full years with her friends and family. There are also new advancements being made in minimally invasive keyhole valve repairs and replacements that allow for quicker recovery and less time in the hospital. Liverpool Heart and Chest Hospital clinicians have been performing the UK's first totally keyhole (endoscopic) robotic mitral valve surgeries allowing

patients to be released much sooner and with much less post-operative pain or risk of infection.

Neil Moat, Consultant cardiac surgeon from Royal Brompton Hospital says, "In the future, we will also see improved treatment options for patients who present with mitral regurgitation. This will include more effective repair procedures, newer devices and less invasive approaches." This is already starting to take place in the UK. Heart valve disease patient Geoffrey Pritchard, 76, of North London recently received a new innovative mitral valve device through minimally invasive surgery, meaning he was out of the hospital and back on the golf course in no time.

"Having access to new innovative treatments are essential to further expand options for patients. It was not that long ago that there were no, or very limited, options to help those with this life-limiting condition, who are considered inoperable or too high risk for cardiac surgery," said Jan Kovak.

The more we listen, the more lives we save



From the Editor

Indu Deglurkar, Publishing Secretary, SCTS



I reckon we have all done a lot of editing in our time and indeed editing and auditing are tasks that I innately enjoy. Yet, when our President, Richard Page, telephoned to offer me the job of Publications Secretary following a round of late evening interviews, I suddenly had mixed feelings... joy of course, but equally laced with sudden doubts as these are uncharted territories. This was short lived due to the ease and patience with which Vipin & Isabelle have guided me into editing the bulletin.

In the Presidential communication, Richard Page talks about nurturing individuals to engage with the Society, the GIRFT report and its use of HES to produce helpful comparison between Units in England, explore outcomes beyond operative mortality and service issues.

We have been inundated with a range of articles. If lack of exposure equals not being equipped to excel, there is certainly no paucity of global exposure in the Cardiothoracic community given the wide breadth of Fellowships undertaken and the acquisition of a number of skills which will enrich our practice.

The thought provoking article by Steve Large on independent operating and whether the graduation of Mr Alt O'Gether to Mr Alt O'Gether-Perfect should involve a junior Consultancy period is worth exploring further. This is counterbalanced with a trainee's perspective that opportunities to operate independently are variable and

ramifications as well. Space... the final frontier and the gliding voyages of Nick Odom highlights the similarities in multidimensional awareness of atmosphere be it in theatres or in space. Clearly, once a cardiac surgeon, always a cardiac surgeon holds good after retirement too.

We have reports from Narain Moorjani, Honorary Secretary encouraging involvement with the SCTS. David Jenkins reports on the development of the new "Blue Book" that will review 15 years of cardiac surgery data & Doug West announces the publication of the third Thoracic Blue Book later this year - no doubt we are in for plenty of interesting data ahead. Rajesh Shah reports on the imminent change in curriculum in 2019 & Sri Rathinam reports on a constantly evolving Education portfolio. Carol & Sunil relate the challenges of assessing a trainee's

knowledge before and after the course. There is a wealth of information for AHPs given out by Helen Munday, Tara Bartley & Bhuvana Krishnamoorthy. Clinton Lloyd & team are bracing themselves for another busy annual meeting.

In my new role as Editor of this popular, unique & useful bulletin, I will request one article by invitation and introduce a brief constructive "Candid Column" and submissions will be open to all members. This is specifically to stimulate debate about practices, team working, commissioning, education & training, leadership & resource management... anything that may be worthwhile. As a Society we can remain at the forefront, chart our own road map and firmly cement our position as key players.

Enjoy the glorious summer & many thanks to Isabelle for all the help.

I welcome all suggestions and feedback and can be contacted at indu.deglurkar@wales.nhs.uk ■

"In my new role as Editor I will introduce a brief constructive "Candid Column" to stimulate debate about practices, team working, commissioning, education & training, leadership & resource management."

limited. The management of this difficult transition with minimal implications to the patient, trainee and the consultant, acquiring nontechnical skills to compliment the technical skills and the finished "end product" is the BIG question.

I felt that Joel Dunning's article which is essentially an honest, sensitive account from a patient living with a severe chest deformity in a Society that prizes a "strong & proud" chest is a timely reminder that our Commissioner's need to understand the emotional and psychological

Nick Odom (page 63) compares his gliding voyages to the multidimensional awareness of atmosphere in theatre



From the President

As I write this in the middle of the biggest heat wave to affect the UK for many years, it seems a world away from the snow in Glasgow.

Richard Page



The Annual SCTS meeting in March was a fantastic place to start my Presidency. Once again a record number of delegates (over 800) attended despite the heavy snowfall and feedback from the meeting was excellent. Credit should go to Clinton Lloyd and the rest of the meeting team for coping with what could have been an unending series of crises when speakers could not get to Glasgow because of the weather. But as always the adaptability of the cardiothoracic surgical community to adversity was very impressive, and the meeting was a great success.

The task of taking over the office of SCTS President from Graham Cooper was something that has nagged at me for the last couple of years. Graham has been an absolutely sterling servant of

the SCTS and his wisdom, diplomacy and humour is already missed. But I'm lucky to have Simon Kendall as President-Elect and Narain Moorjani as Honorary Secretary to help me. Isabelle Ferner and Tilly Mitchell in the SCTS office are always so helpful

“One of my main aims as SCTS President is to structure the Society to allow for as many members as possible to be able to contribute.”

and approachable, and keep everything and everyone ticking along smoothly. I know they are appreciated by us all, especially with the upheavals of the College refurbishment and the trials of the dreaded GDPR with the deadline in May. GDPR is the reason

you've been getting all those e-mails from companies who you have no recollection of having anything to do with, but who have held your personal data since you bought that microwave from them years ago. The SCTS hold personal data

as well and Isabelle and Narain have done a brilliant job navigating the sea of bureaucracy that governs the GDPR process, the penalties for breaches of which can be severe.

The SCTS education portfolio continues to expand seemingly exponentially, thanks to

the efforts of what, for the first time, probably comprises the majority of SCTS members and led enthusiastically by Narain and Sri Rathinam. Letty Mitchell has coped admirably with the absorption of the administration of all the courses over the last year (previously carried out by colleagues in Ethicon, who still fund the costs of the NTN courses), but I know she was very relieved when we were able to appoint Emma Ferris to help. Education within the SCTS remains a major priority - not just for nationally appointed trainee surgeons, but also those surgeons not in Deanery training posts, cardiothoracic nurses and surgical care practitioners.

Special thanks go as well to Mr Marian Ionescu for his inspiring and tireless support of SCTS Education via the SCTS Ionescu University which runs throughout the day before the SCTS annual meetings. This is followed by the publication of the University's lectures in the "Perspectives in Cardiothoracic Surgery" textbooks distributed free



Keng Ang (page 38) shares his pearls of wisdom from his travelling fellowship to China

to the membership. The 10th Ionescu University is planned to take place before the 2019 meeting in London next March. Mr Ionescu – on behalf of all the SCTS can I say that we really appreciate your help and support for SCTS Education, and that the SCTS Ionescu University is without doubt the highlight of the Education year.

One of my main aims as SCTS President is to structure the Society to allow for as many members as possible to be able to contribute. This has traditionally been as an elected Executive Trustee and many congratulations to Marjan Jahangiri and Mahmoud Loubani who were successful in the Trustee elections last year, and who joined the SCTS Executive in March 2018. And thanks to Andy Owen and John Dunning who have completed their terms of office. Juliet King has also completed her Trusteeship, but has kindly agreed to stay on as the co-opted thoracic surgical representative. But in additions to being a Trustee it is through the various SCTS subcommittees that there are lots more

opportunities for members to get involved with SCTS matters. As such, we have recently revised the terms of reference for all the subcommittees to facilitate this, and over the next few months you will be contacted by the SCTS office explaining the process.

In addition to the three subspecialty committees (adult cardiac, congenital cardiac, and thoracic surgery) the SCTS has well-established sub-committees relating to Allied Health Professionals, Education, Audit, the Meeting Team, Research, and Professional Standards. We have recently conceived a Communications sub-committee which will look at expanding the way the SCTS communicates with its membership, all other professional groups and of course our patients and their families.

The SCTS continues to lead clinical audit of activity and outcomes after cardiothoracic surgery and we were closely involved with the most recent iteration of this, the Getting It Right First Time (GIRFT) project led by David Richens, the first report of which for adult cardiac

and thoracic surgery in England was published this Spring. As is becoming commoner these days given the politics within the NHS it is a shame that Scotland, Wales and Ireland are marginalised from national projects. The report used Hospital Episode Statistics (HES) data to produce helpful comparisons between Units and explored many other clinical outcomes beyond operative mortality, as well as service issues such as access to protected ITU facilities, day-of-admission surgery, and bed management. The GIRFT is very much in line with the philosophy of the SCTS in reporting outcomes, where the publications of the variations between Units stimulate the cardiothoracic community to optimise services for our patients.

Many congratulations to David and his colleagues on a fantastic job. The GIRFT recommendations are universally helpful, sometimes challenging, and I know will be debated widely within the SCTS and cardiothoracic Units throughout the country.

My best wishes to you all for the rest of 2018. ■



SCTS ANNUAL DINNER

Monday 11th March 2019
UnderGlobe, 21 New Globe Walk, London, SE1 9DT

Tickets £65

**Ticket includes welcome drinks,
 3 course meal and entertainment.**

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 for the SCTS Annual Meeting.**

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10-12 MARCH

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1ST SEPTEMBER: SUBMISSION OPEN

5TH NOVEMBER: SUBMISSION DEADLINE

1ST DECEMBER: REGISTRATION OPEN

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83rd Annual SCTS and CT Forum Meeting and Ionescu University

The 83rd Annual SCTS and CT Forum meeting will be held 10th – 12th March 2019 and will return to London.

Clinton Lloyd (on behalf of the meeting team)



The QEII Centre is centrally located opposite Westminster Abbey and the Houses of Parliament and will provide another excellent venue for the Ionescu University on the Sunday and main SCTS meeting and CT Forum (Nursing and Allied Health professionals) on the Monday and Tuesday. New techniques in Cardiothoracic surgery, updates and controversies in all aspects of care will be covered and we have another exciting faculty of invited European and American guest speakers over the course of the three days - this is your chance to meet them and pick their brains in their area of expertise.

Last year we had a record number of abstract submissions with ever increasing interest in submissions from the CT Forum, trainees and medical students. Abstract submission will open on 1st September 2018 and deadline for submission will be 5th November 2018. Registration for the meeting will open on 1st December 2018.

See <https://scts.org/annual-meeting/> for links to the meeting and abstract submission.

The conference dinner will be held in the Underglobe – beneath Shakespeare's Globe Theatre and we look forward to providing another memorable evening of entertainment.

We welcome Cha Rajakaruna (Bristol) to the meetings team who will work as deputy secretary along with Maninder Kalkat (Birmingham) and Clinton Lloyd (Plymouth) from the surgical team and Helen Munday (Papworth) who represents the CT Forum. Please contact any of us for any areas of interest or ideas that you may wish to be considered for the meeting.

Please contact Isabelle Ferner at sctsadmin@scts.org for any administrative queries and we look forward to seeing you in London 2019. ■

Congratulations for our new roles



Richard Page,
President



Simon Kendall,
President-elect



Narain Moorjani,
Honorary Secretary



Marjan Jahangiri,
Elected Trustee/Co-Chair,
Cardiac Committee



Mahmoud Loubani,
Elected Trustee



Juliet King,
Co-opted as Thoracic
Trustee



Cha Rajakaruna,
Deputy Meeting
Secretary



Indu Deglurkar,
Publications Secretary

What the Society can do for you and what you can do for the Society

It is a real honour and privilege to take on the role of Honorary Secretary of the SCTS and responsibility that the position carries with it.



Narain Moorjani, Honorary Secretary

It is important to recognise the work of those before me in the role and it will be a difficult act to follow in all that they have achieved, especially Simon Kendall, my immediate predecessor. I am excited by the challenges ahead, and hope to help to continue to evolve the Society to ensure that it continues to be responsive to meet the needs of its members and the general public.

This article aims to look at what the Society does for its members and how the members can contribute to the SCTS's functions and achievements. The Society has a responsibility to patients undergoing cardiothoracic surgery, as well as all professionals involved in the care of these patients. This is clearly stated in the official aims of the SCTS:

1. To continuously improve the quality of healthcare that our members deliver to patients in an open and accountable manner

Over the past 40 years, the SCTS has been at the forefront of auditing and publishing outcomes for patients undergoing cardiothoracic surgery, which has directly been associated with improved quality of care for patients. This is delivered through stringent collection, analysis, validation, risk-adjustment and calibration of the data to

ensure accuracy of the information published. The SCTS will continue to engage in this process, as it has a responsibility to the public to ensure that quality assured information is published and its desire to continually improve patient care.

2. To ensure that we influence the direction of education and development of surgeons-in-training and related health care professionals

The SCTS has developed an internationally recognised portfolio of cardiothoracic surgery training courses. For surgical trainees, a unique programme of 12 curriculum-aligned, simulation-based training courses has been set up, encompassing their entire cardiothoracic surgery syllabus and uniquely using live operating to teach surgical techniques. These courses are delivered free of charge to the trainees, including registration, travel and accommodation. This is the only extensive portfolio of cardiothoracic surgery training courses that exists throughout the world or in any other surgical sub-specialty. Recent peer review of the courses has come with two publications in the *Journal of Thoracic and Cardiovascular Surgery*, with three supportive accompanying editorials citing how the SCTS is leading innovation in the

delivery of cardiothoracic surgical education. Similarly, the SCTS has an expansive array of training courses for nurses and allied health professionals, as well as a number of courses and conferences to attract medical students, foundation year doctors and core surgical trainees into the speciality.

3. Ensure that regulation when required is fit for purpose

The SCTS works tirelessly with the Royal College of Surgeons, General Medical Council and Department of Health to ensure any regulation and legislation introduced that governs our daily practice both protects and supports all healthcare professionals involved in the delivery of cardiothoracic surgery, to ensure the best quality of care for patients.

4. To meet the professional demands of our members as regards information and guidance surrounding the practice of cardiothoracic surgery

The Society runs an Annual Meeting that provides a wealth of knowledge and practical skills for its members regarding the contemporary practice of cardiothoracic surgery. In addition to the main programme, where current cardiothoracic surgical practice is presented and debated, the SCTS

University delivers an interactive programme that discusses innovation and controversial issues in current practice, delivered by international experts in the field, with parallel and integrated medical, nursing and allied healthcare professional sessions running throughout the meeting.

In addition, the Society website currently provides a wide range of information to guide healthcare professionals in terms of clinical practice and professional development. There are plans to further expand the information provided, including sharing best practices and quality improvement programmes, such as how to set up a Day of Surgery Admission pathway, and guidance information, such as on how to develop a research portfolio and introduce a new surgical technique.

5. Support education and professional development through Society scholarships and bursaries

The SCTS has a strong commitment to supporting professional development by providing travelling fellowships to enable individuals or teams to visit a

“As a Society, we have a responsibility to serve our members, which includes doctors, nurses and allied healthcare professionals. In order to fulfil these responsibilities, we need the help of all our members.”

cardiothoracic surgery centre of excellence, in the UK or abroad, to develop new clinical skills to bring back to their base unit. There are different fellowships for Consultants, Surgical Trainees, Fellows (non-NTNs), Nurses & Allied Health Professionals and Medical Students. These fellowships have been made possible not only by generous contributions from Ethicon, but especially by the tireless and unstinting support that Mr Marian Ionsecu has given to the SCTS over many years.

6. Represent GB & Ireland in cardiothoracic surgery at an international level to foster exchange of concepts and ideas which may enhance our practice

The SCTS has developed links with the major international Cardiothoracic Surgical Societies to ensure that surgical practice in the UK & Ireland remains at the leading edge of innovation by collaboration in clinical and research networks. Through these associations, it has also allowed local surgeons to visit international centres of excellence to further develop surgical practice in the UK & Ireland.

Over the past few months, we have been looking at the constitution of the SCTS Executive sub-committees, with the aim of standardising and streamlining the infrastructure of the Society. It will mean that there will plenty of opportunities for members of the Society to get involved and have the opportunity to shape the way that the Society runs and influence the delivery of care for patients undergoing cardiothoracic surgery at a national level. A new addition to the current infrastructure will be a Communications Sub-committee, which will coordinate the overall strategy on how the SCTS connects with its membership, external stakeholders and the general public. In particular, the Communications sub-committee will aim to evolve the Society's website as the outward face of the SCTS being responsive to the needs of professionals caring for patients undergoing cardiothoracic surgery and for patients themselves, as a source of reliable

information that will allow them to make an informed decision regarding surgery.

In terms of communication, one of the main challenges that has occurred since the last Annual meeting in March is the introduction of the new European Union General Data Protection Regulations (GDPR), which came into effect on the 25th May 2018. You will all have received a barrage of emails from companies and websites that you are registered with explaining how the new laws affect them and their interaction with you. The new legislation sets out strict requirements for the collection, processing, protection and disposal of your personal data. In order to carry out its activities as a specialist cardiothoracic surgery association, the SCTS has a legitimate need to collect and process information about its members and about individuals who take part in cardiothoracic surgical activities in general. In addition, the SCTS will need to continue to communicate with its members about ongoing Cardiothoracic Surgical research, audit, educational courses, conferences and publications, as well as on behalf of the wider cardiothoracic community. As we understand that not all members will want to receive all of this information, by logging in to the Society website, members will be given the opportunity to opt-out of some or all communications from the Society.

As a Society, we have a responsibility to serve our members, which includes doctors, nurses and allied healthcare professionals. In order to fulfil these responsibilities, we need the help of all our members whether it is delivering excellent healthcare to patients undergoing cardiothoracic surgery, teaching as faculty on the training courses or helping to enter patients on the nationally co-ordinated clinical research trials. In addition, the best way to change things is from the inside and to be engaged, and as such we would encourage all members to get involved with the Society and its infrastructure, whether as Unit Representative on the Board of Representatives, as a member of one of 10 SCTS sub-committees or as a Trustee on the SCTS Executive. ■

Audit report

It is two years since I wrote the last combined audit report for the Bulletin and with separate more recent updates on the advances in thoracic audit, and with all units now represented on the SCTS congenital committee, this report will concentrate on adult cardiac surgery.



David Jenkins, Chair of audit committee, SCTS executive

I am sure all are aware that the publication of the latest 2014-17 audit data cycle, due in May, has been delayed by NICOR (National Institute for Cardiovascular Outcomes Research). The data submissions and analysis were completed on time at NICOR and the results communicated to the senior members of the SCTS executive. I am pleased to report that the provisional analysis indicates there were no alarm outliers at unit or individual level and all will be shown as 'as expected' in the public domain when the publication is released.

There were 13 surgeon and 3 unit alert outliers, evenly distributed between positive and negative and the joint NICOR/SCTS letters have already been sent

informing those members affected. We have again kept the recalibration of logistic EuroSCORE (European System for Cardiac Operative Risk Evaluation) I stable over the last few years and the formula is available to your audit departments so that you can replicate the NICOR analysis for your own data locally. In addition, the corrections for dispersion have not changed. The last revision of the dataset has allowed us to collect the

variables needed to calculate EuroSCORE II, but no decision has been made about changing the risk stratification at present.

The reason for the delayed publication was due to a potential analysis error in another NICOR audit. This prompted an external review by the UCL statistical department, and until this has been completed, HQIP (Healthcare Quality Improvement Partnership) agreed that publication of all the audits should be delayed. Although frustrating, I think for the future of the adult cardiac surgery, and

There have been considerable changes at NICOR over the last two years. The organisation is now hosted by Barts and has moved site. Last year it successfully bid to continue to run the six cardiac audits and HQIP re-commissioned NICOR for a further three year period. The plan is to integrate the audits further and develop joint reports. The audit component is now renamed NCAP, national cardiac audit programme. Andrew Goodwin remains as the NICOR lead for the adult cardiac surgery audit. NICOR and SCTS have worked together to develop

additional outcome measures related to morbidity and process and these will be published at unit level in the future. Examples of additional outcome measures include deep

"I am pleased to report that after a 2 year delay we are nearing completion of the analysis of a major project to review 15 years of cardiac surgery data. This will be developed into a new 'Blue book' demonstrating the changes in practice and outcomes over the last 15 years."

congenital, audits (both run by NICOR), this will be an important step. It is likely that the results will be published in a similar format to previous publications, but in future we need to consider formats that are more easily understandable by patients. SCTS welcomes more external statistical scrutiny, and we have been promised that this will now become routine with all six NICOR audits receiving the same support.

sternal wound infection, stroke, renal failure and return to theatre because of bleeding. This has highlighted that the completeness of the database fields for some variables could be improved and your help at local level is appreciated.

Those of us working in England will have contributed to the GIRFT report that was lead by Dave Richens and published a few months ago (<http://gettingitrightfirsttime.co.uk>).

As part of the series that commenced with orthopaedics, and has now moved on to cardiology, the cardiothoracic report was well received, and was endorsed by SCTS. As an NHSEng initiative, it only covered English units, but I would suggest the 20 recommendations should be considered by all hospitals. It may not be possible for all units to adopt all of the recommendations for geographical or logistical reasons, but one has to admit that there are clear potential patient benefits. The regional GIRFT teams are due to visit individual hospitals to provide support to meeting the recommendations. The report highlights examples of good practice and SCTS also developed a toolkit (<https://scts.org/7891-2/>) that is available on our website to illustrate how some of these can be achieved. What was novel about the GIRFT analysis is that it used data from multiple sources, some from the individual hospitals, some from NICOR and some from HES (Hospital Episode Statistics) and reported at unit

level only, reflecting the team basis of modern cardiac surgery. Although HES data is not validated in the same way as the information we submit to NICOR, the quality has improved in recent years, and as GIRFT demonstrated, it allows us to look at our practice in different ways. For example, readmission rates after discharge and the incidence of PCI in the year following CABG are only possible from HES.

Another initiative, supported by the secretary of state and endorsed by the Federation of Surgical Specialty Associations, is NCIP – national clinical improvement programme. This is in the preliminary stages and will be developed by the same teams that delivered GIRFT. It is envisaged as a portal to allow individual clinicians more access to their own outcomes, but is not designed for publication. SCTS have already held preliminary discussions and have shared our experience in audit and outcomes publication. We have again stressed the

importance of team and unit outcomes as many more than the individual surgeon contribute to patient care.

I am pleased to report that after a two year delay we are nearing completion of the analysis of a major project to review 15 years of cardiac surgery data. This will be developed into a new ‘Blue book’ demonstrating the changes in practice and outcomes over the last 15 years. The thoracic and congenital audits are working on similar projects and the final result should be a unique insight to modern cardiothoracic practice at national level.

Finally, SCTS need a replacement for my role. I was originally elected to the SCTS executive as a trustee and took over the chairmanship of the audit committee from Ben Bridgewater during my three year term. I am now in my third extended year as a co-opted member. We are reviewing the terms of reference of all the sub-committees and roles, so please look out for application/expression of interest opportunities if you want to contribute. ■



Timings: 09:30-17:00, lunch provided.

Venue: The Great Hall, St. Bartholomew's Hospital, 19 Giltspur Street, London, EC1A 9DD

Attendance by invitation only. Registration essential.

EVENT PROGRAMME

Morning Session: The Patient Pathway

- Genetic Factors in Aortic Dissection: Treating the whole family
- Aortic Dissection in Children
- The surveillance of Aortic Dissection patients
- Managing Risk Factors for Aortic Dissection: Difficult blood pressure
- Patient story: Genes, childhood and life before Aortic Dissection
- Cardiothoracic surgery for Aortic Dissection
- Vascular surgery for Aortic Dissection
- The role of Stents in Aortic Dissection
- Patient story: Dissection, Surgery & Recovery

Afternoon Session: Improving Standards

- Diagnosing Aortic Dissection in the Emergency Setting
- The Aortic MDT – working together for better outcomes
- The new NHS Service Specification for Thoracic Aortic Disease
- Implementing the new NHS Service Specification for Thoracic Aortic Disease in practice and other considerations
- AD Awareness (UK & Ireland) Patient Association - AGM
- Medics discussion: Addressing the UK's unwarranted regional variation in care and outcomes for Aortic Dissection

Hosts: Mr. Harpaul Flora and Prof. Aung Oo of Barts Health NHS Trust.

Keynote speaker: Mr. Richard Page, President of SCTS.

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Thoracic surgery audit update



Doug West, Thoracic Audit Lead

Over recent months thoracic surgeons have been validating data for the 2018 Lung Cancer Clinical Outcomes (LCCOP) report, covering lung cancer resections in the English NHS during 2016. This is the fourth LCCOP report that the Society has supported the National Lung Cancer Team to produce.

Readers will notice some changes when the report comes out later this year. Firstly, we have removed small cell lung cancer resections from LCCOP. This follows last year's introduction of one-year outcomes reporting for units. There were concerns that units may be discouraged from taking on clinically appropriate small cell resections, given that there may be some impact on one year outcomes. Only 1.6% of last year's LCCOP resections were for small cell, so this is expected to have minimal effect overall.

Reporting of resection rates alongside peri-operative mortality is supported by the Society. Feedback on this policy from SCTS members at the BORS and annual meetings has been positive. Last year we simply

asked surgical units which Trust MDTs they served, and then copied the NLCA resection rates for these Trusts into the LCCOP report. This year we are trialling a new method of calculating a compound resection rate for surgical units. For many units this is straightforward, since the trusts that they serve send all of their cases to one surgical unit. The total number of cases operated upon will be divided by the total number of cases seen in the referring MDTs, to derive the resection rate for the surgical unit. In two areas this will be more complex. Firstly, Trusts sending cases to two or more units will need their activity "split" between the surgical units involved. Secondly, some Trust MDTs, known as "tertiary MDTs" in the NLCA report, have unusual referral patterns and often artificially high resection rates as a result. These are identified in the NLCA report, with some narrative included for explanation. We anticipate taking a similar approach in LCCOP.

The main survival measures remain for 2018; 30, 90 and 365 day mortality. These are the outcomes which are outlier

managed, with units at negative alert and alarm levels compared to the national pooled results required to submit formal responses to the data and action plans where appropriate through the SCTS

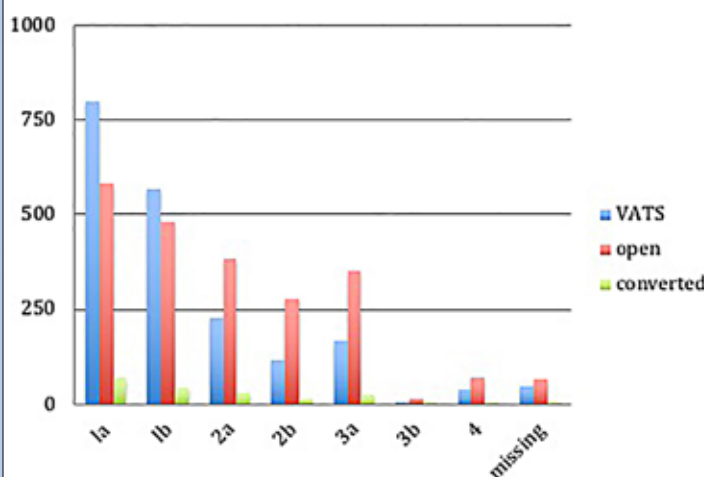
and NLCA. This year we have updated the SCTS/NLCA guidance to outliers (<https://scts.org/outcomes/thoracic/>), reflecting changes to LCCOP in recent years. We have also added a response template, to guide units who are required to respond to an outlier notification.

Median length of stay by unit will stay in this year's report, and for context we are adding in 90 day readmission rates, derived from Hospital Episode Statistics (HES) data. We are hopeful that making these data available will help units to target quality improvement initiatives, but these data are not currently outlier analysed and there is no audit standard set for them.

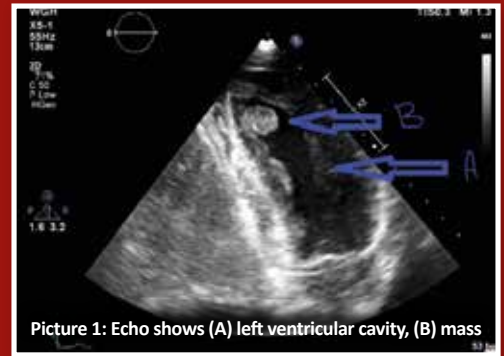
The picture that is emerging from several years of LCCOP reports is one of increasing activity in lung cancer surgery, increasing specialisation of surgeons (evidenced by a significant rise in the median number of cases performed per surgeon) in lung cancer, and of a gradual decline in peri-operative mortality risk. Last year we reported on the use of minimal access approaches for the first time, and showed that videothoroscopic (VATS) approaches are now the commonest approach for lobectomy in early stage lung cancers (figure 1).

Lastly, if your hunger for thoracic audit and quality improvement is not sated by LCCOP, please look out for the third Thoracic Blue Book later this year, which will include the three years of the SCTS database project. Also have a look at the thoracic components of the Getting it Right First Time (GIRFT) report if you haven't done so already <http://gettingitrightfirsttime.co.uk/surgical-specialty/cardi thoracic-surgery/>. This has used multiple data sources including LCCOP and the NLCA together with HES and NHS financial data to provide an overall quality and safety report for individual units. ■

Figure 1: Surgical approach for lobectomy by stage 2015



“Foil” Retractor helps with an unusual mass in the left ventricle



Picture 1: Echo shows (A) left ventricular cavity, (B) mass

Background

A 67 year old male patient with no significant past medical history had an echocardiogram, because his doctor suspected a cardiac murmur. This revealed an incidental left ventricular apical mass, which was very mobile (Picture 1).

Cardiac MRI confirmed the presence of the mass with a differential diagnosis of thrombus or myxoma, because of its location far away from the valves.

Operative procedure

A periareolar approach was used to access the mass. Once peripheral bypass was established and the heart arrested with aortic occlusion using an Endoclamp the left ventricular cavity was approached via a left atriotomy and passing an endoscope through the mitral valve.

The exposure of the left ventricular cavity was improved by using the “Foil” retractor and the mass was identified and excised (Pictures 2,3,4). It had a characteristic appearance when submerged in fluid. Histology was reported to be papillary fibroelastoma. Patient spent one night in the intensive care, one night on the ward, and was discharged home on the second postoperative day. He was very happy with the cosmetic result at 6 weeks.

Conclusion

Fibroelastoma should be considered in the differential diagnosis of intra ventricular masses and minimal access excision of ventricular fibroelastoma is safe.



Picture 2: Mass in LV with foil retractor in place



Picture 3: Mass being removed from heart



Picture 4: Inspection of LV after excision

Thanks to A Kenawy, G Laskawski, J Zacharias. Lancashire Cardiac Centre, Blackpool, for permission to reproduce this case report.



FEHLING Mitral “Foil” Retractor

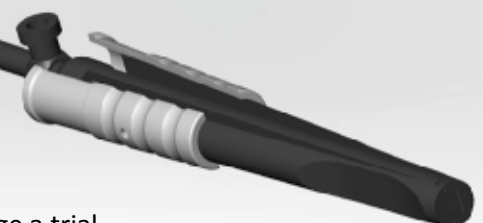
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Independent operating

Stephen Large, Papworth Hospital



Independent operating is what the trained consultant cardiac surgeon does. The patient, the surgeon and the team are in the operating theatre following an agreement to proceed between the patient and the surgeon. Should a problem arise it is the surgeon who bears the responsibility. Indisputably, the surgeon is in charge of the operation and Independent operating is, of course, the aspiration of every cardio-thoracic surgical trainee. It is, I guess, an assumed indication of completeness of training. Is this true? And is it true to say that the more independent operating done, the better the trainee?

My interest in this area has been re-kindled following reports from my senior trainee after his sniffing about for a consultant's position. In his search for a possible career placement, my fine trainee

was advised that his 30 independently performed procedures of 465 logged operations was less impressive than another applicant's 100 independent operations in a portfolio of 200. Let's take a look at what was being judged here.

Firstly, we have to ask how many operations are needed before a trainee is safely awarded a certificate of completion of specialist training (CCST)? This issue is both a current and a recurring debate and one that also dogged me in my training, so many years ago. As a result, I fell into a reflective mood. I'd notched up 887 operations in my seven years of registrar training. It was a time when 1 in 1 and 1 in two on calls were the norm and these numbers of performed cases, common-place.

A better trainee with this experience, you'd be tempted to say, than someone with only 200 or even 465 cases under his or her belt? However, this number is probably not a marker of excellence of training as so many of my cases were performed independently with senior guidance available at the end of a 'phone.

Surely CCST indicates a competence with the skilful and appropriate use of cardio-pulmonary bypass. What is carried out, once safely on bypass, varies

according to the needs of the patient. The absolute number of training operations (*that is where the trainee is mentored through the operation and not where one trainee performs a median sternotomy, another a top end and an additional one a bottom end or two each claiming the operation for their record*) should be

tailored to the trainee's needs, ensuring that this core competence has been achieved. In this way, the numbers of training operations needed by the trainee, varies and is probably, I'll guess, between 150 – 300 cases and less about numbers and more about the quality of guidance and mentoring during the training episode.

Secondly, what of independent operating, our main concern? Here the training consultant is not in the room. We must ask what is the lesson to be learned? Not the demonstration by our trainee whom I'll frivolously call Mr Al O'Nmeown, that he can re-enact, faultlessly, the sequence of steps in the operation from beginning to end; certainly not the stumbling progress of a

lonely trainee discovering how to perform the operation by trial and error, nor the acquisition of the award of "Independent Operating" as a portfolio medal; not independence thrust on the trainee because the trainer was required elsewhere but some essential lesson to help win surgical excellence which will lead to that longed for senior position. My retrospect reminded me of the pain of my early consultant time. I discovered that despite my huge operative experience these had been performed on my consultants' accounts. In this way I was spared the pain of answering for patients' morbidity and loss. It was accountability that I had had little exposure to. How long did it take me to settle into accepting the weighty burden of the responsibility for recruitment, consent, admission, operation and post-operative care of my patients? I'd say many months, probably 12.

Maybe times have changed and Mr Al O'Nmeown is now very much Mr Alt O'Gether with regular M&Ms and MDTs where the enormity of accountability can be shared? Or perhaps nothing has changed as accounting for the patient is lost in these committees?

So, what to do? My proposal is that the experienced registrar leading the operating team independently by proxy in operating room, loses out in senior guidance and in the very tough lesson of accountability. These shortcomings must be resolved, if only to satisfy the demands of consent from the patient for such surgery. I propose that the final year of SpR training in cardio-thoracic surgery should be as a named junior consultant colleague receiving and operating upon patients on their own account. This would be undertaken in a fixed-term, final year contract surrounded by his or her familiar and supportive mentors. This finishing school would better ensure a well-rounded, well trained, Mr or Ms Alt O'Gether-Perfect; a well-rounded colleague, well equipped for future practice and a joy to share practice with. ■

“Indisputably, the surgeon is in charge of the operation and Independent operating is, of course, the aspiration of every cardio-thoracic surgical trainee.”

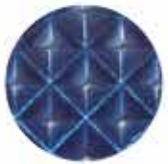
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Independent operating: A trainees perspective

As a trainee, my goal is to acquire the breadth and depth of skills required to effectively function as a consultant, where independent operating is a defining characteristic. How then, are the skills of independent operating acquired?

Jason Ali, Clinical Fellow, Thoracic Surgery, Norfolk & Norwich Hospital



The first thing I ask myself is what is actually meant by 'independent operating'? Independent operating is not operating in isolation. I have witnessed numerous examples where consultants have called a colleague during an operation for advice and assistance when faced with a challenging situation. This is essential for patient safety. As trainees we are striving to become independent operators, but it is important that we acknowledge our limitations and are not afraid to ask for help – but it is also important that we are not put in situations where it is difficult to ask for or receive help.

Is there something to learn from independent operating that cannot be learnt from operating with a consultant scrubbed or present? I think the answer is almost certainly yes – particularly non-technical skills. Without a doubt the more coronary anastomoses you perform or valves implanted, the more technically competent you will become – especially if operating with a consultant who can pass on their tricks and tips.

But what you probably cannot learn so easily are the non-technical skills. I think that during early stages of training these are 'unknown unknowns'. During this stage a lot of time is spent learning the technical aspects of operating and it is easy not to even realise the complex decision making and expert assistance the consultant is providing continuously to allow the operation to proceed smoothly – for example, confirming exactly where

to make cuts and place sutures, and providing excellent first assistance.

My realisation and therefore transition to the 'known unknown' stage has come from thoracic surgery where independence is reached, for minor cases, much earlier.

When I was first left alone, the extent of decision making that I had not previously been aware of became immediately apparent and was actually quite stressful. Furthermore, I had an inexperienced SHO who had never held a camera assisting. I had not really needed to talk an assistant through what I needed them to do before – because the consultant did it perfectly, and this made the procedure even more challenging. Reflecting afterwards on the experience has allowed me to recognise that there IS a lot that can be learned from operating independently. The question that remains though is how this

can be provided in a safe and effective manner in cardiac surgery where, unlike in thoracic surgery where there can be a process of development progressing from performing minor to major independent cases, the stakes and possible problems that

can arise are more significant as all cases are major.

When thinking about independent operating there are other important perspectives to consider: the consultant and the patient.

Consultant

Cardiac surgery is probably the most monitored surgical specialty, with patient outcomes publicly available and scrutinised.

It is therefore expected that consultants would

want to be present and involved during surgery on their patients, for whom they have the ultimate responsibility and are accountable for any adverse outcomes. If a consultant allows a registrar to perform an operation independently, with them not in theatre, and the patient subsequently dies, how should the accountability be divided?

“When I was first left alone, the extent of decision making that I had not previously been aware of became immediately apparent and was actually quite stressful. Furthermore, I had an inexperienced SHO who had never held a camera assisting.”

I worry that I, as a registrar, cannot truly feel the same burden as I would if it was a patient under my care as a consultant – as ultimately it is not a death against my name at the morbidity and mortality meeting and on publically available records. What if we take this scenario further and the death was due to a preventable intra-operative error? As trainees we need to be aware of these issues whilst in the pursuit of independent cases.

Patient

What does registrar independent operating mean for patients? Are they consented appropriately for this – especially in the era where Duty of Candour has become central to medical practice? I suspect a reasonable proportion of patients would not give their consent should it be spelt out that a trainee surgeon was to perform their operation, without the direct supervision of a consultant – however senior the trainee may be. If this hypothesis is true, then

following the Montgomery ruling, it is probably necessary to consent the patient accordingly if their operation is to be performed by a trainee independently. We also need to consider the friends and family test. What would we want if the patient was one of our parents or other relatives? The truth is probably for an experienced consultant to do the operation from beginning to end. So if that is the case, as a trainee, the expectation for independent operating should be considered holistically and not simply from the perspective of personal development as a surgeon.

Conclusion

What we are left with is a situation where as a consultant we are required to operate independently, but as a trainee opportunity for independent operating is variable and typically limited. At some point there needs to be a transition. The question that remains is how this

transition can be managed in a manner that is safe for all parties and ensure that at the end of training, trainees are fully prepared for ‘independent’ practice?

How do we reconcile all of this? The truth is I’m not sure. Should it be *expected* by trainees that this is the natural transition during training? Should this experience be provided, as suggested by Stephen Large, during a period as a ‘junior consultant’ at the end of training? Will this be acceptable to patients?

However, what I do think is important is, if independent operating is considered a means of ranking trainees when it comes to consultant appointments (regardless of total experience), then in a similar way to what constitutes the definition of a ‘case’, independent operating from the perspective of a trainee should be clearly defined, and guidance provided on how independent operating can be offered in a manner that is safe for the trainee and consultant, but most importantly the patients. ■

BHVS Two Day Meeting 20th - 21st September 2018 at the IET Birmingham



21st Sept: BHVS Annual Conference

SAC report

The most important issue currently undergoing discussions with the GMC are on curriculum change.

Rajesh Shah, SAC Chair Cardiothoracic Surgery



Submission has been made to the GMC by the SAC and is subject to approval; the curriculum will change in 2019. The proposal is as below.

Introduction

The purpose of the curriculum for Cardiothoracic Surgery is to produce, at certification, competent doctors, able to deliver excellent outcomes for patients. The majority of service needs to relate to providing cardiac or thoracic surgeons, rather than cardiothoracic surgeons except in a few areas, as indicated by workforce data over the last decade. The Cardiothoracic Surgery curriculum will provide consultants with the generic professional and specialty-specific capabilities needed to manage patients presenting with the full range of acute cardiothoracic conditions, up to the point of operation, and to manage the full range of acute and elective conditions in the generality of their chosen special interest of Cardiac or Thoracic Surgery, including the operation.

Shape of training review

The Cardiothoracic Surgery curriculum must meet the main recommendations of SoT, which are as below:

1. Takes account of, and describes how, the proposal will better support the needs of patients and service providers.
2. Ensures that the proposed curriculum to CCT equips doctors with the generic skills to participate in the acute, unselected take and to provide continuity of care thereafter.
3. Where appropriate, describes how the proposal would better support the delivery of care in the community.

4. Describes how the proposal will support a more flexible approach to training.

5. Describes the role that credentialing will play in delivering the specialist and sub-specialist components of the curriculum.

The high-level outcomes of Cardiothoracic Surgery

The curriculum is outcomes-based, specifying the high-level generic, shared and specialty-specific capabilities. There is a greater focus on the generic professional capabilities common to all doctors.

Capabilities in Practice

The high-level outcomes of the curriculum are expressed as Capabilities in Practice (CiPs). The nine shared plus two specialty-specific CiPs describe the professional tasks:

- Manages an out-patient clinic
- Manages the unselected emergency take
- Manages ward rounds and the ongoing care of inpatients
- Manages an operating list
- Manages a multi-disciplinary meeting
- Leads, delivers and assesses patient safety and quality improvement
- Performs as a supervising clinician
- Contributes to and assesses clinical research
- Works effectively in the Health Service

The specialty-specific cardiothoracic capabilities in practice in surgery are:

- Able to manage patients within the intensive care and high dependency settings in both cardiac and thoracic surgery
- Able to assess surgical outcomes of both cardiac and thoracic surgery at a personal and unit level, and is able to respond or adapt practice, where appropriate, without compromising patient care

By the completion of training and certification, the trainee must demonstrate that they are capable of unsupervised practice in all CiPs.

Generic Professional Capabilities

Embedded within each CiP are the full range Generic Professional Capabilities (GPCs) that describe the professional responsibilities of all doctors in keeping with Good Medical Practice.

The GPCs have equal weight in the training and assessment of clinical capabilities and responsibilities in training. The nine domains of the GPC framework are:

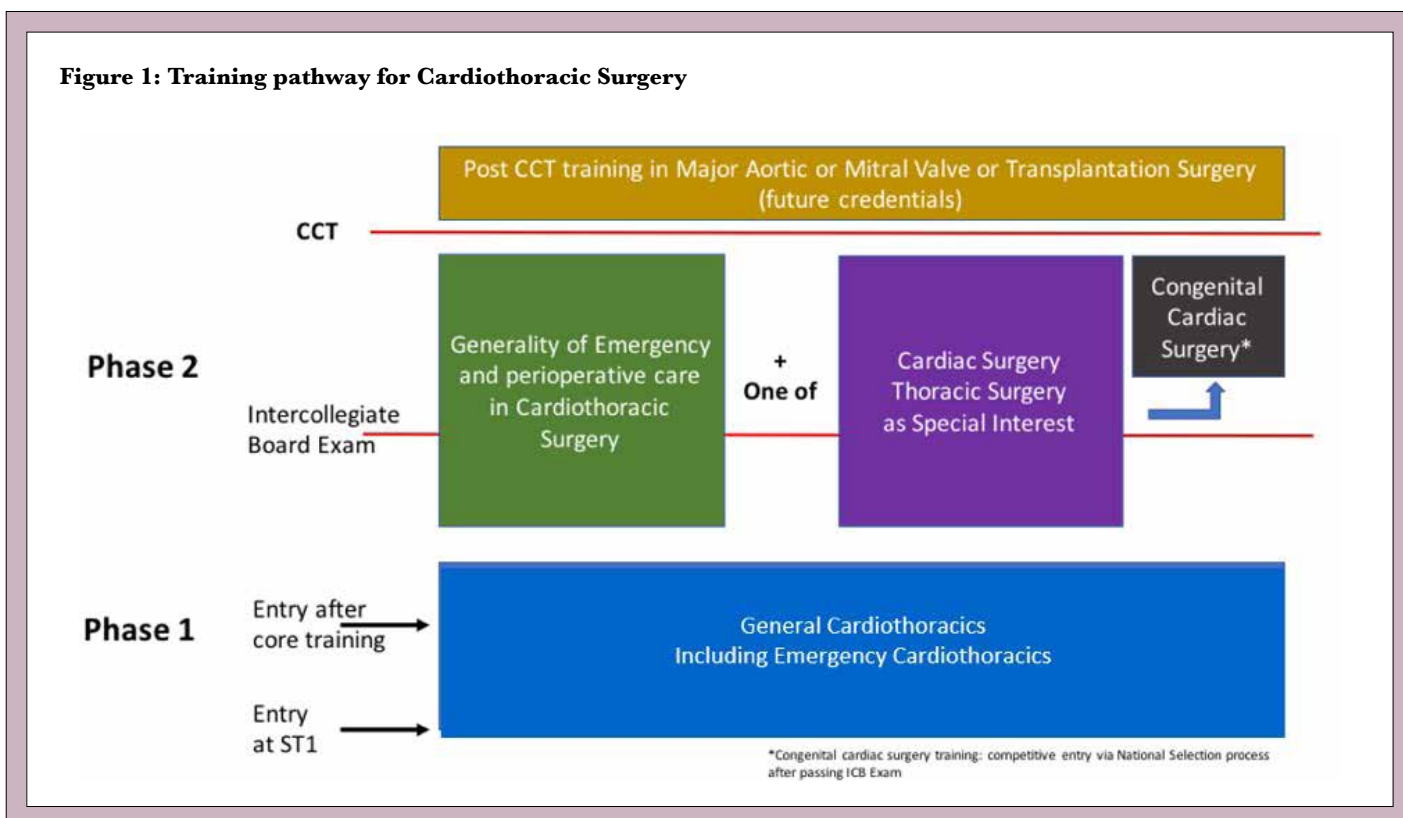
- Professional knowledge
- Professional skills
- Professional values and behaviors
- Health promotion and illness prevention
- Leadership and team-working
- Patient safety and quality improvement
- Safeguarding vulnerable groups
- Education and training
- Research and scholarship

Progression through training

Trainees will enter Cardiothoracic Surgery training via a national selection process at either ST3, or through the ST1 run-through programme.

Cardiothoracic Surgery training is outcome-based rather than time-based. However, it will normally be completed in an indicative time of 7 years (3 years phase 1 and 4 years phase 2) for those entering run through training at ST1 (formerly 8 years in the 2015 curriculum) and 6 years for uncoupled trainees entering at ST3 (2 years in phase 1 and 4 years in phase 2).

Figure 1: Training pathway for Cardiothoracic Surgery



There will be options for those trainees who demonstrate exceptionally rapid development and acquisition of capabilities to complete training more rapidly than the current indicative time of 7 years. There may also be a small number of trainees who develop more slowly and will require an extension of training.

The programme will be divided into 2 phases:

- Phase 1** will take an indicative time of 3 years to complete for run through trainees, during which trainees will gain many of the GPCs and the knowledge, clinical and technical skills in both cardiac and thoracic surgery, as defined in the CiPs and syllabus. Uncoupled trainees should have acquired generic skills, both technical and non-technical, during core training, and it is anticipated that an indicative time of 2 years after entry into cardiothoracic training will be required to achieve competencies required for completion of Phase 1. At the end of Phase 1 there is a critical progression point for Phase 2 entry, assessed at the Annual Review of Competence Progression (ARCP).

By the end of Phase 1, trainees will follow a special interest in either cardiac or thoracic surgery after discussion with the Training Programme Director (TPD). The special interest choice will be facilitated based on the needs of the service, the preference of the trainee, trainee skills and the ability of the programme to support the trainee in that special interest. Where a programme cannot facilitate the agreed special interest needs of trainees, Out of programme Training (OOPT) can be utilized. In exceptional cases, and with specific TPD and Deanery/ LETB support, Cardiothoracic Surgery may be chosen as the special interest. Trainees will need careful counselling before following this route, as it is likely to require extra training time. There are few geographical areas within the UK requiring such surgeons and central monitoring of these posts will be undertaken by the SAC and the Society for Cardiothoracic Surgery to ensure supply matches demand.

- Phase 2** will take an indicative time of 4 years to complete during which trainees will train predominantly in either

cardiac or thoracic surgery, with the exception of a small number who may train in Cardiothoracic Surgery to fulfill local requirements. During Phase 2 of training, it is expected that trainees will continue to be involved in the care of both cardiac and thoracic patients, whilst on call to continue gaining the knowledge and clinical skills in the generality of Cardiothoracic Surgery.

To apply for a first sitting of the Joint Committee Intercollegiate Exam in Cardiothoracic Surgery a trainee will have demonstrated the knowledge, clinical and professional skills of a day one consultant in Cardiothoracic Surgery as defined by the syllabus. It is anticipated that most trainees will reach this level by 2 years after entering Phase 2 of the curriculum.

Training in congenital cardiac surgery will be available during Phase 2 for a small number of trainees, who will be able to apply through a national selection process after passing the Intercollegiate Board Exam in Cardiothoracic Surgery. Training in the subspecialty of congenital cardiac surgery will take an indicative time of 2 years (total time in Phase 2 will still be 4 years). ■

SCTS Education report

July 2018

Sri Rathinam, SCTS Education Secretary



It has been a great 5 years for SCTS Education. When SCTS Education was created in 2013 it had a very ambitious vision. We have made what was an impossible dream into a reality in just five years. It would not have been possible without the relentless efforts of the Education secretaries, SCTS tutors, AHP leads and the Education subcommittee. Our faculty members have devoted time and effort to allow us to offer a robust structured educational portfolio for all our membership.

2018 has been an eventful year for SCTS Education. My co-chair of the education committee, Mr Moorjani, was appointed as the Honorary secretary of the SCTS. Narain and I have worked together for the last 5 years as SCTS tutors and then Education secretaries in an incredible journey. We wish him all the very best in his new role.

SCTS Education now manage the NTN Portfolio of courses with industry funding. The volume of work in the administrative office has grown in mammoth proportions and the Executive have supported our request for further support in the office. We have appointed Emma Ferris to support Letty Mitchell as Education administrator. I request the faculty members and delegates to promptly respond to emails from the administrators who now have the responsibility of arranging the logistics in a timely and thrifty manner.

SCTS Fellowships

We offered 2018 SCTS fellowships to high calibre members who submitted very competitive applications.

SCTS Marian and Christina Ionescu Travelling Scholarship for Consultants

Fraser Sutherland and Mohamed Hawari

SCTS Ethicon Fellowship

Pouya Youssefi, Ashok Narayana, Prakash Nanjiah, Ana Lopez Marco and Mehmood Jadoon

SCTS Ionescu Non-NTN Fellowship

Kirk Patrick Santo

SCTS Ionescu Nursing & AHP Fellowship

Juan Carlos Quijano-Campos and Chris Dain

SCTS Ionescu Medical Student Fellowship

Samuel Covins, Jimmy Toh and Tabitha Hanna

We are grateful for the generosity of Mr Marian Ionescu for funding a further Consultant Team Fellowship.

SCTS Courses

NTN Portfolio: The courses are continuing well in 2018 in spite of organisational and logistical changes as elucidated by Carol and Sunil in the Tutor's report. We are pleased to report the JCST have listed our portfolio of courses as mandatory boot camps. Susan Cipriano, the Head of JCST, is keen to attend our ST3 boot camp to observe it.

Changes to funding streams also mean some changes to the funding for travel and social aspects. We have to implement these in order to offer the same high quality courses without compromising on the educational content. The NTNs in cardiothoracic surgery are the only cohort in the world who gets these type of educational courses. SCTS Tutors are introducing new aspects to the way the courses are delivered and assessed. With John Butler they are in the process of setting up registration, test of knowledge, feedback forms and certification generation all on a web based platform, which should streamline the process.

Non NTN portfolio: We have completed the workforce data which will enable better engagement of the non-NTNs. We are always looking at various ways to improve the courses for the non-NTN members. For the first time they will have a two day course with accommodation in the autumn, which will include wet labs.

AHP: Tara Bartley and Bhuvana Krishnamoorthy are spearheading the AHP portfolio. They have launched new courses like the Nurse Prescriber Course as well as conducted the SCP course, Advanced Cardiac and Thoracic Course and Band 5,6 Nurses Course with great success. We are pleased to report the industry support is robust in supporting and sustaining this portfolio.

Royal College of Surgeons of Edinburgh /SCTS Webinars: The webinars are relaunching again after a short break with accomplished national and international speakers, including Ramesh Patel, Steven Cassivi, Giovanni Mariscalco and Gilbert Massard. Registration is free for anyone but archives are available for RCSEd members only. We encourage our members to make use of the valuable opportunity for their continued professional development.

Consultant Education: Further to our survey of our consultant members, we held our first Faculty Training the Trainer course in Glasgow on the Saturday preceding our AGM. The Course was organised with the support and guidance of Dr Yvonne Hurst the Head of Education of Royal College of Surgeons of Edinburgh. All the course directors and key faculty members were invited to this course. We are also offering a Team Human Factors Course in Harefield in the Autumn.

Acknowledging faculty: SCTS acknowledges the invaluable contribution of the faculty members and we have sent thank you letters signed by the President to the Medical Directors of the faculty members, so that their contribution is acknowledged in their respective units. The Honorary Lectureships of SCTS project is progressing with the standards and metrics being formalised.

We once again thank our industry partners for supporting our endeavours in educational and training by offering logistics and financial support. All of this would not be possible without the continuous hard work of our administrative staff. ■

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SCTS Education tutors' report

We are into our second year as SCTS Education Tutors. The learning curve has been steep and we continue to learn and improve.

Carol Tan, SCTS Thoracic Tutor

Sunil K Bhudia, SCTS Cardiac Tutor



We have a great team and welcomed Emma Ferris as the Education Administrator on to the team. We are indebted to the support from Letty Mitchell (SCTS Senior Education Administrator), SCTS Executive Committee, Cardiothoracic Surgery Specialty Advisory Committee, and Training Programme Directors. There are no words to describe our gratitude to the dedication, commitment and innovation of the Course Directors and Faculty. This extended team comprises of over 60 Cardiac and Thoracic consultants, and several others from allied specialties. Many have been teaching for a number of years and some new members have come on board.

The SCTS Education team has now taken over the running of courses from industry. This includes procuring funding, logistics of booking venues and travel arrangement, catering and sending out invites to trainees, faculty and directors.

Narain Moorjani and Sri Rathinam have discussed with various industry partners and secured sponsorships of varying amounts and support. The courses will remain free of charge to all nationally appointed cardiothoracic trainees (NTNs) as long as they are members of the SCTS. However, a deposit is requested and refunded following attendance. Those NTNs who are not members of SCTS are still invited but have to pay the full cost of the course. Unfortunately, at present, we are not able to offer these courses to non-NTNs.

In order to ensure we are getting value for money we are looking at alternative venues from those previously used, except Hamburg. This exercise has opened up further opportunities and ideas.

On the theme of improvement and progress, we seek feedback from Course Directors and Faculty. We encourage Course Directors to produce a report after each course. We have looked into previous reports

and incorporated suggestions into the current courses. A Faculty Development Training the Trainer course was organised for the Course Directors at the SCTS Annual Meeting 2018. We have intentions of expanding this to all faculty members.

An area that we have found challenging is how we assess trainees' knowledge and skills prior to and after the course. Even more challenging is the assessment of retention of knowledge and skills longitudinally in time. Related to this is what media we use to capture the assessments. Paper and pen have been tried and tested. If completed, and hoping by all, one has to enter the data into a spreadsheet of some sort to analyse and report. In the digital era, we have sought help from John Butler to create a Virtual Learning Environment (VLE). We intend to have all assessments done electronically and these could be multiple choice questions, Objective Structured

Forthcoming SCTS Education Courses

• 29th September 2018

Clinical Examination Course for FRCS(CTh) (ST7B)

Venue: Royal Papworth Hospital

Course Directors: Ravi De Silva/Shakil Farid/Adam Peryt

• 19th – 21st November 2018

Introduction to Specialty Training in Cardiothoracic Surgery Course (ST3A)

Venue: TBC

Course Directors: Ravi De Silva/John Pilling/Joel Dunning

• 27th – 29th November 2018

Core Cardiac Surgery Course (ST4A)

Venue: TBC

Course Director: Ishtiaq Ahmed

• 4th – 5th December 2018

Professional Development Course (ST8B)

Venue: Pinewood Campus, Wokingham

Course Directors: Graham Cooper/Richard Page/Carol Tan/Sunil Bhudia

“The SCTS Education Team has now taken over the running of courses from industry. This includes procuring funding, logistics of booking venues and travel arrangement, catering and sending out invites to trainees, faculty and directors.”

Assessments of Technical Skills (OSATS) and also the feedback. This still does not unravel the conundrum of retention of knowledge and skills longitudinally in time. However, we will keep working on it.

Another piece of exciting work being undertaken and hoping to run the first course in September or October 2018 is a multidisciplinary course. Shahzad Raja, Consultant Cardiac Surgeon at Harefield Hospital is helping us with this course. This will be a one-day course

delivered by trained human factors personnel from The Royal Brompton and Harefield NHS Foundation Trust and aims to highlight the interaction between Behavioural Human Factors, Team Skills and Performance. In the first instance two teams of eight will be invited from any cardiac or thoracic unit in the country. The teams will be multidisciplinary and should include surgeons, anaesthetists, nurses, and scrub team. We believe the course will result in more effective team work

and communication in the workplace, particularly in the scenarios of multiple complex conditions, emergencies and during care transition. After the first course we will take on board feedback and hope to continue and keep inviting all centres.

The SCTS Education Operative Prize continues to be a popular avenue to showcase some of the innovative work in which our cardiothoracic trainees are involved. We received a healthy number of videos in thoracic and cardiac surgery. Congenital surgery was not well represented. The videos were reviewed by the SCTS Education Secretaries and SCTS Tutors. Shortlisted videos were viewed at the SCTS Trainee Forum. The winners at the SCTS Annual Meeting 2018 voted by the trainees were Jeremy Smelt for the thoracic video on the Nuss procedure and Thomas Theologou for the cardiac video on Robotic Mitral Valve repair.

Please do not hesitate to get in touch with us (Carol.Tan@stgeorges.nhs.uk and S.Bhudia@rbht.nhs.uk) should there be any queries.



SATURDAY 3RD NOVEMBER 2018

SCTS NATIONAL RESEARCH MEETING

Meeting aimed at: Surgeons, Anaesthetists, Trainees, Clinical and Research Fellows, Allied Healthcare Professionals, Junior Doctors and Medical Students with an interest in Cardiothoracic Surgery

Covers all subspecialties within Cardiothoracic Surgery

Featured lectures in research methods and latest trials

Excellent opportunity for participants to increase their academic output and research networking

Earn CPD points for this activity

Structured Abstracts (250 words) to be submitted by email to the address below.

Prizes will be awarded for the best abstracts in their session

ABSTRACT SUBMISSION DEADLINE: 31ST AUGUST 2018

CONTACT: SCTS@LEICESTER.AC.UK

VENUE: CLINICAL EDUCATION CENTRE, GLENFIELD HOSPITAL, GROBY ROAD, LEICESTER, LE3 9QP



Living with Pectus Excavatum – A patient's perspective

In the current NHS climate where rationing is being openly discussed and previously there have been moves to take pectus surgery away from the NHS, I think it is important for us as Thoracic Surgeons to realise the impact that this condition can have on people's lives.



Joel Dunning, Consultant Cardiothoracic Surgeon, James Cook University Hospital

I have recently met Deborah Vaughan, a very strong lady who has lived her life under the cloud of having pectus excavatum. She has a very eloquent and powerful blog which can be found here <https://pectusinspiration.wordpress.com> and I asked her to summarise her journey for us briefly in this article. She is happy to link with any patients that you may have who are struggling with their condition, via her website.

Deborah writes:

On the 25th of October 2017, at age 36, I had the Nuss procedure to correct my severe pectus excavatum. Here is a little about my experience as a woman with pectus, what it was like for me before repair, the process of getting diagnosed and referred, and how I have benefitted from the surgery so far.

I remember noticing the dent in my chest at around the age of six. I would lie

in the bath and see how much water I could hold in it. I had no idea that it was unusual. I grew extremely fast and was five foot ten by the age of twelve. I don't remember a time when I was not easily out of breath and have always avoided situations where I might struggle. As a teen I became reclusive, my confidence was very low and I was bullied quite badly. My chest was so sunken that I was often teased for looking like a boy and this continued

up until the date of my operation. I found any clothes that put even light pressure around my chest or waist to be extremely uncomfortable, and fitted women's clothes accentuated my deformity.

When pregnant with my son at age 24, I experienced numerous blackouts and after birthing him, had months of dizziness and respiratory infections. Over the next ten years, my quality of sleep deteriorated and I developed digestive difficulties. The breathlessness and palpitations increased to the point where I would have to stop for a moment after picking something up off the floor or after climbing one flight of stairs. I had a constant aching sensation in my chest that felt like being crushed.

I self-diagnosed at age 35. I had never heard the words 'pectus excavatum' until I searched the Internet in desperation one afternoon. I went to my GP, who did a double take at the dent in my chest before assuring me that it was purely cosmetic and there was no help for me, so no point in getting any testing done.

Luckily I had by then found a wealth of information on dedicated websites and forums and knew that this was not the case. I approached my GP twice more, armed with printouts and contact numbers, and she eventually referred me to an orthopaedic specialist. I knew I needed to see a cardiothoracic surgeon, and began researching who in the UK was experienced in adult pectus repair.

During the next few months, I talked online to many other men and women who had pectus. This was an extremely reassuring time as I no longer felt alone. Aside from my young son who also has severe pectus excavatum, I had never knowingly met another person with it. Understanding the condition has helped me to speak with him about it and this has increased his confidence. He now

feels more positive about his own future, and is fairly sure he will choose surgery when he reaches 17, the recommended age to undergo the procedure. I strongly feel that contact with a community of others who understand what it's like to live with pectus has the potential to change the lives of many, especially teens

and young adults, suffering silently and often undiagnosed.

cage out. The hardware is removed after approximately three years. Surgery was four weeks ago, and although very difficult, my recovery has gone smoothly. I have two titanium bars. I am still weak and have a long way to go but am seeing daily improvements. My posture is noticeably different and

“I went to my GP, who did a double take at the dent in my chest before assuring me that it was purely cosmetic and there was no help for me, so no point in getting any testing done. Luckily I had by then found a wealth of information on dedicated websites and forums and knew that this was not the case.”

the crushing feeling is gone. I have not noticed any palpitations or light-headedness. I have more energy during the day than before the operation, even though I am not yet sleeping well due to only being comfortable lying on my back. There is no dent at all - my figure looks normal - my nipples face outwards rather than inwards and I have a waistline. Dresses fit properly for the first time.

I can burp more easily and when drinking cool water I can feel it trickling down 'inside' an area that used to be 'outside'!

and young adults, suffering silently and often undiagnosed.

I was having trouble getting a referral out of area from my GP and contacted the office of Mr. Dunning who fixed a date for my first consultation. By then I had decided to go ahead with the Nuss procedure as my quality of life was already being affected. Mr. Dunning answered my many questions and that put my mind at ease.

The Nuss procedure (developed by Dr. Nuss in 1987) involves placing one to four bars in the chest, woven over ribs and underneath the sternum, to hold the rib

I can burp more easily and when drinking cool water I can feel it trickling down 'inside' an area that used to be 'outside'!

Living with pectus excavatum in a society that prizes a 'strong' and 'proud' chest is incredibly challenging. The profound effect it can have on confidence can be reason enough to seek surgical repair and people should not have to argue their case over and over before they are listened to. I hope that by raising awareness, in future more people will know the name of their condition so that they can access the physical and emotional support networks that are now available.



Deborah Vaughan



CT Forum at the SCTS Annual Meeting

Taking time away from the workplace to attend conferences and educational events is becoming increasingly challenging with current capacity pressures in our hospitals, so it was hugely encouraging to see over 230 nurses and allied health professionals in Glasgow earlier this year for the CT Forum at the SCTS Annual Meeting.

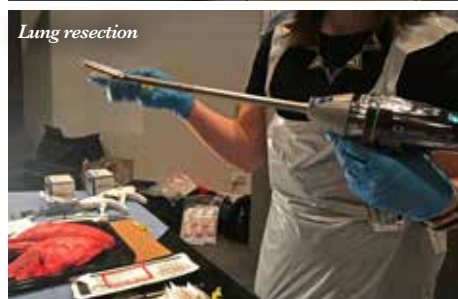
**Helen Munday,
SCTS Nursing and
AHP Representative**



The meeting was held at the Scottish Event Campus from 18th – 20th March and in keeping with previous years, combined the CT Forum practical, hands-on university day, with a two-day programme of plenary speakers and abstract presentations.

As always, the cardiac and thoracic wet-lab and skill stations at the CT Forum university day proved to be popular attractions, allowing participants to gain a greater understanding of cardiac anatomy and practice surgical techniques as well as refresh their knowledge of various clinical treatments and diagnostic investigations such as cardiac pacing and CT imaging. We are enormously grateful to all members of the faculty for their expert teaching and the support from Kevin Austin at Wetlabs.

The CT Forum got off to a lively start on Monday morning with an inspiring and motivating presentation from Lynda Bonner OBE who talked about the relationship between work engagement and psychological capital; by the time she had finished talking, I think we were all convinced that nothing was impossible and we could achieve anything we wanted with the right approach. We are very appreciative to Dr Cecilia Anim CBE, President of the Royal College of Nursing, who once again took time out of her busy schedule to give the opening address and reinforce the continuing support from the RCN to nurses and AHPs.



Lung resection



It was an enormous privilege to welcome Jamie Hull, a former soldier in the UK Special Forces Reserve, to the meeting. Jamie captivated the audience with his moving account of how, after sustaining life-changing injuries in a plane crash in 2007, he has rebuilt his life through extraordinary mental strength and determination. His ability to overcome the most horrific physical and mental pain is beyond words. He competed in the inaugural Invictus Games in 2014 cycling in the bike time trial and circuit race, he became a qualified mountain leader and scuba diving instructor, and is an ambassador for Help for Heroes. Judging by the lengthy standing ovation that Jamie received at the end of his talk, I believe he made a lasting impression

on us all that day, and I thank him most sincerely for what he taught us.

The selection of abstracts provided a varied programme covering multi-disciplinary team working, advanced clinical practice, service development and patient experience as well as more specific cardiac and thoracic initiatives. The audience were invited to vote for the best presentation via the online app and the winner was **Chest radiographs after cardiac surgery: is one too many?** Mrs Kathryn Smith, Cardiothoracic Nurse Practitioner, Royal Wolverhampton Trust. The award for the best poster went to **Mrs Melanie Freas**, Cardiac Surgery ACNP-BC, MSN, from University of Pennsylvania for her poster - **An independent run advanced practice provider clinic for aortic valve repair surveillance**. Congratulations to both Kathryn and Melanie.

The winners of the **SCTS Ionescu Nursing and AHP Fellowships 2018** were announced at the annual dinner in Glasgow. Fellowships were awarded to - **Juan Carlos Quijano-Campos**, Clinical Research Nurse at Royal Papworth Hospital who will be looking at surgical treatment pathways for ILD patients and collaborating with Imperial College London, and **Chris Dain**, Surgical Care Practitioner, Queen Elizabeth Hospital Birmingham who will be visiting Dr Souza in University Hospital Örebro, Sweden to observe and learn skills

“The cardiac and thoracic wet-lab and skill stations at the CT Forum university day proved to be popular attractions, allowing participants to gain a greater understanding of cardiac anatomy and practice surgical techniques.”



Workforce Review

The SCTS has been undertaking a workforce review (the last one being in 2015), which will now include, for the first time, the extended surgical team. This means incorporating non-medical roles in the review with the job title of Advanced Nurse Practitioner (ANP) or Surgical Care Practitioner

to undertake no-touch saphenous vein graft harvest. We look forward to learning about their work at the meeting next year.

Associate members of the SCTS are eligible to apply for the SCTS Ionescu Nursing and AHP Fellowship to broaden their experience within or outside the UK. The invitation to apply for 2019 will be sent out in the autumn.

The 2019 annual meeting will be held in London at the Queen Elizabeth II Conference Centre in the heart of Westminster, from Sunday 10th March – Tuesday 12th March. Abstract submission will open on 1st September and close on the 5th November. Please encourage colleagues to share their work and ideas with the wider cardiothoracic community. Abstracts will be selected for oral or poster presentation.

(SCP); authors of the review acknowledge other roles within the extended surgical team, but for the purpose of the review at this time, the scope is limited to ANPs and SCPs. Directors of Nursing in cardiothoracic centres in the UK and Ireland were asked to indicate how many ANPs and SCPs worked in their respective Trusts; the response was woefully inadequate. Approaching colleagues directly in cardiothoracic centres around the country yielded a better response but does not give the national picture. However, I am very grateful to the 191 respondents from 13 Trusts who completed the short survey and the information provided has given a very good indication of common competencies and tasks performed in these roles.

Moving

forward, there is an aspiration to have a more robust and reliable registry of these roles akin to the credentialing system introduced by the RCN last year, not least so that more accurate and informative predictions for workforce development and requirements can be made. The report is expected later this year and

will provide the foundation for further work. I am keen to hear from colleagues around the country who would like to be involved in this exciting project, which has the potential to influence the cardiothoracic workforce of the future.

Unit Representatives

With a broad and accessible education portfolio and developing research opportunities (about which, further information can be found in this issue of the Bulletin), as well as a stimulating and enjoyable annual meeting, the nursing and AHP stream of the SCTS has seen considerable growth over the last few years but our ambition is big. It is my aim to reach every cardiothoracic centre in the UK so that the CT Forum and Associate Membership to the SCTS provides exactly what members want and offers a platform for everyone to contribute and feel involved. To that end, I am seeking nominations for a unit representative from each centre to facilitate two-way communication between the centres and the SCTS. This is a great opportunity to become more involved with the work of the SCTS and similarly to promote your own organisation and share quality improvements, whilst enhancing your personal and professional development. All Associate Members are eligible to put themselves forward for this role and having a range of professional disciplines represented would be encouraged. Please do not hesitate to contact me if you wish to discuss.

Would you like to be the next CT Forum Meeting Organiser?

An exciting position is offered for an individual to join the SCTS Meeting Organisers Team with a focus on the CT Forum. You will be joining a multi-disciplinary team, responsible for deciding on everything from the meeting venue to the final programme, choosing plenary speakers to the annual dinner menu. There is a wealth of experience within the existing team who have been involved with meeting planning for many years and will guide the less experienced through the process, so please do not be put off if you have never done anything like this before. The only requirement is that you are an Associate Member of the SCTS, or willing to join if successfully appointed. Please contact me if you wish to discuss. Interviews will take place in London on Friday, 28th September. ■

“Associate members of the SCTS are eligible to apply for the SCTS Ionescu Nursing and AHP Fellowship to broaden their experience within or outside the UK. The invitation to apply for 2019 will be sent out in the autumn.”

Cardiothoracic training

Changes to junior doctor (JD) contracts, working hours and the introduction of run-through ST1 training have changed the face of cardiothoracic training in the UK.

Jacob Chacko & Ahmed Al-Adhami, Trainee Representatives, SCTS

We read with interest D. Steele's article in the January SCTS bulletin outlining the changes introduced in the new JD contract, the likely consequences and potential opportunities¹. As outlined, in his current trust they have worked together with management to construct an agreement, which has resulted in the delivery of a rota that has benefited the department and trainees alike. It is crucial that we take such a proactive approach to identify and utilise all opportunities this new contract offers as in October it will be a year from when it was first rolled out in England.

Since 2013, there has been a shift in the pattern of recruitment to National Training Numbers with the introduction of a ST1 pilot program and subsequent shift towards a larger proportion of NTN's recruited through this pilot. This marks a significant change from previous years where candidates with more years of experience were recruited into the specialty. It is critical that during years of training, trainees gain appropriate exposure in all aspects of cardiothoracic surgery to ensure skilled surgeons ready to take up consultant posts and this is all the more important with the advent of the ST1 training program. It is particularly crucial that cardiothoracic

surgical trainees have the opportunity to spend an adequate number of hours building their operative skills.

The number of hours per week required to achieve this has been much discussed and significantly reduced through the introduction of the European Working Time Directive. Whilst the merits of working more hours and consequent exposure derived are obvious, this must be balanced with the need to ensure adequately rested doctors who are able to consistently deliver a high quality of care and avoid trainee burnout.

In a recent survey we conducted and published in the January bulletin², 43% of trainees surveyed stated 56 hours per week was the optimum number to gain adequate exposure, with another 30% responding that > 60 hours per week was optimum. These results demonstrate a feeling amongst the trainee body of the need for more hours to achieve the necessary exposure to progress appropriately.

Whilst maintaining a sense of reality over the number of hours our current contract allows us to work, there is certainly the opportunity to move towards a higher weekly average. The new JD contract does offer trainees the opportunity to 'opt out' of the maximum 48 hour per week average, with the opportunity to work and be paid for an additional 8 hours per week. Whilst the much-debated JD contract may have many shortcomings this is certainly key opportunity that individual units and training programs should look to utilise.

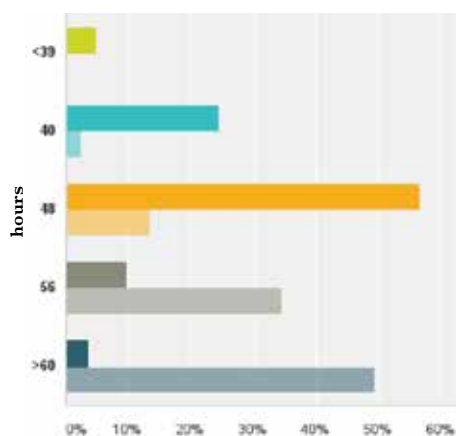
With these changes to both recruitment and shift in number of hours worked by trainees, it is crucial that time spent in training is structured and purposeful. As we know SCTS education has an established structured educational program for cardiothoracic trainees in the United Kingdom³. These simulation-based courses have been well received by trainees, with the opportunity to hone their skills through simulation and importantly trade notes and experiences with colleagues at a similar stage from across the UK. As outlined in the article the

introduction of this course has been followed by a significant increase in the pass rate of the FRCS C-Th examination by trainees.

The introduction of such a structured programme is commendable and has set the way for improvements in cardiothoracic surgical training. It is hoped that such structured improvements will follow in day to day operative exposure and training, ensuring a uniform high standard of training and performance monitoring of trainees at their respective stages.

As trainee representatives we are in a privileged position to attend several student and junior doctor engagement events. At the Association of Surgeons in Training 2018 Annual meeting we conducted both a pre-conference course and a stand at the ASIT specialty village. Both of these were extremely well attended with a great deal of interest. The pre-conference course was almost immediately fully booked! The level of engagement, enthusiasm and caliber of these delegates is truly inspiring and reminds us of the great deal of interest in what is a uniquely challenging and rewarding specialty.

As the trainee representative body we will continue to endeavor to be a voice for trainees to both the SCTS and Cardiothoracic SAC and to work to build on current initiatives. With this ambition in mind we have created a National Cardiothoracic Surgery Training Committee (NCSTC). The formation of this committee brings us in line with other surgical specialties and offers us the opportunity to bring about improvements on several fronts. We will update you with our progress in the next bulletin article. ■



Number of hours contracted to work (top) to number of hours actually worked (bottom) from Trainee Survey 2017

1) The Contract Conundrum – my views, D. Steel, SCTS Bulletin January 2018

2) Cardiothoracic Surgery Training: What do we think and how can we improve? J.Chacko, A. Al-Adhami, SCTS Bulletin Article January 2018

3) Implementation of a novel portfolio of structured, curriculum-aligned, simulation-based, cardiothoracic surgery training courses: Evolving the delivery of surgical education. N. Moorjani et al. J Thorac Cardiovasc Surg. 2017 Dec;154(6):2009-2016

SCTS AHP Education portfolio



Tara Bartley & Bhuvana Krishnamoorthy, SCTS Allied Health Professional Education Leads

The SCTS Education portfolio has delivered a total of six courses since November 2017, with a further three planned courses:

- SCTS Core Skills band 5&6 course has run in Brighton Nov 2017 & at the Abbott centre in Solihull, March 2018
- SCTS Non-medical prescribing course ran on 4th May 2018, at James Cook Hospital
- SCTS Advanced Cardiothoracic Course ran on 19th & 20th May 2018, at the Abbott centre
- SCTS/SCP Surgical Skills in Cardiothoracic surgery ran on 10th April 2018 at The University of Manchester Surgical Simulation centre
- SCP Revision course ran on 23rd & 24th September 2017 at the University of South Manchester NHS Foundation Trust

Further courses planned for 2018 are the Joint Abbott & SCTS theatre course on 16th August 2018, the non-medical prescribing course on 10th November 2018 and the Surgical skills course being run on 15th January 2019 and 25th of June 2019.



In addition, the new diet SCP joint RCSEd & SCTS examination led by Norman Briffa will take place in the RCS regional office in Birmingham.

These courses have welcomed in excess of 210 colleagues over the previous six months. Those attending have benefited from the educational elements of the courses, taking new knowledge and experiences back to the clinical areas to share with colleagues and to improve the care delivered to patients.

Delegates have completed a Likert scale to assess their learning pre and post course with very favourable results. Of equal merit are the comments that delegates have added to their evaluations, expressing how much they welcomed the opportunity to attend the courses, how much they have enjoyed partaking and how much they have learnt and networked.

None of this would be possible without the sponsorship from Abbott and Cardio solutions.



Their generous investment in the SCTS Education fund has enabled the courses to run at minimal expense to delegates, so opening up the opportunity for large numbers of delegates to attend. The new Abbott facility is both easily accessible and an excellent venue to host the courses.

In addition, the wet labs component of the courses continue to add value. Our thanks go to Kevin Austin and Wet Labs for the continued working relationship with the SCTS. Finally, we are grateful for the time our surgical and allied health professional colleagues give to delivering the high standard of teaching that takes place. ■

Delegate comment: Mr. James Cartwright:

“I would just like to add some feedback, that I thought the surgical skills course was fantastic well organised and I learnt a lot from it including doing a presentation on endoscopic vein harvesting at my trust hospital post meeting. I have also recommended the course to my surgical colleagues for your next course.”

SCTS Forum, Nursing and Allied Health Professional – Research round-up

Julie Sanders, Director Clinical Research, Quality and Innovation, St Bartholomew's Hospital



The vision of the SCTS Forum is to encourage, promote and assist in the development of NAHP clinical academic career and research opportunities in cardiothoracic surgery in the UK. Following on from our article in the previous bulletin, we have:

- Launched the **SCTS Forum Nursing and Allied health professional Research Group (SCTS NARG)**: The SCTS NARG, the first step in creating a community of NAHP cardiothoracic researchers to encourage and support the development of NAHP-led research, share expertise, and highlight research opportunities, launched at the annual meeting in March. We have a dedicated webpage for SCTS members (accessed via <https://scts.org/narg/>) which provides a research support directory, an emerging resource library, including details

of funding and research event opportunities. For more information, to offer your expertise to the SCTS NARG, please contact me.

- Been involved in establishing the **SCTS Cardiothoracic Interdisciplinary Research Network (CIRN)**: The remit of the CIRN will be to help deliver a portfolio of multi-centre clinical trials that address important research questions, more details on which can be found in a larger article on page 34. In brief, we aim for each cardiothoracic centre to have a named nurse/allied health professional (working collaboratively with a surgical trainee) involved in the network to assist in delivering this work. The opening work of the CIRN will relate to surgical site infections. We are looking for nurses/AHPs for many centres so if you are interested in being involved for your centre, please do contact me.

For any further information or to join the SCTS CIRN, please contact Julie Sanders, SCTS Forum lead for Audit and Research at julie.sanders@bartshealth.nhs.uk

- Been organising the **SCTS National Research Meeting**: Following the successful meeting in 2017, the 2018 meeting will be held on Saturday 3rd November at Glenfield Hospital, Leicester. This meeting covers all sub-specialities within cardiothoracic surgery and is an excellent opportunity for participants to increase their academic output and research networking. We are particularly keen to have more NAHP abstracts submissions (deadline 31st August 2018) and attendees at this excellent meeting, which will also host a NAHP Research NARG break-out meeting. For more information, please contact SCTS@leicester.ac.uk ■

2018 Annual SCTS national research meeting

Marius Roman, MD (Cantab)



Following the successful inaugural meeting in October 2017, the second edition of the SCTS National Research meeting will take place at Glenfield Hospital, Leicester. The meeting will be chaired by Prof. Gavin Murphy - BHF Professor of Cardiac Surgery. This is an excellent platform to access an interdisciplinary research network and gain insight in the up-to-date research trends in all the subspecialties of Cardiothoracic Surgery in the United Kingdom.

Each of four sessions of the Research meeting will feature keynote speakers, who will address essential topics: **Adult Cardiac Surgery** (Mr. Enoch Akowuah: *The development of a portfolio of trials in minimally invasive cardiac surgery*); **Thoracic Surgery** (Prof. Tom Treasure: *RCTs in Thoracic Surgery / The MARS Trials*); **Congenital and Transplantation Surgery** (Prof. Massimo Caputo: *The Thermic*

and Oxid Trials in paediatric cardiac surgery) and **The development of a national trainees' trials initiative** (Speaker: TBC).

The meeting is open to all Healthcare professionals, including Surgeons, Anaesthetists, Trainees and Junior Doctors, Nurses, Perfusionists, Allied Healthcare Professionals and Medical students. Additionally, this meeting provides a perfect opportunity for participants to submit and present their abstracts in each of the main sessions or the poster session, competing for the 4 prizes awarded for the best presentation in each session. Each session is moderated by a panel of expert Consultants, who will encourage stimulating discussions. The prizes consist of free registration tickets to the 2019 Annual SCTS Meeting, London, UK. The deadline for the abstracts submission is the **31st of August 2018**.

The final session of this meeting will be a workshop on the development of

the Interdisciplinary Research Network and collaboration with the Nursing and Allied Health Professionals (NAHP) network. This will focus and will try to answer four fundamental topics: **1.** Who is conducting the highest quality research in the UK; **2.** How to develop research opportunities with Senior Researchers; **3.** How to engage successfully with the National Interdisciplinary Research Network; and **4.** How to get involved with the National Research Programme.

The aim of the meeting is to showcase the latest high impact research in cardiothoracic surgery undertaken in the UK. It provides an excellent opportunity for trainees and healthcare professionals to get involved and present their research. Additionally, this meeting promises to increase the involvement in research networking platforms, the development of trainees as future research leaders in the field, and build on existing research networks. ■

Cardiothoracic Interdisciplinary Research Network (CIRN)

Cardiothoracic surgery is undergoing a transformation thanks to the development of novel techniques and cancer therapeutics.

Luke Rogers, Cardiothoracic Trainee, Derriford Hospital
Ricky Vaja, Cardiothoracic Trainee, Royal Brompton Hospital



Defining the role of surgery to patients, clinicians and funders within a modern clinical setting is dependent on high quality research. The United Kingdom is currently the world leader in terms of high quality science and produces 15% of all top rated scientific outputs with only 7% of the world's researchers. To build on this the UK government plans to double investment in Life Science research over the next 10 years. During this time, it is expected that the number of clinical trials funded will increase by around 50%. To address the challenges faced by our specialty, and provide the best evidence-based care for patients it is of paramount importance that we are in a position to take advantage of this opportunity.

To meet the future research needs of the specialty, the SCTS is developing a national research strategy. This has included the establishment of a multidisciplinary Academic and Research Committee, the appointment of a Surgical Specialty Lead (SSL) and two Associate SSLs (trainees). The Society has also increased the number of NIHR Academic Training posts

“The United Kingdom is currently the world leader in terms of high quality science and produces 15% of all top rated scientific outputs with only 7% of the world's researchers. To build on this the UK government plans to double investment in Life Science research over the next 10 years.”

in recent years. Finally, in partnership with Heart Research UK, the Society is leading a James Lind Alliance research Priority Setting Partnership (PSP) to identify national research priorities in adult cardiac surgery.

UK cardiothoracic surgery has produced some of the highest impact cardiothoracic research across the world, with the NIHR supporting numerous high impact clinical trials including ERICCA, TITRE2, UK-TAVI, MAVRIC, UK Mini-Mitral and VIOLET. Increasingly however, funding is awarded to research grant applications that demonstrate engagement of a network of interdisciplinary healthcare professionals and public and patient involvement both in the formulation of

research goals and outcome measures. In a number of other surgical specialties successful research networks are already established and these have generated high impact research outputs¹⁻³. To address this the Society have established a Cardiothoracic Interdisciplinary Research Network (CIRN), funded by the Royal College of Surgeons SSL funds. This will be led by

Mr Luke J. Rogers (Associate Surgical Specialty Lead), Mr Ricky Vaja (Associate Surgical Specialty Lead), Mr Priyadharsh Ariyaratnam (SCTS Director of Research), Dr Julie Sanders (SCTS Nursing & AHP Academic & Research Lead) and Professor Gavin Murphy (Surgical Specialty Lead).

The remit of the CIRN will be to help deliver a portfolio of multi-centre clinical trials that address important research questions. If you are interested in being part of this, you are invited to email the appropriate contact (Table 1).

Currently 19 of the 35 cardiothoracic centres have a trainee(s) that has expressed an interest in being involved. The following centres still require representation;

- Aberdeen Royal Infirmary
- Edinburgh Royal Infirmary
- Freeman Hospital, Newcastle
- Northern General Hospital, Sheffield
- Blackpool Victoria Hospital
- Manchester Royal Infirmary
- Wythenshawe Hospital, Manchester
- Wolverhampton Hospital
- Nottingham University Hospital
- Royal Stoke University Hospital
- Walsgrave Hospital, Coventry
- Morriston Hospital, Swansea
- Essex Cardiothoracic Centre, Basildon
- Royal Victoria Hospital, Belfast
- Cork University Hospital
- Mater Misericordiae University Hospital, Dublin

Nurses and Allied Health Professionals from the following Trusts have already expressed an interest in supporting some of the networks preliminary work (outlined

below) and have generously been provided with SCTS Forum membership:

- Barts Health NHS Trust
- Royal Brompton & Harefield NHS Foundation Trust
- Kings College Hospital NHS Foundation Trust
- Nottingham University Hospitals NHS Trust
- Royal Papworth Hospital
- University Hospitals North Midlands NHS Trust
- University Hospitals Birmingham NHS Trust
- University Hospitals Coventry & Warwickshire NHS Trust

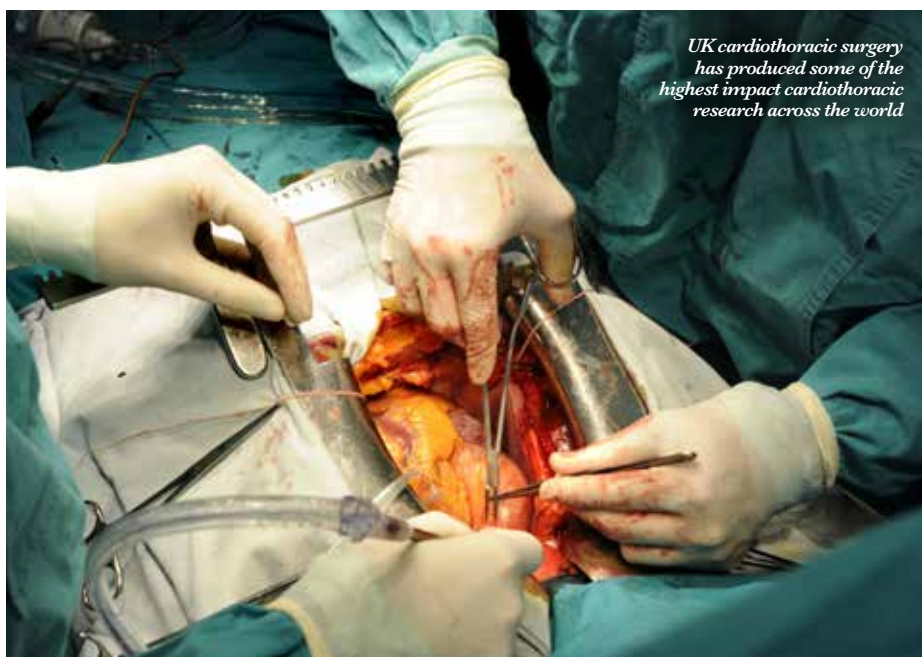
If you are interested in working with the Cardiothoracic Interdisciplinary Research Network we would be very interested to hear from you, particularly if you work in one of the above centres.

In addition to support from the SCTS, this initiative is supported by the Royal College of Surgeons, England through the Surgical Trials Initiative and the University of Leicester's Clinical Trials Unit. The Terms of Reference for the Cardiothoracic Interdisciplinary Research Network is currently under review and will be shared with those involved following ratification by the SCTS Executive Committee.

Preliminary Work

I. Cardiac Surgical Site Infections

The opening work of the CIRN will be a systematic review into surgical site infections (SSIs) associated with cardiac surgery, including sternal, conduit harvest and peripheral cannulation sites. Through this review, evidence-based interventions that reduce the incidence



UK cardiothoracic surgery has produced some of the highest impact cardiothoracic research across the world

of SSIs following cardiac surgery will be identified. A national epidemiological study will then assess variations in practise throughout the UK. We anticipate that this work will then support a grant application to run a cluster randomised trial investigating the impact of a care bundle to reduce SSIs in cardiac surgery.

II. MERITS Study

Facilitation and recruitment of centres to assist Mr Aman Coonar, Mr Vinci Naruka and SCTS Students in the delivery of a Multi-centre Evaluation of Renal Impairment in Thoracic Surgery (www.royalpapworth.nhs.uk/merits/). This is a multi-site investigation which seeks to bring together thoracic surgery units in a joint effort to identify rates of AKI and from there improve outcomes.

III. UK Mini-Mitral Trial

Facilitation and identification of interested trainees in centres recruiting for an NIHR funded clinical trial. In this trial trainees

who aid the recruitment of substantial numbers of patients are credited as co-principle investigators in any publications resulting from the trial data. Trainee principle investigator positions remain vacant in the following Trusts;

- Essex Cardiothoracic Centre, Basildon
- Blackpool Victoria Hospital
- Edinburgh Royal Infirmary
- St Georges Hospital, London

The Cardiothoracic Interdisciplinary Research Network offers an exciting opportunity for all those interested in cardiothoracic surgery, irrelevant of prior experience, to get involved with leading the future of cardiothoracic surgery research. We would invite you to get in touch if you wish to be involved with any of the above projects, have an idea that you feel presents a pertinent area of future research or simply have a question about this new initiative. ■

1) West Midlands Research Collaborative (WMRC). <http://wmresearch.org.uk>

2) Reconstructive Surgery Trials Network (RSTN). <http://reconstructivesurgerytrials.net>

3) British Neurosurgical Trainee Research Collaborative (BNTRC). <https://www.bntrc.org.uk>

Table 1. Cardiothoracic Interdisciplinary Research Network Contacts

Cardiothoracic Surgeons (NTN's, non-NTN's, Fellows, Trust grades, Foundation Doctors, Core Trainees & students)	Luke Rogers (ljrogers@doctors.org.uk) Ricky Vaja (ricky.vaja@gmail.com)
Nursing & Allied Health Professionals	Julie Sanders (julie.sanders@bartshealth.nhs.uk)

Thoracic forum

The Thoracic forum has been an event which is eagerly looked forward to by all practising thoracic surgeons and the trainees of the British thoracic fraternity. In the last two decades the event has evolved from a political talk shop to incorporating the needs and necessities of the thoracic surgical community.

Sri Rathinam, Consultant Thoracic Surgeon, University Hospitals of Leicester



Over the years with improvement in engagement with the society, as well as the Department of health, the forum has become the hub of discussions which have driven agenda for change with regards to Thoracic practice. The event always starts with the networking dinner on Friday followed by six hours of CME, political issues, service development and finishing with the AGM. The unique nature of the Forum is that it only has terms of reference, with no written constitution or an elected council. The hosting surgeon chairs the event and collates the collective opinion, concerns and views of the thoracic surgeons in the United Kingdom and Ireland.

The first event started in Birmingham and was hosted by David Waller the newly appointed consultant thoracic surgeon in Leicester. The story of its inception goes that David Waller, Joseph Marzouk and Pala Rajesh were discussing the need for a thoracic fraternity forum in Hong Kong, whilst attending the VATS symposium. They felt Thoracic surgeons needed a platform to voice opinions and to engage with the SCTS, which had a significant cardiac presence, and the BTS. David, a Birmingham trainee just appointed in Leicester, took the challenge and hosted the first event in the Forest of Arden.

The event has since then moved between UK units taking into consideration the commute after the Fridays work to ensure large attendances and the balancing act to rotate around the country. Some units have hosted the event more than once; each unit host has given the forum his or her own perspective depending on

The event is always on the first weekend in February so that the surgeons have the date in the diary with the only exception being the event in Dublin which was held in January to be held alongside the BTOG meeting.

Members of the forum have debated and driven various issues varying from

“Members of the forum have debated and driven various issues varying from the national selection drive, specialist thoracic appointments, service expansion in thoracic surgery as well as service specifications.”

the national selection drive, specialist thoracic appointments, service expansion in thoracic surgery, as well as service specifications. From being a minority voice which needed a collective resonance with the forum, thoracic surgery has a significant presence with the current President and SAC Chair being Thoracic surgeons. This led to an

interesting debate at the last forum in Leeds which raised the question whether there is still a need for the forum and the consensus was that there was still a need for the forum in the current format.

Thoracic Forum Leicester 2018

I had the privilege of hosting the 20th Forum, on behalf of the Leicester unit which was involved in the first forum in Stapleford Park, Melton Mowbray.

UK NETS SCTS Satellite meeting

We were approached the UK NETS to have a joint meeting with the Surgical fraternity to streamline pathways. We decided to have the SCTS-UK NETS

what was the flavour of the nation that particular year. Some events have had interesting Fridays, Cambridge held a large multidisciplinary education day alongside the thoracic forum attracting a large number of students, nurses and doctors. Eric Lim, Babu Naidu and I as Registrars offered the concept of the forum as a hub to popularise collaborative research in the Nottingham event. This was in a way the precursor to the UK Thoracic Research Collaborative under the leadership of Eric Lim and Babu Naidu. Ed Black in Nottingham invited a Martial arts expert and brought out the karate kid in us to break wooden boards, which to our surprise all of us did. Southampton had Joseph Marzouk talking at the dinner about his journey in thoracic surgery.

Symposium on the Friday proceeding the dinner to attract maximum participation. The afternoon had a variety of eminent experts on neuro endocrine tumours including Dr Was Mansoor, Dr Tahir Shah, Prof John Gosney and Prof Nick Reed discussing the various aspects of the NETS. Dr Tahir Shah introduced the concept of NETS and how the service has developed and pathways implemented in Birmingham. Professor Nick Reed offered a great overview of Lung NETS, followed by Professor John Gosney offering an insight into histopathology. Maninder Kalkat discussed the Surgical work up and Dr Was Mansoor discussed current approaches, oncological treatment and preliminary results of the LEAP Study. This was followed by a variety of cases with interactive discussions involving both the panellists as well as the surgical fraternity. There were discussions on setting up optimum follow up pathways with units learning from established centres.

Thoracic Forum Main Meeting

The First Session on Saturday meeting covered various contemporaneous issues as well as shared learning from various units. Prof Mike Morgan explained how Specialised commissioning works and its implications for Thoracic Surgery. Doug West presented the preliminary data of the National Audit, LCCOP and proposed plan to use HES data for Non Malignant outcomes. This was followed by experiences on best practice in increasing resection rates and clinical quality improvement presented by Elizabeth Belcher of the Oxford unit and Ira Goldsmith from Wales. Richard Page shared how Liverpool inspected themselves in response to the LCCOP report. Dr Richard Booton presented the Manchester experience of RAPID Optimal Lung pathway which may soon become the national benchmark.

The second session had the customary reports from Juliet King (Thoracic Sub-Committee), Sri Rathinam (SCTS Education) Thomas Tsitsias (Thoracic Trainee Representative). Rajesh Shah, as SAC chair, briefed us on curriculum change, changes to Exams

Table 1: List of Thoracic Forums since its inception and who has been the host surgeon on each occasion

Host Unit	Venue	Host Surgeon
Leicester	Forest of Arden	David Waller
Liverpool	Mootram Hall	Richard Page
Leeds	Weetwood Hall	Andrew Thorpe
Birmingham	Belfry	Pala Rajesh
Cambridge	Cambridge Garden Moat House	Frank wells
Sheffield	De Vere Oulton Hall	Roger Vaughan
Birmingham	Coombe Abbey	Richard Steyn
Nottingham	Breadsall Priory Hotel	John Duffy
Dublin	The Burlington Hotel	Kieran McManus
Manchester	Mottram Hall	Rajesh Shah
Nottingham	Rutland Square Hotel	Ed Black
Cambridge	Double Tree	Aman Coonar
Glasgow	Breadmore Hotel	Alan Kirk
Sheffield	Conference 21	Jagan Rao
Coventry	Coombe Abbey	Joeseeph Marzouk
Oxford	Oxford Hotel	Elizabeth Belcher
Hull	Cave Castle	Mahmoud Loubani
Southampton	Botleigh Hall	Aiman Alzetani
Leeds	Rudding Park	Nil Chaudhuri
Leicester	Stapleford Park	Sri Rathinam

as well as GMC discussions on future training pathways which led to robust discussions. The other major change was the Open Forum which had Graham Cooper, SCTS President and Richard Page, President Elect offering an open platform to address the needs of the Thoracic fraternity and responding to their questions. This was a very interactive and engaging session with the feedback concluding that we should have it in the future.

The final session focused on clinical trials, new collaborative studies, innovative procedures and an update on

clinical trials in Thoracic Surgery. Tim Batchelor gave an update of the MARS-2, CELEB, VIOLET and HARP-2 Studies. The Hull group shared their experience on Spontaneously breathing Thoracic Surgery and the Session finished with Gianluca Casali emphasising the need for Mindfulness and Resilience in Surgeons.

The AGM reviewed the current contributions, there were a few industry partners who did not support this year but there were a few new partners to balance the loss in sponsorship. The Next meeting will be in London hosted by Juliet King and Carol Tan. ■

“Some events have had interesting Fridays, Ed Black in Nottingham invited a Martial arts expert and brought out the karate kid in us to break wooden boards which to our surprise all of us did.”



Fellowship Group picture with Professor He

Marian and Christina Ionescu Consultant Travelling Fellowship 2017: The search of oriental pearls of wisdom and friendship

I was honoured and privileged to be awarded the Marian and Christina Ionescu Consultant Travelling Fellowship in 2017 by the SCTS to take a team to learn and implement the use of non-intubational techniques in Thoracic Surgery, from one of the high volume centres in China specialising in this approach.

Keng Ang, Consultant Thoracic Surgeon, Glenfield Hospital

I have previously benefited from the SCTS Ethicon Trainee Fellowship where I spent 3 months learning this technique with Professor He, from the First Affiliated Hospital of Guangzhou Medical University. I discovered that it has the potential to benefit some of our patients, and to enhance their recovery. Hence, I wanted to introduce this technique in my centre in a structured manner. I also learnt from my time there, while helping them set up an International course for this technique,

successful delivery of this approach will need the close co-operation between our anaesthetists and theatre staff to get used to some of the technical adjustments required. Therefore, it was important that I engaged all relevant teams (ie. anaesthetists, anaesthetic and theatre ODPs, and my surgical colleagues) early to start this venture. I am extremely grateful to Mr and Dr Ionescu for this generous fellowship enabling me to lead a team (Anaesthetist Dr A Elssisi, team leader from surgical and anaesthetic ODPs Mrs L Jones & Mrs B Sursham, and

another surgical colleague, Mr Rathinam) to go to China to observe, practise and learn the nuances of this approach.

During our intensive immersion visit (with not much time to recover from jetlag after a 12 hr flight), Professor He and his anaesthetic team had organised daily lectures on the surgical and anaesthetic aspects of this approach so we all could gain a better understanding of the principles and potential application of it. We also had the opportunity to spend a lot of time in operating theatres every day so that everyone could gain a first-hand practical knowledge of the skills and techniques. While there are a lot of “how to do” videos on the internet, they cannot provide the opportunity this visit offered to interact with experts and understand the



Fellowship ward round visit with Professor He

“We had the opportunity to spend a lot of time in operating theatres every day so that everyone could gain a first-hand practical knowledge of the skills and techniques.”



Fellowship learning from our Chinese anaesthetic colleagues

entire set up together with the tips and tricks of this technique. Professor He and his team had made sure that we all had the skills and confidence to implement this back in the UK before we left, and this made this trip really fruitful for everyone!

The learning opportunities were not limited to operating theatres and lectures. We were shown around the hospital and even had an interesting visit to their traditional Chinese Medicine department. One of the most valuable aspects in my view was that we saw the patients pre-operatively and post-operatively on the wards and so we had a better understanding of their patient's journey and how this technique can benefit them. When I first proposed this technique to our institution, there was a lot of scepticism about its feasibility and application. I am very pleased that some of the more sceptical members of the visiting team had changed their views about the non-intubational approach by the end of this visit.

Whilst the primary aim of the visit was to learn a new technique, we felt that it was equally important that we took this opportunity to promote a mutual exchange of ideas, share our knowledge, build new friendships and establish a long-term collaboration. Therefore, we had also given a few talks during our time there introducing our training in Thoracic Surgery and Anaesthesia. As the first step towards our mutual collaboration, we also invited Professor He and his team over in March 2018 for the first Glenfield-Guangzhou Collaborative Training Event, whereby we had a mini-symposium on non-intubational thoracic surgery (see separate

article). During his visit with us, Professor He also had the chance to share his work with the wider UK audience at the Annual SCTS meeting in Glasgow.

Overall, this was a hugely successful and rewarding trip for all of us, and we were very grateful to Professor He and his team for their friendship, guidance and hospitality. I am grateful too for the SCTS for giving us this wonderful opportunity. Finally, I would like to dedicate this article to Mr Marian and Dr Christina Ionescu to thank them for their generous fellowship that gave us this fantastic opportunity to learn and bring a new technique back to the UK. In the January 2018 edition of the SCTS bulletin, Mr Ionescu mentioned that “..I do find now more time to shower more love, friendship and more help on more people”. I hope I have, through this fellowship, fulfilled his aim and vision, by bringing a new technique to help UK patients, and by establishing new friendships for the UK cardiothoracic surgery. ■



Fellowship group with anaesthetists



Fellowship lectures about non-intubational Thoracic Surgery



Fellowship lectures about our training system



Marian and Christina Ionescu Consultant Travelling Fellowship 2017: A real masterclass in Aortic surgery

Amit Modi, The Royal Sussex County Hospital, Brighton



The Marian and Christina Ionescu Consultant Travelling Fellowship has been managed by SCTS Education for a few years now and is funded by a generous grant from the Ionescu family. I was appointed as a Consultant Cardiac surgeon in August 2016 at Brighton. Our unit currently carries out

around 650 operations a year, which include all aspects of adult cardiac surgery with the exception of transplantation. We perform approximately 30-40 Aortic procedures

annually, including emergency type-A Aortic dissection repairs and non-emergent cases with good outcomes. We also have a complimentary TEVAR programme that is provided in conjunction with dedicated endovascular surgeons. Having successfully established VATS AF ablation, minimally invasive Mitral and Aortic valve surgical programmes, we had identified the need to develop Aortic valve preservation and Aortic arch surgery at our centre.

This project was discussed with and was supported by my colleagues and had been

approved by our clinical director. In order to put it in motion, we had decided to attend focused courses and visit reputed centres nationally, within Europe and one in the North American continent. Our primary goal was for our team to watch successful Aortic valve-sparing root replacements and frozen elephant trunks, understand how programmes were started and developed in these centres, learn and gain experience on patient selection as well as on the technical front. I, therefore, decided to apply for the travelling fellowship, the application process for which was relatively straightforward and not time-consuming. The selection process was managed by SCTS Education and a positive outcome was communicated to me within 3 months.

We attended the 'Master Class on Aortic Valve Repair: A step-by-step approach' in Paris and 'Reconstruction of the Aortic

"It was enlightening to observe him perform total body perfusion during Aortic arch replacement."

Valve and Root', Prof. Dr Hans-Joachim Schäfers, in Germany. Both the courses focused predominantly on the Aortic root remodelling and basal ring annuloplasty with live operations which were elegantly performed with fantastic results preserving the physiological movements of the root during the cardiac cycle. These courses were mentioned in my proposal but fellowship funds were not used for them.

I made multiple visits to Southampton where Mr Geoffrey Tsang routinely performs complex Aortic surgery. Some of these involved our operating theatre staff and perfusion team. Mr Tsang was welcoming and made us feel like a part of their team during our visits. He explained his patient selection process and technical surgical details at great length. We watched him perform multiple David type procedures using the Valsalva graft and Frozen elephant trunk procedures. He also guided me through my first FET implantation with a Thoraflex hybrid device. I attended 'Surgery on the Thoracic Aorta' in Bologna with Mr Michael Lewis which was an important visit to update ourselves on contemporaneous trends in Aortic surgery, following which I had a short fellowship at St. Luc hospital, Brussels with Prof Gebrine El Khoury and Dr Laurent deKerchove. This experience was a real masterclass; Prof El Khoury was inspiring and it was a joy to observe both of them perform 8 Aortic valve re-implantations offering very valuable tips and tricks to

accomplish a durable procedure safely. I concluded my travelling fellowship with a visit to Dr Michael Chu's unit in London, Ontario in the first week of April 2018. The attendees included a Cardiac Anaesthetist, a Cardiologist and 3 Surgeons with a special interest in developing

Aortic service at Brighton. Dr Chu and his colleagues, Prof. Bob Kiaii and Dr Linrui Guo, had arranged for a series of lectures and multiple David type valve-sparing root replacements, total arch replacements and right thoracotomy AVRs for us to observe. It was enlightening to observe him perform total body perfusion during Aortic arch replacement and I was particularly impressed with the metabolic parameters and patient recovery in the immediate post-operative phase. Michael Chu was very approachable, helpful and accommodating in setting up our visit. We noticed his team work with incredible efficiency and our experience was



*Left to Right:
A Modi,
G ElKhoury,
L deKerchove*

invaluable as it helped us further refine our re-implantation technique and got us planning for aggressive perfusion strategies to minimise ischaemic times.

The Marian and Christina Ionescu Consultant Travelling Fellowship has been

tremendously helpful to facilitate our project. I feel honoured to receive this fellowship and sincerely thank SCTS Education and the Ionescu family for the additional funding towards this award. Overall, it has provided us with a great opportunity to witness state-of-art complex proximal and distal Aortic operations at reputed centres around the world and that has made us conversant with the concepts to accomplish these operations with safety. We have successfully performed 2 valve-sparing Aortic root replacements and an Aortic valve repair with ascending Aortic replacement so far and we hope to continue building our programme from here. ■

Chasing Hearts

Shruti Jayakumar



When I expressed my interest in cardiothoracic surgery to a mentor – Mr Johnny Ferguson – he suggested I approach Professor Kumud Dhital, an old friend of his from Papworth who had performed the world's first donation after circulatory death (DCD) heart transplant.

I was hoping to be able to witness at least one DCD transplant during my elective at St. Vincent's Hospital in Sydney (SVHS) but, surprisingly, there were transplants nearly every day. To my delight,

this also involved jetting off on private planes to organ procurements across the country. The entire affair was complex, often taking the whole day and night. First we would go on 'runs' to retrieve the heart, sometimes flying as far as Perth, in a process that was closely coordinated with the abdominal transplant team. Then, once the hearts and/or lungs were procured, it was time to rush back to Sydney while closely communicating with the surgeons at SVHS so they could meticulously time explantation of the recipient's battered

heart to match our arrival, all with the aim of minimising the ischaemic time of the donor heart - crucial in determining how well it would eventually work. It was certainly not easy - a heart could become available any minute, even 5 am on Sunday mornings as I would soon find out. Though the mornings were early, nights were long and sacrifices were plentiful, few privileges in life compare to watching individuals wake up with a new lease of life, the result of an ultimate sacrifice. ■

Measuring outcomes in Congenital Heart Disease

Every Tuesday morning the department of Congenital Heart Surgery at Texas Children's Hospital (TCH), the former surgeon-in-chief used to conduct rounds intended for trainee congenital heart surgeons, paediatric cardiologists and medical students.



Marisa Gambarini, Foundation Year 1 Doctor, Ealing Hospital, London North West Healthcare NHS Trust

Each session evolves around a case that represents a learning opportunity about the (mis) management of the presented patient and leads to a reflection about the current thoughts and future directions of care in similar clinical situations. In one of the rounds I attended, a case of a neonate with a very complex congenital heart problem and other congenital malformations, opened a discussion about the possible treatments and interventions before the surgeon posed the uncomfortable question – but what about the possible outcomes? What can we tell the baby's parents to expect? And we could add – how

do we know that what we are telling the parents is true?

Where only decades ago 'blue babies' had a very poor chance of survival, at least in the developed world, we now

have an armamentarium of treatments available for children with congenital heart disease (CHD). The survival of these children has improved dramatically, however reporting of outcomes has, until recently, been largely limited to research studies. This lack of readily available outcome data is particularly important when dealing with patients with complex

CHD, where the burden of mortality and morbidity is the highest. Considering the above questions, it becomes evident that to be able to give answers about outcomes we need to first decide which outcomes are relevant and then develop simple yet reproducible measures to monitor them. Many institutions in North America and Europe where congenital heart surgery is performed are now part of The Society of Thoracic Surgeons and The European Association for Cardio-Thoracic Surgery databases that aim to capture outcomes of congenital heart surgery. However, reports from such datasets continue to

are important to patients, to ensure that we are providing adequate care at different levels instead of maximizing one outcome at the expense of another. At TCH, Dr Fraser championed the continuous use of outcome and processes measures not only to enhance discussion with families but also to improve performance, as this allows the programme to reflect on current practices based on available data and act upon it to improve the care of patients with CHD. The outcome measures at TCH include mortality, neurodevelopmental outcomes and cardiopulmonary bypass times. The case volume of surgical and

catheter-based procedures and lesion-specific mortality rates are regularly updated and readily available to the public on the TCH website. Not surprisingly, TCH was ranked top in the nation by

“Where only decades ago ‘blue babies’ had a very poor chance of survival, at least in the developed world we now have an armamentarium of treatments available for children with congenital heart disease.”

focus on mortality data and case volume which although clearly important, do not adequately capture the current efforts to achieve outcomes beyond the 30-day or in-hospital survival. Not limited to CHD, Professor Porter from the Harvard Business School proposed a generic three-tier hierarchy of outcomes (figure 1) to include survival and other outcomes that

US News & World Report in Pediatric Heart Care and Heart Surgery in 2017-18. However, there remains a wide variability in outcomes of CHD across US institutions. Joint efforts by the Society of Thoracic Surgeons and Congenital Heart Surgeons' Society in the US released a set of 'Quality Measures for Congenital and Pediatric Cardiac

Surgery' (Table 1) with the aim to reduce this variability and improve the quality of care for patients with CHD. These achievements are clearly commendable, however addition of neurodevelopmental outcomes would be useful based on the Scientific Statement from the American Heart Association on the neurodevelopmental outcomes in children with CHD, which shows that children with CHD are at increased risk of developmental disabilities or developmental delay. To monitor neurodevelopmental outcomes, there needs to be a concerted effort by the relevant institutions to create tools for the capture of long-term outcome data that will be transparent and comparable between institutions since neurodevelopmental outcomes have been more challenging to measure than other morbidities such as arrhythmias and residual defects.

In summary, when treating patients with CHD we need to consider outcomes beyond survival. This is because although we have seen significant reductions in surgical mortality in nearly all forms of CHD, there is still high morbidity associated particularly with complex CHD. It is only by careful documentation and continuous measurement of processes and outcomes that we can build a clear picture of the possible futures of children with CHD. On a local level, we can provide patients and families with most accurate counsel if we have access to institution-specific outcome measures. Additionally, by measuring processes we can identify areas of improvement that impact those outcomes at a given institution. On a global level, coordinated measurement of outcomes helps monitor quality, equity and access to healthcare which gives us an opportunity to compare and improve healthcare services by learning from leaders in the field based on outcome data. In the setting of CHD, progress has already been made by publishing and comparing survival data with national standards both in the US and the UK, however future practice should complement this by including neurodevelopmental outcomes and other long-term outcomes to their set of measures. This would encourage institutions to adhere better to patients' needs and provide patients with the option of choosing the service that best matches their expectations. ■

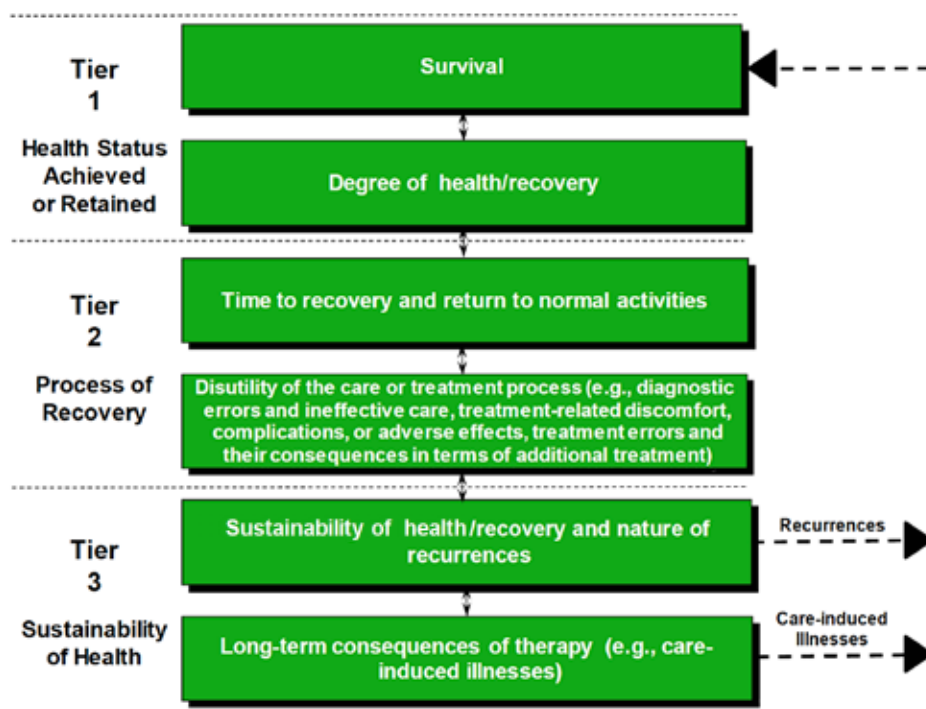


Figure 1: The outcome measures hierarchy (4).

1. Participation in a **National Database** for Pediatric and Congenital Heart Surgery
2. **Multidisciplinary rounds** involving multiple members of the healthcare team
3. Availability of Institutional **Pediatric ECLS (Extracorporeal Life Support) Program**
4. **Surgical volume** for Pediatric and Congenital Heart Surgery: Total Programmatic Volume and Programmatic Volume Stratified by the **Five STS-EACTS Mortality Categories**
5. **Surgical Volume** for **Eight Pediatric and Congenital Heart Benchmark Operations**
6. Multidisciplinary **preoperative planning conference** to plan pediatric and congenital heart surgery operations
7. Regularly Scheduled **Quality Assurance and Quality Improvement Cardiac Care Conference**, to occur no less frequently than once every two months
8. Availability of **intraoperative transesophageal echocardiography (TEE)** and epicardial echocardiography
9. **Timing of Antibiotic Administration** for Pediatric and Congenital Cardiac Surgery Patients
10. Selection of **Appropriate Prophylactic Antibiotics** for Pediatric and Congenital Cardiac Surgery Patients
11. Use of an **expanded pre-procedural and post-procedural "time-out"**
12. Occurrence of new post-operative **renal failure** requiring dialysis
13. Occurrence of new post-operative **neurological deficit** persisting at discharge
14. Occurrence of arrhythmia necessitating **permanent pacemaker** insertion
15. Occurrence of **paralyzed diaphragm** (possible phrenic nerve injury)
16. Occurrence of need for **postoperative mechanical circulatory support** (IABP, VAD, ECMO, or CPS)
17. Occurrence of **unplanned reoperation** and/or unplanned interventional cardiovascular catheterization procedure
18. **Operative Mortality** Stratified by the five STS-EACTS Mortality Categories
19. **Operative Mortality** for Eight Benchmark Operations
20. Index Cardiac **Operations Free of Mortality and Major Complication**
21. Operative **Survivors Free of Major Complication**

Table 1. Quality Measures for Congenital and Pediatric Cardiac Surgery produced by the Task Force to develop Quality Measures for Pediatric and Congenital Cardiac Surgery endorsed by the Society of Thoracic Surgeons (7).

The Joint Surgical Colleges Fellowship Examination



John Smith, Shadow Board Chairman, JSCFE in Cardiothoracic Surgery

The first clinical or Section 2 exam of the “International FRCS” (more properly the Joint Surgical Colleges Fellowship Exam – JSCFE) took place in Kuala Lumpur on 23rd and 24th February. It was the culmination of several years of preparation, including five diets of the Section 1 (MCQ) exam. Thirteen examiners, an assessor, the Board Chairman and two members of the secretariat travelled to Malaysia a couple of days earlier to acclimatise and prepare for the exam. Local organisation and support were outstanding. The lead was Professor John Chan, previously a London trainee but presently Consultant Cardiothoracic Surgeon at Gleneagles Hospital in Kuala Lumpur. It was particularly gratifying to witness the enthusiastic involvement of numerous cardiothoracic colleagues from several hospitals across the city.

A refresher course for the examiners took place on the morning of 22nd February, followed in the afternoon by standard setting for all the next day’s cases. Several local surgeons attended the event to familiarise themselves with the processes and techniques, hopefully with a view to some of them becoming examiners in due course.

The first day of the exam proper - the clinical cases - was held in the University of

Malaya medical examination suite. This is a remarkable purpose-built facility with almost limitless space and dedicated, helpful and experienced staff. Several problems were nevertheless anticipated and plans were made to manage them, but in the event none materialised. For example there was an awareness that many if not most patients would be unable to understand or speak English. Translators were on hand with every patient but also the very experienced examiners were more than capable of not dwelling excessively on history taking if this seemed wasteful of time. As with the previous day, several local surgeons attended as observers.

The final day - the oral exams - took place in the Hotel Majestic. Each candidate was questioned for one and a half hours at cardiac, thoracic and imaging/equipment stations. Again, several local surgeons attended.

Twenty eight candidates put themselves forward for the exam and the pass rate was approximately 60%, indicating, I believe, a generally very high standard amongst the young surgeons who had previously passed the Section 1 papers.

The universal feeling at the end of the visit was that the exam had been a great success and this was due to several crucial

factors. Firstly, all the examiners were senior UK/Ireland surgeons with immense experience who gave willingly and enthusiastically of their own time to support this project. Secondly, the local organisation and support were superb. This was not just because of the facilities, the patients etc., but also the cordial and warm reception we received. There is undoubtedly a genuine desire in Malaysia for the link with UK/Ireland cardiothoracic surgery to be nurtured and further developed. Thus, for example, the main dinner on the Friday night was attended by, amongst others, Tan Sri Yahya Awang (Chairman, Malaysian Board of Cardiothoracic Surgery), Professor Hanafiah Harunarashid (President, College of Surgeons), Professor Raja Amin (President of the Malaysian Association of Thoracic and Cardiovascular Surgery), Dato Hamzah (Head of Cardiothoracic Services, Ministry of Health) and H E Vicky Treadell (British High Commissioner to Malaysia). Last but not least, the ladies from the secretariat, Carolyn Mason and Amy Heaton, efficiently shepherded and organised examiners and candidates alike with their usual firm graciousness.

What about the future? Time will tell, but the perception is that the number of candidates presenting is steadily increasing, and my own aspiration would be to hold such an exam on a yearly basis. The next diet is being considered for February 2019. Should this go forward, it too will be held in Kuala Lumpur as all concerned were very comfortable and are now very familiar with the arrangements in Malaysia. Once the exam is more fully established it is possible that an additional venue in the Middle East will be considered. Very importantly, looking ahead, the Royal Colleges are keen to recruit ‘international’ i.e. non-UK/Ireland examiners. There are presently some minor obstacles with respect to suitable training, but such a development in the long-term is essential - to enhance engagement with the international surgical community, disseminate the skills that have been honed in the UK/Ireland exams, and not least of all to take some pressure off our own examiners who have to take annual leave to participate. ■



Assessment of the modern cardiothoracic surgical team

The concept of the Surgical Team is currently all the rage in the NHS surgical colleges. Health Education England are organising meetings and publishing position papers on how the modern surgical team is essential to provide good quality surgical care to patients.

Norman Briffa, Consultant Cardiac Surgeon, Northern General Hospital, Sheffield

There have always been surgical teams - when I trained, the surgical team consisted of a consultant, senior registrar, junior registrar, senior house officer and junior house officer - all members of the team being doctors.

During the past 20 years, there have been profound changes in the organisation of UK healthcare, in the way doctors are trained as well as a shift in the tasks they perform. A fall in the number of doctors below consultant grade has led to the creation of a myriad of new posts such as advanced nurse practitioners, surgical care practitioners, surgical assistants, physicians associates and others. The speciality of cardiothoracic surgery has been in the vanguard in the development of these posts. In the 1980s and 1990s, newly appointed cardiothoracic surgical consultants helped to create the post of cardiac surgical assistants in their departments after having observed and worked with physicians' assistants (PAs) during part of their training in the USA.

In the US, the post of PA was originally created in the early 1960s to help attending physicians (Consultants) do their job in smaller non-teaching hospitals where there were no doctors in training. Their training and career path is well defined and is based on the medical model with applicants requiring a University degree. This is followed by a period of higher specialty training at the end of which is a specialty specific national board exam and certification. As in medicine, licensing is devolved to the individual states.

Today in the NHS, cardiothoracic surgical care practitioners are an integral part of the cardiothoracic surgical team.

In the medical profession, all doctors in the UK are registered with the General Medical Council (GMC). The GMC has

overarching responsibilities and powers to maintain standards in the training and assessment of both medical students and doctors in training. Completion of training and a successful national summative assessment of knowledge (final exam) are a necessary prerequisite for a doctor/surgeon to be on the GMC's Specialist register before she/he can apply for a consultant job. The General Medical Council is also planning a National Licensing exam for newly qualified medical graduates from 2018-2019.

Professional Regulation of Physicians Associates is the subject of a private member's bill that is currently going through parliament. As with the General Medical Council, a function of any new regulator would be the policing of standards of training and assessment.

It is generally accepted that such high standards are required for all members of the surgical team. The Association of Cardiothoracic Surgical Assistants (ACSA), the Society for Cardiothoracic Surgery in GB and Ireland (SCTS) and the Royal College of Surgeons of Edinburgh are all represented on a panel I chair, to design an exam for cardiothoracic surgical care practitioners that meets the very high standards required by professional organisations such as the GMC, in a modern summative assessment of knowledge. The work to develop this exam began in 2014. It is designed to ensure that the exam comprehensively tests the knowledge of cardiac and thoracic surgery that a Cardiothoracic Surgical Care Practitioner is expected to possess in order to do their job effectively and safely. The curriculum of knowledge covers the whole of the surgical journey undertaken by a patient undergoing cardiac or thoracic surgery. The exam will be fair and quality assessed. Unlike in the past where the exam pass mark was set

arbitrarily, in this exam, the pass mark will be set by a standard setting process to maintain standards and fairness.

The role of the Royal College of Surgeons of Edinburgh in the development of this exam has been crucial. Royal Colleges of Surgeons (there are 4 in the British Isles) are the institutions that organise exams and award membership and fellowships to surgeons on successful completion of these exams. Possession of these degrees, as evidenced by the postnominals of MRCS and/or FRCS, indicates that the candidate possesses the requisite knowledge to do the job of a surgeon. In 2016, a Faculty of Perioperative Practice was launched in the Royal College of Surgeons of Edinburgh. One of the broad aims of the faculty is to highlight the fact that the modern Surgical Team does not just consist of doctors. The faculty provides courses for all members of the surgical team and awards membership of the faculty (with accompanying postnominals) when the applicant demonstrates certain competencies. Successful completion of the Cardiothoracic Surgical Care Practitioner Exam will be such a competency.

Simon Stevens, the chief Executive of NHS England recognises the important role that non medical members of healthcare teams contribute to high quality care. The work of this panel, together with the Faculty of Perioperative Practice of the Royal College of Surgeons of Edinburgh, will ensure that Surgical Care Practitioner members of the Cardiothoracic Surgical Team will have the high standards of knowledge required to do their job effectively and safely. This exam is a first in the assessment of non medical members of the surgical team. It is hoped and expected that what is being achieved in the speciality of Cardiothoracic Surgery will serve as a template for all other surgical specialities. ■

Education, training and practice of cardiothoracic surgery: The shifting paradigms of the future



Hisham Sherif, MD, FACS, FICS, FACC, FAHA, Cardiac Surgery (ret.), Newark, Delaware, USA

“An investment in knowledge pays the best interest” –
Benjamin Franklin

“Books must always follow Science, not science books”
– **Sir Francis Bacon**

“Everything should be made as simple as possible, but not simpler” – **Albert Einstein**

Over the past decade or so, several events have significantly impacted healthcare in general and cardiothoracic surgery in particular. Societal and demographic changes have contributed to a chronic shortage of candidates for cardiothoracic surgical training programs. In addition, the limitations on work hours for physicians-in-training (i.e., residents, fellows and registrars) have reduced the time spent in managing patients and the volume of cases seen, discussed, studied or operated upon. In some cases, such surgeons in training seek experience in institutions beyond their training locations. The increasing number of novel procedures such as catheter-based and minimally invasive interventions has further reduced the number of traditional “open” procedures. Especially in these procedures, the rapidly expanding role of cardiologists and interventional radiologists has further reduced clinical exposure and expertise, as in the case of aortic and valvular interventions. Furthermore, the current generation of cardiothoracic surgery trainees has been much more focused on bolstering their technical operative skills, as opposed to critical care skills. This reduced expertise has contributed to a decrease in the pass rate in some certification/credentialing examinations, thereby calling in question the competency of some candidates.

Partly for the same reason, there has been increasing reliance on the recruitment, employment and retention of mid-level “cardiac surgery providers”; i.e., nurse practitioners and physician assistant, to ‘fill in the gaps’ due to the reduced number of residents and fellows. Such clinicians now have a ubiquitous presence in all phases of patient management, from the outpatient clinic, preoperative evaluation

to discharge. Another reason for the hiring of these non-surgeons is the financial appeal of employing clinicians seen as “fairly equal” to surgeons at a lower cost; as is the case of staffing of cardiothoracic surgical intensive care units clearly demonstrates. The introduction of a simplified or “watered down” educational and training curriculum for such clinicians has significantly reduced the knowledge base necessary for safe practice in such high-risk clinical areas and thus jeopardizes the foundation for safe practice.

The introduction of such abridged educational and training curriculum for clinicians charged with the bulk of cardiothoracic surgical practice has severely weakened the cause for surgeons engaging in continuing basic science or clinical research. New graduates face a situation where the “new normal” standards for practice are over-simplified, generalistic one-size-fits-all “guidelines” originally drafted for non-surgeons. This decreased interest has been made worse due to the much decreased impact of research findings on actual clinical practice or its guidelines, in favor of simplistic, often arbitrary policies drafted by administrators and bureaucrats, and expected to be implemented by such mid-level providers. This is reminiscent of the infamous quote “The Republic has no need for scientists”.

Due to the same regulatory and administrative considerations focused primarily on financial issues and the documentation of the bureaucratic paperwork, compounded by the absence of a clear and comprehensive credentialing process for cardiothoracic surgeons, cardiothoracic surgical critical care team leaders have been mostly non-surgeons who are “Critical Care-certified” in other specialties such as anesthesiology or pulmonary medicine.

These changes have created an unprecedented situation on the ground (especially in cardiothoracic surgical critical care) where the cardiothoracic surgeon is ushered into practice with suboptimal education and training, to find himself/herself being considered equal to or be replaced outright by non-surgeon clinicians. Further worsening the frustration and humiliation is the fact that

cardiothoracic surgeons have abdicated decision-making authority in critical care management to non-surgeons, while still being legally and administratively held accountable for patients’ outcomes in the critical care and postoperative period. Outside the critical care area, surgeons have been reduced to mere technicians performing a limited number of procedures, while facing increasingly fierce competition from other specialties.

The unwelcome result of these changes has been the declining interest of medical students to pursue a career in cardiothoracic surgery, and a growing number of surgeons or surgeon candidates leaving the specialty in pursuit of other avenues of work. This is posing a significant existential threat to the specialty and its professional identity.

Instead of becoming an endangered species, the governing organizations of cardiothoracic surgery are called upon to rise to the challenge of redefining their specialty as compatible with the 21st century, and to never relinquish this task to bureaucrats or administrators whose only motivation is cost cutting. The return to the foundational principles and ethos of medical practice is urgently needed; where solid scientific findings, through rigorous research, must be restored as the basis for education and training of surgeons. Financial considerations should be challenged to ensure proper definition of the role of each clinician involved in cardiothoracic surgery and cardiothoracic surgical critical care practice. Nurses, physician assistants and surgeons should be regarded as distinct groups of practitioners with different yet complementary backgrounds and skills. One isn’t and should never be a substitute for others.

In our specialty’s struggle for survival in today’s medical marketplace, our professional organizations should be inspired by the words of Admiral Sir Horatio Nelson to his naval troops demonstrating effective leadership, role definition and team resource management:

“England Expects that Every Man Will do His Duty”

To which we might add: “for which he/she has been properly educated, trained and credentialed.” ■

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SCTS Ionescu Medical Student Travelling Fellowship 2017:

The Oz experience

I was awarded the SCTS Ionescu Medical Student Fellowship following the annual meeting in Belfast 2017. This provided me with a unique opportunity to explore Cardiothoracic Surgery, a specialty we are sparsely exposed to within the undergraduate surgical curriculum.



Devan Limbachia, Final Year Medical Student, University of Birmingham

Melbourne is the capital city of the Australian state of Victoria. Described as the ‘most liveable city in the world’, I decided to complete my 4-week medical school elective here in hope of experiencing a different healthcare system to that of the UK. St Vincent’s Hospital is one of five large tertiary hospitals in Melbourne with particular strengths in Cardiothoracic, Neuro, Gastrointestinal, Micro and Plastic Surgery. As it is an established teaching hospital, I thought it would be a fantastic opportunity to increase my learning opportunities.

During my placement, I was able to work with the cardiothoracic surgical team Monday-Friday. The department

was split into a cardiac team and a thoracic team, both consisting of multiple consultants, registrars, residents and interns. The office in which the cardiothoracic team were based was shared with the respiratory team and therefore, as an added bonus, I was able to spend some time with them for the four weeks whilst I was there. This was actually very beneficial as I was able to appreciate

the physiological and surgical side of thoracics.

A typical day would consist of a mixture of multi-disciplinary team (MDT) meetings, teaching sessions, ward-based jobs, clinics and numerous theatre lists.

Days in the hospital were very flexible and I was made to feel extremely welcome. I was able to practice my history taking and clinical skills

(venepuncture, cannulation, examinations, etc), run parts of a pre-admission clinic (with supervision) and scrub into theatre. My theatre experience was really interesting and I was able to observe and assist in a number of procedures including: VATS lobectomy and metastasectomy, AVR and CABG. This was invaluable as I was able to practice my surgical skills and develop my confidence in dealing with the wider multidisciplinary surgical team. Fortunately, I was also able to join a number of on-call shifts which encompassed myself and an intern managing acute emergencies for cardiothoracics, respiratory and CCU. This was a thoroughly enjoyable and immersive experience and I learnt a great deal whilst actively getting involved.

During my elective period, I was able to explore the perceptions towards cardiothoracic surgery. Several studies have hypothesised that negative perceptions have led to a reduction in the number of applicants to specialty training in cardiothoracic surgery, using both quantitative and qualitative methods. A relative lack of undergraduate exposure may contribute to this and the use of early intervention, such as medical elective attachments, may



St Vincent's Hospital, Melbourne

prevent this downward trend. From my own observations, and speaking to medical students and surgeons during my placement, it was apparent that negative perceptions are playing a causative role in the reduction of applicants to cardiothoracic surgery, especially in those without a pre-existing interest in the field. A large array of negative perceptions are generated during the early years of a medic's career. As such, this has created a discouraging bias towards the specialty.

Working within the cardiothoracic surgical field shows a contrastingly positive environment, although the field still requires improvement to attract more applicants. Early exposure to the specialty may help to remove some of these negative perceptions. Similar opportunities, including work experience, clinical attachments and educational events may be of benefit in providing similar results and should be considered in demonstrating the wonders of cardiothoracic surgery.

Reflection

My elective experience in Melbourne was definitely memorable and I would highly recommend a placement in Cardiothoracic Surgery at St Vincent's Hospital. The placement reinforced my ambition for a career in the specialty and taught me plenty, from surgical technique to acute management of cardiothoracic emergencies. It was an opportunity to develop both professionally



and personally and has given me a base level of understanding, regarding cardiothoracic surgery, which I can develop throughout my career. My hope is to return to Australia in the near future, following my foundation years in Oxford, to gain further hands-on experience!

Take home messages

1. Cardiothoracic surgery is a vast specialty, plentiful in advancing technology - *far from a dying specialty!*
2. Negative perceptions associated with cardiothoracic surgery are dissonant and active participation and engagement within the field may help to overcome these.

3. Medical electives are a great tool in providing students with early exposure to the specialty and scholarships such as this will continue to encourage students.

Acknowledgments

I would like to thank everyone who has helped me during my elective period. In particular, I would like to thank my overseas supervisor Mr Gavin Wright and his team, who provided this memorable experience. Finally, I would like to extend my appreciation to Mr and Dr Ionescu and the SCTS for granting me this fellowship, which has allowed me to complete this fantastic opportunity. ■

Jerusalem Cardiothoracic Surgery Elective 2017

Eyal Ben-David, 5th year medical student, St George's



The Ein-Kerem campus of the Hadassah Medical Center is a beautiful hospital that overlooks the gorgeous hills of Jerusalem. One third of the patient population is orthodox Jewish and one third is Palestinian, the hospital truly abides by its mission – “to extend a hand to all, without regard for race, religion or ethnic origin”.

I spent six extremely educational weeks in the cardiothoracic surgery department. Many hours were spent in the operating theatre, assisting in a variety of interesting and complex operations in

cardiac, thoracic and paediatric surgery. I developed my surgical skills, learned the principles of cardiopulmonary bypass and myocardial protection and increased my understanding of many different operations. I found paediatric surgery to be particularly fascinating.

Whilst in Jerusalem, I became involved in a clinical research project evaluating the ability of 30-day mortality predictive models (Society of Thoracic Surgeons Predicted Risk of Mortality, Euroscore 2 and the Logistic EuroSCORE 1) to predict long-term survival following

cardiac surgery, working with a team of cardiac surgeons and statisticians. This work has been submitted to the American Society of Thoracic Surgeons annual meeting and is being prepared for submission to a high impact-factor journal. The work was also submitted to the 2018 SCTS annual meeting.

Overall, I had an incredible experience and am extremely motivated to become a cardiac surgeon. None of this would have been possible without the fellowship money which went towards my flights. I am extremely grateful to the SCTS. ■

SCTS Ionescu Medical Student Travelling Fellowship 2017: Health economics in the delivery of cardiothoracic services

I have chosen to conduct my elective placement in the southern city of Bangalore, a region experiencing exponential development over the past decade.



Chu Yik Tang, Barts and The London School of Medicine and Dentistry

With the increasing disparity in income over the years, health can sometimes be perceived as a luxury by the poor. With only 17% of the local population being privately-insured, an affordable healthcare delivery system ensures that patients do not end up in catastrophic debt incurred from seeking health treatment. Narayana Health is currently one of the lead providers of affordable healthcare in the region. It is a group consisting of 27 hospitals dotted across populous regions in India. Narayana Institute of Cardiac Sciences is a dedicated heart hospital which performs over 7000 cardiac surgeries annually. I had the privilege to speak to

the facility manager and the clinicians to gain an insider's view on the delivery of affordable cardiothoracic surgery.

Medical Equipment and Medicines

The main leverage that Narayana Health has is the size of the group in its entirety. The group of 27 hospitals holds strong purchasing and negotiation power over the manufacturers and resultantly, exorbitant medical equipment can be brought down to a relatively affordable price. It is also worth noting that medical equipment used at Narayana are from the same manufacturers supplying Europe and North America.

For example, the St. Jude's mechanical heart valve is often the prosthetic heart valve of choice despite the availability of low-cost local alternatives.

Blood test machines and the test reagents can be exorbitant. As common test results like blood gases are used to inform crucial treatment

decisions, most machines must be replaced before they even begin to malfunction. For massive centres like Narayana, the number of blood tests performed annually is enormous. To circumvent the costs of maintaining these test machines, Narayana Health obtains all the test equipment from medical companies on a rental basis instead. The hospitals are charged by the number of tests performed on the machines whilst the limited functional life of the machines will be a liability of the supplier.

Most of the surgical tools and equipment at Narayana Health are reusable. The metallic parts are autoclaved and returned to the hospital in a sterile drape package. Non-autoclavable parts like plastic materials are sterilised using ethylene oxide (EtO). This reduces the amount of disposable waste contaminated by biological fluids which are costly to process.

Narayana Health recognises pharmaceutical trademarks of quality assurance such as those by the Medicines and Healthcare Products Regulatory Agency (MHRA) and the Food and Drug Administration (FDA). Generic brands are usually preferred as they have similar efficacies of branded medicines at a fraction of the cost. However, in instances whereby on the recommendation from clinicians, certain branded medicines will be used instead if they are clinically superior to the generic counterpart.



*A busy market
in the city*



*My typical breakfast
in Bangalore*

The Student Experience

I arrived at midnight on a humid Sunday night. Fortunately enough, I was able to evade the busy traffic which clogs the streets of Bangalore at the break of dawn. Every morning, I would start my day with a dosa and a cup of chai at the hospital canteen before

changing into my scrubs. Often, I would find myself standing in front of the OT list and be left spoilt for choice, trying to decide which of the 30 cardiac surgeries I would like to join in that day. I scrubbed in for my very first cardiac surgery in India, when I was helping as the first assist in a chest closure after an off-pump CABG procedure. The surgeon talked me through each and every step and he also explained to me the nuances of different suturing techniques. It was a bit daunting initially, but I really got comfortable

participating in surgeries thereafter. On certain days, I spent time in paediatric cardiac theatres which started as early as 6.30 a.m. I also had the privilege to observe a septal myectomy led by the chairman and the executive director of Narayana Health, Dr Devi Shetty, when I went to the centre on the very first day. On days that I was not in theatres, I would often join the intensivist on their ward rounds and assist in bedside procedures. Every Wednesday, classes were led by the lead anaesthetists on various topics regarding cardiovascular sciences ranging from cardiac arrest protocols to monitoring right atrial function in surgery. I found communication with patients to be the most challenging as I do not speak the local languages. Most of the patients are multilingual and they could converse in Hindi, which is the national language, the local state language Kannada, and several other languages of the neighbouring states such as Tamil and Malayalam. Throughout the weeks, I consolidated my knowledge and skills in cardiothoracic surgery which I found absolutely worthwhile. I would like to convey my appreciation to SCTS Education for supporting my visit to Narayana Institute of Cardiac Sciences. ■

Mehra P. Only 17% Have Health Insurance Cover. The Hindu: National. 2016 Apr 9.

Human Resource

Narayana Health operates on a mixed salary model consisting of a fixed annual salary and a 'fee-for-service' component. The latter is added to incentivise the clinicians and to promote productivity. The health group also rarely employs locum staffs. From their local experience, they found that continuity of care is lacking as locum doctors and nurses do not look after the patients from admission to discharge. Also, the centre rarely conducts induction for the locum doctors as they are called in for emergency shifts and often at times the locums are unfamiliar with the working system of the hospital.

Facility and Maintenance

In temperate countries like India, ventilation and air-conditioning are crucial for the delivery of safe healthcare. Operating theatres and intensive care units need to lower the ambient humidity to 40% as to lower the rates of infection. Centralised ventilation is relatively costly to install but it is still the air-conditioning of choice at Narayana Health as it is more cost-efficient to maintain in the long run. Smaller air-conditioning units are used in private wards instead.

“On certain days, I spent time in paediatric cardiac theatres which started as early as 6.30 a.m. I also had the privilege to observe a septal myectomy led by the chairman and the executive director of Narayana Health, Dr Devi Shetty.”



*Me and my supervisor,
Dr Riyan Shetty who
has worked in the UK
in the past as an ECMO
fellow in Great Ormond
Street Hospital, London*

SCTS Ionescu Medical Student Travelling Fellowship 2017: Osaka University Hospital



Martyn Eckersley, Academic FY2, Southend University Hospital NHS Foundation Trust



Medical students from Osaka University Medical School, University of Malaysia Sarawak and Myself (2nd left), with Prof Yoshiaki Sawa - Osaka University Medical School Dean

Osaka University Hospital is a large tertiary centre located in the Suita district of Osaka. It has 50 inpatient beds, as well as a large ITU. It is a world leader in implantable ventricular assist devices (VAD) and regenerative medicine. Patients are accepted from throughout Japan from Hokkaido in the North to Okinawa in the far South West, as well as from abroad. It is also one of the 11 centres in Japan with a license to carry out heart transplant surgery.

The most prevalent cardiovascular diseases in Japan are the same as those in the UK. Including Ischaemic heart disease, atrial fibrillation, hypertension, cerebrovascular disease, peripheral artery disease and heart failure. Notably the incidence of aortic dissection is higher in Asian populations, with rates being 3 times greater than those seen in Europe. Whilst on my placement in Osaka I was able to observe a wide range of adult cardiac surgery including off pump CABG, combined AVR/MVR, and aortic arch replacement following dissection.

One difference between Osaka and my previous placements at Barts is the provision of Ventricular Assist Devices, a procedure not currently carried out at Barts Heart Centre. Whilst I was there I saw the implantation of a VAD with a postauricular

drive line, the first time this has been done in Japan. This can lead to reduced infection rates and also allows the patient to swim and take a bath, an important part of Japanese life.

A novel treatment that I observed at Osaka University Hospital was myocardial sheet transplantation. Skeletal myocytes are removed from a patient, stimulated to develop into cardiomyocytes and are finally implanted onto the patients epicardium. The desired effect being improved

left ventricular ejection fraction, and improved cardiac remodelling. Osaka University Hospital is one of the main centres of research in this field, and it was interesting learning about it and the exciting applications it may have in the future.

Finally, as mentioned earlier, Osaka University Hospital is one of the 11 in Japan that are licensed to carry out adult heart transplantation. Heart transplantation only began in 2005, with numbers exceptionally low until a change in the law in 2014. Numbers of transplants have remained low, despite a population of 120 million. In Japan only 51 heart transplants were carried out in 2016, this compares with 195 in the UK, a country with a population of approximately half that and 68 per day in the United States. The issues with low transplant numbers are common to both health systems and are largely due to low number of donors. Donor rates are lower in Japan than in the UK, perhaps for cultural reasons and also a patient's family can block organ donation even if the patient was previously registered as an organ donor, like in the United Kingdom.

Importantly my time in Japan was not all spent in the hospital. I was able to explore the magnificent sites such as Todaiji temple in Nara, Himeji castle, the shrines of Kyoto,

take in a rugby game in Tokyo, as well as the humbling peace park and ground zero at Hiroshima. Whilst intimidating and a bit overwhelming at first Japan is an incredible country, with distinct differences in their culture and attitudes as well as the healthcare system. I have thoroughly enjoyed my time in Japan and cannot wait to visit again in the future and I would encourage anyone else to do the same.

I would like to thank Mr and Dr Ionescu and the SCTS for their generous support, without which I would not have been able to complete this elective. ■



Non NTN Ionescu Fellowship 2017–18

This Fellowship gave me the opportunity to visit the two European centres for advancing my knowledge and exposure to the Video Assisted Thoracoscopic Surgery and advanced thoracic oncological procedures in Copenhagen and Paris.



Lakshmi Srinivasan MBBS, FRCS (Surg-in-Gen), FRCS (Cth)

I visited the state of the art facility for Video Assisted Thoracoscopic Surgery (VATS) and had the opportunity to work, for over a month, with Dr Rene Petersen and Dr Henrik Hansen who run the sub-specialist service in VATS at the **Rigshospitalet** in Copenhagen. This is a tertiary referral thoracic unit in Denmark and serves a population of 2.1 million including some of the other Scandinavian islands. It is highly accredited for popularising the anterior approach and has an established mentorship programme for the senior trainees and consultants at all levels to train in VATS techniques. It is a high volume centre with a throughput of 1200 major cardiac cases 75% of which are by VATS and 54% of the lobectomies done by VATS.

I had the opportunity of watching 25 major VATS cases of which 23 were

VATS anatomical lung resections including two segmentectomies and two thymectomies. The techniques were reproducible and standardised for the Unit. This gave me the opportunity to watch the techniques closely and learn how to plan, anticipate, avoid, and in some cases, manage intra-operative complications. Since my visit, I have developed my abilities further to be able to become independent operator in this technique. I am currently using VATS for lung resections in my current practice as Consultant in Thoracic Surgery in Stoke on Trent, UK.

During my stay I witnessed a wide variety of open surgery ranging from redo sternotomies for recurrent thymectomy with pericardial reconstruction to double sleeve resections and also pleurectomy and decortication for mesothelioma. I also had the opportunity to see trauma and bilateral lung transplantation with the on call team. This is the only centre for mesothelioma referrals in all of Denmark. Lead by Dr Jesper Ravn and Dr Bodil Brandt, they have a vast experience over the years in extra-pleural pneumonectomy and now pleurectomy & decortication for epithelioid mesothelioma.

tracheal sleeve resections. I also was part of major resections of sarcomatous deposits in the supraclavicular region and advanced lung cancer resection for upper lobe tumours involving the chest wall using the anterior Darteville approach and the Shaw Paulson posterior approach.

The inclusion of thoracic surgeons in the retrieval of donor organs (lungs), chronic pulmonary endarterectomy for pulmonary hypertension (CTEPH) and peripheral vascular operations being performed by the thoracic surgeons gives

the trainee versatility in surgical skills and the holistic approach to the speciality. The advanced oncological resection skills are put to use less frequently but are useful in the surgeon's armamentarium faced with locally advanced tumours which would otherwise have good results with R0 resection

in combination with neo-adjuvant and adjuvant therapy.

I thoroughly enjoyed my visit to the two hospitals and would like to thank the SCTS committee for having chosen me to be the recipient of the Non- NTN Ionescu Fellowship 2017. This Fellowship has broadened my knowledge in thoracic surgery and taught me advanced skills in minimally invasive surgery, advanced oncological surgery and management that I am able to apply to day-to-day practice as a thoracic consultant in the United Kingdom. ■

“My visit to the MarieLanne Longue Hospital in southern Paris lasted two weeks and I had the valuable experience to attend the pulmonary hypertension MDT and the regular lung cancer MDTs.”

My visit to the **MarieLanne Longue Hospital** in southern Paris lasted two weeks and I had the valuable experience to attend the pulmonary hypertension MDT and the regular lung cancer MDTs. I had the opportunity to work and learn from Professor Elie Fadel and his team. The hospital is dedicated to cardiovascular and thoracic surgery and is the tertiary referral centre for all pulmonary diseases from the peripheral hospitals. In addition to routine lung cancer surgery, I witnessed chronic thrombo-embolism and for the chronic pulmonary hypertension and

Ionescu SCTS fellowship: two milestone years

Anas Boulemden, FRCSEd (CTh), Senior fellow in cardiothoracic surgery, Nottingham Trent Cardiac Centre



If you ask me about my passions in life, I will not hesitate to mention cardiothoracic surgery, research and football! Combining and materialising these passions in one day came true during the Birmingham SCTS meeting (March 2016).

I recruited a team of doctors, admin staff and other health care professional from Nottingham Trent cardiac centre, and we went on to reach the final and win the SCTS football tournament in Birmingham, and I must say it felt surreal.

A few days later, I received an email from Letty Mitchell, and I was informed that my application for the Ionescu SCTS fellowship was successful and I was awarded £4000 to facilitate my professional development.

It was also the year when I performed my first full CABG case under Mr Richens supervision, a truly inspirational and instrumental trainer, and then my first

independent CABG case under Mr Szafranek, my current mentor who has been genuinely passionate about my training and who supported my application for the SCTS scholarship. It was a culmination of many years of dedicated training and learning opportunities in the east midlands region and in the Trent cardiac centre in particular.

Reading and being involved in research has been a passion of mine since my core surgical training days and I aspired to undertake a degree in research. Hence, the natural choice to undertake a part time Master research in applied health studies (DeMontfort University, Leicester). As outlined in the programme handbook, this MRes equips students with a holistic understanding of research, from planning to designing and formulating a research problem within an ethical and professional framework.

“Reading and being involved in research has been a passion of mine since my core surgical training days and I aspired to undertake a degree in research.”



Anas Boulemden, Adam Szafranek,
Trent Cardiac Centre,
Nottingham University hospitals

The programme comprises five modules and a dissertation:

Research Designs in Health

I learnt about the principles of research design and methods as well as an introduction to research ethics, i.e. how to design a survey. This module has a social element to it, which I found a bit challenging being a surgeon! It was an educational module, which culminated in learning how to write a research proposal as part of an assignment.

Research Dilemmas and Strategies

This module focuses on research strategies and philosophical assumptions. It also covers social sciences applied to the health field. I learnt more about the pros and cons of randomised controlled

trials, and their weakness regarding external validity and caution about generalisability of the results to the broader population.

Health Policy and Strategy

This was an interesting and very much relevant module. It was an opportunity to learn more about the NHS structure and policymaking challenges in the contemporary era. Understanding the politics, the fiscal aspect and research in the field of healthcare was a core part of this module.

Making Sense of Quantitative and Qualitative Data

This module was one of the main reasons I opted for this masters. The module had two main components: qualitative and quantitative. The qualitative part was a bit hard to digest, but there were some learning points there. It was interesting to learn about some ways used in analysing qualitative data, namely thematic analysis, which would be useful in conducting surveys (open questions

surveys in particular). The quantitative part of the module was very educational, and although I had some understanding of statistical methods and different tests used to analyse data, this module provided me with a better understanding of handling data and statistical methods used in analysing data, also, how to report the results using standardised approaches. This was an online module with excellent course material and SPSS datasets of hypothetical and real studies.

Advanced Statistics and Data Analysis

This online module built on the previous one. It extended my skills and knowledge

of numerical data analysis. It strengthened my knowledge of advanced statistical tests to address research questions with a better understanding of advanced statistical methods, namely multiple and logistic regressions and their appropriate applications.

Thankfully I passed the last assignment this month (July 2018). As part of my dissertation, I am currently working on a research project on simulation training in cardiopulmonary bypass. The project is at the proposal stage and awaiting ethical approval from De Montfort University. We plan to conduct the project in conjunction with the Trent cardiac centre in Nottingham.

Overall, this was an educational degree towards my professional development, and I feel more equipped to conduct and contribute in research in the future. I believe the knowledge that I acquired during this master will help me to contribute to research activities during my upcoming one-year fellowship in Belgium (Genk Cardiac surgery Unit) starting from September 2018, a fellowship with an emphasis on learning more about full arterialisation CABG and robotic surgery.

Throughout this programme, I had overwhelming support from the unit (Trent cardiac centre) and the University of De Montfort, especially doctor Sally Ruane who has been a dedicated mentor. ■

SCTS Annual Meeting 2018 – Student Leads behind the scenes

Devan Limbachia, Final Year Medical Student, University of Birmingham
Royce Law, Foundation Year 1 Doctor, EBH Training Region



Devan & Royce

It was our privilege to lead the student team at the SCTS Annual Meeting 2018 in Glasgow. This experience provided us with a great opportunity to work behind the scenes with Isabelle and the team and deliver what has been another fantastic conference.

What does the Student Team do?

The Student Team is a group of medical students and allied health professionals from across the country. As a collective, the group is responsible for the smooth running of scientific presentations, the large corporate exhibition, symposia and debates. Before the conference, the student team ensures that the venue is ready - this year the student team designed the wonderful SCTS shop with all the fantastic merchandise!



Throughout the conference, the student team is split and jobs are delegated. Students maintain the registration area, assist delegates and speakers as they enter the venue, maintain the speaker rooms and nursing forum and assist in the wetlabs, ensuring that they run smoothly. Keep an eye out at the next annual meeting for the student team, in SCTS polo tops, as they're always happy to help!

What did leading the Student Lead involve?

Leading the student team was a very immersive experience. We worked very closely with Isabelle, Letty and Tilly and the central conference team. We acted as a bridge between the student team and the conference team ensuring that all

aspects of the conference were under control. Not only that, but we ensured that this experience was educational and enjoyable for the student team members. We ensured that each student had an opportunity to attend talks they were interested

in and also get some hands-on experience in the wetlabs. We also ensured that during our time, we were able to interact with as many of the student and trainee delegates as possible. This enabled us to engage future surgeons, educating them about cardiothoracic surgery careers and enthusing them with the same passion for the field that we hold.

Reflection

Working within the student team is a fantastic way to develop both professionally and personally, and is yet another way in which the SCTS engages its student members. From networking with the multidisciplinary cardiothoracic surgical team to developing your own leadership, management and organisation skills, this experience has it all. If cardiothoracic surgery is a career that you are considering, we highly recommend getting involved with the student team. It is the perfect way to meet like-minded people, make new friends, and become part of an ever-growing student network! Take a look at <https://sctsed.org/students/> for more ways to get involved. ■



Travelling Fellowship:

A year in Sunnybrook

Bao Nguyen PhD FRCS, Clinical Fellow in Cardiac Surgery and Transcatheter Therapy – Toronto, Canada



“You are accepted” was how the correspondence reply began in April 2016. Of course, I was delighted to accept! And with that, the process of navigating College licensing and credentialing began in earnest with medicals for work permits and obligatory criminal record checks as one would anticipate for an international posting. I went out on my fellowship experience prior to obtaining CCT and the position was prospectively approved by the GMC, with support from the JCST. The administration was completed a year later in the summer of 2017 and I was ready to travel to Canada’s most populous city, Toronto, in the province of Ontario, to join the division of Cardiac Surgery at Sunnybrook Hospital. This is a

large tertiary-referral centre located in the leafy suburbs of mid-town Toronto and is a major teaching hospital of the University of Toronto. Sunnybrook is Canada’s largest trauma centre with 1300 beds and is an established veteran’s hospital and home to the Schulich heart centre. The Cardiac Surgery division within is productive and active, staffed by 4 surgeons, and is home to the largest TAVI program in Ontario run in conjunction with an excellent structural heart Cardiology service.

During the latter years of my training in the United Kingdom I developed an interest in aortic surgery and the management of valvular heart disease. This Cardiac surgery and Transcatheter Therapy Fellowship allowed the opportunity to pursue a rounded operative experience complemented by training in structural heart disease. Whilst working in the surgical division, I provided a 1:4 on-call

“To date, at Sunnybrook under supervision, I have performed 92 open-heart procedures as the primary operator.”

service with 2-3 days in the operating room and 1-2 days per week in the intervention suite, depending on service requirements and arrangements. The surgical expertise was provided by Professor Stephen Fremes who is the co-lead on TAVI with Dr Sam Radhakrishnan, cardiologist and director of the Cardiac Catheterisation Labs, alongside training with Dr Harindra Wijeyesundera, interventional cardiologist with a specific interest in transcatheter aortic valve implantation and coronary chronic total occlusions.

From a clinical perspective, I undertook this fellowship to develop specialisation in an area of cardiac surgery that I believe the United Kingdom will need in the long term: collaborative expertise in the totality of management of aortic and complex valvular heart disease. Surgical training needs additional focus on and the ability to deliver percutaneous treatment with both practical experience in the catheterisation lab as well as in the operating theatre - a clinician with experience and common convergence of knowledge and skills.

To date, at Sunnybrook under supervision, I have performed 92 open-heart procedures as the primary operator. This has included conventional as well as sutureless AVRs; on- and off-pump coronary artery surgical revascularisation as well as combined valve and grafts. In addition I have received training in a good range of more complex adult cardiac surgery with surgery for endocarditis; resection of cardiac tumours; redo cardiac surgery; major aortic procedures including aortic root and arch replacements; emergency surgery for aortic dissection; emergency surgery for trauma and ECMO support.

From an interventional perspective I have participated and performed all aspects of the TAVI procedure alongside two highly-

trained interventional cardiology structural heart fellows. This has included percutaneous access; crossing the native aortic valve; aortic root angiography; TAVI valve deployment, TAVI valve re-capture and post-ballooning of devices and native aortic valve valvuloplasty and percutaneous closure. I primarily learnt transfemoral percutaneous approaches to the aortic valve but have also gained experience in open cut-down approaches and trans-axillary access routes. At Sunnybrook I have been trained in 88 valve implants including the Medtronic Evolut R and Corevalves; Edwards Sapien S3 and XT; Symetis and recently exposed to the HLT Meridian device system. This was complemented by specific training from Medtronic for their devices, as well as with Claret for the Sentinel neuroprotection system. Furthermore, I performed a number of permanent pacemaker implants under surgical supervision.

During the year, I developed fluency with catheters, wires, dilators and imaging strategy in the delivery and deployment of percutaneous valves as well as familiarity in the peri-procedural assessment of valve dynamic function. Also during the year, as with all procedures, I gained a practical knowledge of dealing with complications of structural heart interventions ranging from valve migration; valve embolism; para-prosthetic leaks; ventricular perforation and vascular access complications. And, as always, it's the teamwork, camaraderie, and prepared

mindset that prevails. I was also witness to the first-in-Canada bioprosthetic aortic scallop intentional laceration to prevent coronary artery obstruction (BASILICA) procedure with TAVI performed by our team. In addition to the TAVI service, there is a strong parallel Mitra-clip

program at Sunnybrook for those readers who are interested in furthering their interventional skills in the mitral domain. It's been a real privilege to gain an alternative perspective on the practice of medicine and to be immersed in the Canadian surgical system.

As I am writing this in July 2018 during the final weeks of my Fellowship, regrettably, I am unable to accept the offer to extend the Fellowship for another year due to existing commitments in the UK. Nonetheless, and in all, I had a productive time at the Cardiac surgical division at Sunnybrook. I gained a balanced experience of both open heart surgery and interventional treatments for structural



Sunnybrook Hospital, Toronto

heart disease and have been witness to first-class Canadian medical care for patients.

To conclude, it is with the utmost gratitude that I would like to extend my thanks to the society for the careful consideration and support of this Fellowship experience. I would also like to thank my TPD Mr Yeatman and my UK mentor Mr Unsworth-White for the support during the year, and to acknowledge Messrs Lloyd and Dalrymple-Hay, our unit TAVI surgeons, who set me off on the structural heart pathway. It has been a pleasure to have been in Canada for two beautiful summers and one incredibly long and cold winter, in an amazing city. Come see for yourself. ■

My Dubai experience

Cindy Rodrigues Cleto, 5th year medical student, Royal Liverpool University Hospital



My elective took place in Al Jalila Children's Specialty Hospital, Dubai, UAE. I spent 4 weeks shadowing Dr Roberto Di Donato, a paediatric cardiac surgeon.

My day started at 7.30am with an MDT meeting followed by a variation of clinic, ward and ICU based work, including consenting patients for procedures. I was also involved in pre- and post-operative care, and observing various procedures in the cath lab and in theatre. The procedures observed ranged from

simple Atrial and Ventral Septal Defect repairs to the more complicated conditions such as Tetralogy of Fallot repair and Coarctation of the Aorta repair with patent ductus arteriosus ligation. This exposed me for the first time to neonatal surgery; as young as 5 days old, which was truly fascinating.

On one occasion, after a 16 hour surgery on a patient with Downs Syndrome, an ECMO machine was required. It was not only mine but also the hospital's first ECMO machine. It provided me with a

fantastic opportunity to observe how these machines are inserted and how they work, as well as the post-operative care and revision needed.

They also have an amazing anaesthetic team, unlike any other in the world, for extubating patients in the theatre room as common practice which was incredible to be part of.

Overall it was an amazing placement, providing me with a wealth of knowledge and experience and a hunger to continue to pursue this career. ■

Uniportal VATS training

- my experience at Shanghai Pulmonary Hospital; A recommended fellowship for trainees

M. Asghar Nawaz, Trainee University Hospital of South Manchester



Uniportal VATS / RATS is the future of thoracic surgery and perhaps we will be executing surgery without entering the ribcage routinely e.g. sub-xiphoid in the near future and eventually via the natural orifice (endobronchial resections) in the distant future. Uniportal VATS is feasible, practicable, doable, viable and transferrable as per personal experience having performed a few cases since my return from Shanghai. Although, this should be translated cautiously in the context that I have been trained in the busy North West region that performs large numbers of lung resections and I am privileged to be working with a good trainer who also has a track record in performing the highest number of lung resections in

the country. I was already doing VATS independently with the Copenhagen technique when I visited the SPH in March 2018. Since then I have performed a few uniportal VATS cases.

Whether you are in early years of thoracic training or post-CCT, a visit to the Shanghai Pulmonary Hospital is recommended. My fellowship training was self-arranged, self sponsored and self financed but worth every penny. It happened after I met Diego Gonzalez Rivas at VATS international in London who facilitated my visit to the SPH in March 2018 for two weeks. This is a very well organized and valuable training opportunity that reaps a lot of benefits. There are several reasons to recommend this fellowship as follows.

SPH is presumably the largest thoracic surgery department in the world accomplishing the highest number (n= 13326 during year 2017) of lung resections. The majority (80-90%) of cases are performed via VATS, predominantly the uniportal approach.

Fortunately, I observed a variety of case mix during my stay, including bilateral lesions operated in the same sitting via the same incision (sub-xiphoid approach), GGOs marked preoperatively with image guided guide wires routinely prior to operation,

and complex lung resections including sleeve and double sleeve (bronchial and vascular) resection operations performed with uniportal approach. My training was enriched by a full day hands on wetlab workshop at a great facility furnished like a modern operating suite to perform the uniportal cases under the supervision of Diego Gonzalez.

Arranging the fellowship is simple but you have to be in the queue and approximate waiting time is about a year.

Chinese people are very friendly and the SPH staff are really welcoming. They are keen to nurture professional relationships with medical visitors so I was welcomed with open arms and warm hearts. The chief of the department with his staff gave us a tour of the hospital including its ancient garden where we were informed about the history of the hospital. A typical day starts by an overview of the cases being operated on the day and updates were provided for postop patients. A course participant would then do a presentation on the topic of their choice and then we moved to the operating rooms to spend all day. The unit is equipped with 14 ORs and could perform as many as 60-70 lung resections per day primarily uniportal VATS technique. Notwithstanding my broad contextual experience I was astonished by a number of "wow moments" during my stay at SPH.

One day, Gening Jiang started the day with a lung transplant, then a tracheal resection and his third case was carinal resection on ECMO. I specifically adored the tracheo-carinal resection although all three operations were carried out in an impressive manner. Secondly, a surgeon superbly performed a uniportal left anterior basal (segment 8) segmentectomy followed by beautiful systematic lymph node dissection including 4L station with no node grasping technique. The utmost inspiring moment was observing the uniportal VATS double sleeve (Bronchial and Vascular sleeve) resections



that were done in an extremely proficient manner by an adroit surgeon, Jiang Lee (pictured). Jiang Lee explained to me about the uniportal approach, provided the tips and also kindly gifted me a compilation of his operative uniportal sleeve operations.

Overall my impression from this experience was fantastic and I would certainly recommend this fellowship. Since then I have performed certain uniportal cases and found this technique very doable for selective cases for the beginners, which could potentially be adapted routinely following the learning curve.

I observed an enormous sum of operations in a shorter space of time and I tailored my



training according to my personal needs. Being a higher trainee I was particularly interested in uniportal complex lung resections and was fortunate enough to have been with Jiang Lee watching him do the double sleeve resections. I am a senior trainee independently performing VATS anatomical lung resections with the Copenhagen Technique. Although I was very excited for the uniportal initially, I found within few

days that it seemed to be a normal standard technique and very quickly I moved to watch the complex cases that were amazing.

Now, something about Shanghai: Shanghai is a large, modern, supplemented by numerous skyscrapers metropolitan city of China. A few industry sponsored dinners were also arranged for participants as part of this course where I tested my taste buds, relished a variety of Chinese food and had the opportunity to socialize with local and global doctors. I thoroughly enjoyed my stay in Shanghai and explored the city over the weekends and evenings. The Bund (city centre with cruise), Shanghai museum, world financial centre (best bird's eye views of city), Yuyuan garden, Shanghai Circus and Shanghai maglev (world's fastest train) were among my favourites. The city has a highly urbanized and convenient public transport system including the modern underground trains. Language may be a bit of issue as not everyone speaks English but if you install a translator app on your phone, this may suffice. Getting a visa is easy and flights are very economical if booked in advance. ■

BISMICS meeting, Dublin 6-7th December 2018

Clinton Lloyd, Consultant Cardiac Surgeon, Derriford Hospital, Plymouth



The 3rd Annual BISMICS (British and Irish Society for Minimally Invasive Cardiac Surgery) Meeting will be held at the Convention Centre Dublin in early December this year.

Following the two previous meetings in Birmingham in 2016 and London 2017, the developments in this rapidly expanding area of cardiac surgery will again be discussed by many leading UK and European surgical experts. This year we are focussing on the 'Heart Team' and the benefits of the close interaction we have with our Cardiology colleagues and other members of the theatre team in the challenges of delivery of minimally invasive valve and coronary procedures in cardiac care. The roles of minimally invasive aortic valve surgery and TAVI, port access mitral surgery and new endovascular technologies, hybrid coronary revascularisation and the latest CTO techniques will be debated by surgeons and cardiologists from most of the centres in the

UK and Ireland and promises to be a lively and interesting meeting.

The meeting will be held in the magnificent Conference Centre Dublin and details for the meeting can be found at www.bismics.org.uk.

The BISMICS group is continuing to look at innovative ways to help shape the future of cardiac surgery in the UK by supporting surgeons embarking on new programmes and guiding trainees interested in developing their own training schemes. ■



Cardiothoracic training in the USA: A step-by-step guide

Training in the USA is appealing to many cardiothoracic registrars and soon-to-be consultants. A fellowship can widen ones experience and improve both a clinical and research portfolio.



Vijay Joshi, MBChB FRCSEd (C-Th), Mayo Clinic Graduate, Class of 2018

The process of applying for a formal position can be difficult with a lot of red-tape and obstacles to get around but with good preparation it is possible. This user guide should aid those wishing to pursue such a position abroad.

Before You Start

Before you commit to investing both time and money to completing the US licensing exams you should have a rough idea of the type of programme you are interested in. They can be either clinical or research based or a combination of the two. Funding is usually provided with formal attachments, usually 6 months to 2 years in duration. This will require a formal interview process following applications along with contribution to an on-call rota. The frequency of the call rota should be known prior to applying as this will give you an idea as to how much free time you will have away from patient care. Most major centres and universities will offer non-ACGME (American College of Graduate Medical Education) fellowships. ACGME fellowships are formal training positions that lead to certification by the ABTS (American Board of Thoracic Surgery). Unless you plan to start over and do a general surgery residency, these are not the positions to pursue. Each programme will have a programme director / liaison whom you should contact to find out if you are eligible, what the entry requirements are, and how exactly to apply. Programmes can be found by simple internet search, CTSnet jobs, fellowship

council, and by speaking to visiting consultants at conferences. Programmes are either mixed cardio-thoracic, pure cardiac, pure thoracic - with foregut (and maybe lung transplant), or pure transplant. It's important you know what you are signing up for before you start.

Visas

(Disclaimer: not official legal advice)

The visitor J-1 visa (training or research) is the visa that applicants most commonly apply for and is extendable for 8 years. It is sponsored by the Educational Commission for Foreign Medical Graduates (ECFMG). In order to get their sponsorship you need to complete the USMLEs. At least step one and two are needed before certification is granted. Some programmes/states may require you to have all three steps completed though. You will need to provide a letter of need from a special branch of the GMC. It is important to note that this is a visitor visa, meaning you need to return home for at least two years after completion and failure to exit one month after expiration can result in a temporary ban from the USA.

O-1 and H-1B visas are work visas and are more complicated. You may need the assistance of a US immigration lawyer for both, which may be expensive. You need to prove you are expert in your field and centre need to demonstrate need. The H-1B visa is subject to a cap, of which academic centres may be exempt. It usually is good for three years, extendable to six, and allows you to pursue immigration.

USMLEs

In order to get sponsorship from the ECFMG, the USMLEs have to be completed and the programme you are applying to has to be affiliated with a formal ACGME cardio-thoracic programme. Sponsorship will also make it easier for the programme to apply for a state license and a National Provider Identifier (NPI) number. This allows you to have physical contact with a patient and legally prescribe drugs.

First, your credentials will need to be validated. Diplomas, transcripts, and proof of identity documents are submitted to ECFMG. If these are in a foreign language they need to be translated. Most documents will need formal notarisation by a lawyer before being sent. After this you are issued a USMLE number and can start applying for exams on OASIS (On-line Applicant Status and Information System).

Step one is computer based and focuses heavily on basic sciences. Step two is two parts, a computer based test and a practical exam which has to be done in the USA. Step three is also a computer exam but in two components and also has to be done in the USA. I would recommend using USMLE world to revise along with the First Aid for the USMLE books available on Amazon. These exams are hard, cover all aspects of medicine, and require study commitment.

Once steps one and two are completed, an ECFMG certificate is issued and you can apply for a fellowship programme.

After Applications

You may be offered an informal visit. I would try and time this with the USMLE exams you are doing in the US as you have to fly there anyway. Scope out centres of interest and speak to residents and fellows there along with the consultants to see if it fits your needs and expectations.

If you are successful in your application, the training programme liaison will initiate a visa application through OASIS and will instruct you on what material you need to submit on-line. You should receive a formal offer letter outlining the specifics of the rotation and your salary. Once the visa

application is completed you will be issued a DS-2019 (your visa). This is then taken to the US consulate located either in London or Belfast for a visa stamp. You can now enter the USA.

After entering the USA, you need to have a record of your entry (I-94 form) which is available to print online. You're institution should have already started the process of applying for a state medical license and NPI number on your behalf. You will need to attain medical and dental cover as well as long term indemnity insurance. Most major institutions should provide this but it is important to check beforehand. A US driver's license would also be worthwhile

as private auto insurance on a foreign license is expensive. Accommodation is easily organized now thanks to the internet.

Good luck! It's worth it.

Useful Websites

CTSnet Jobs - <https://jobs.ctsnet.org/>

Fellowship Council - <https://fellowshipcouncil.org/>

ECFMG - <https://www.ecfm.org>

OASIS - <https://oasis2.ecfm.org/>

I-94 Website - <https://i94.cbp.dhs.gov/>

USMLE world - <https://www.uworld.com/>

Have your say – What are the key unanswered research questions in Adult Cardiac Surgery?

What is the National Priority Setting Partnership in Adult Cardiac Surgery?

We in the UK have the capacity to deliver a portfolio of pragmatic clinical trials that address key areas of uncertainty. The first step to achieve this is to identify the top 10 research priorities by undertaking a national consultation and priority setting exercise.

What is a National Priority Setting Partnership?

The James Lind Alliance (JLA) was established by the NIHR in 2004 to bring patients, carers and clinicians together to identify and prioritise the top 10 uncertainties, or 'unanswered questions', about the effects of treatments. The process is known as a Priority Setting Partnership, or PSP.

Who is involved?

The process is led by a multidisciplinary steering committee with an independent Chairperson appointed by the JLA. This ensures that the process is transparent. A number of patient and professional organisations are Partners within the process.

What is the scope of the Adult Cardiac Surgery PSP?

Indications for, as well as pre-, intra- and post-surgery care of patients requiring surgery for cardiovascular disease.

What is involved?

First, an initial survey asks each stakeholder what they consider to be the top three research questions in adult cardiovascular surgery. Next, the priorities where there is a clear knowledge gap are shortened to a long-list of research questions. These are sent in a second survey where stakeholders are asked to rank them in terms of priority. A final working group identifies the top 10 research questions.

How can I complete the survey?

Please complete the surveys on line by clicking on the following links to the HeartSurgeryPSP webpage: (https://www2.le.ac.uk/departments/cardiovascular-sciences/Heart_Surgery_Priority_Setting_Partnership),

Facebook page: (<https://en-gb.facebook.com/HeartSurgeryPSP/>)

or Twitter: (<https://twitter.com/HeartSurgeryPSP>)

What is the Timeline?

The first survey went live on the 19th March. The second survey is expected in the late autumn with results expected in Spring 2019.

Who has funded the PSP?

The PSP has been funded by Heart Research UK.

How will the PSP lead to a portfolio of clinical trials?

The next step is to work with funders to deliver a portfolio of clinical trials that address these 10 research questions, as part of a national research programme led by the SCTs.

Do you have questions about heart surgery that could be answered by research?

We want new ideas for research into heart surgery which could help patients in the future. We want to hear from ANYONE with an interest in improving heart surgery for heart surgery patients. We are the Heart Surgery Priority Setting Partnership, a consortium between the University of Leicester and the James Lind Alliance, funded by Heart Research UK.

YOUR FIRST QUESTION
E.g. How can heart surgery become less invasive? or there is a way of relieving bypass surgery from within the vessels so it can be done by angioplasty?

Ask us questions about anything related to heart surgery, e.g. diagnosis, treatment, care of people undergoing heart surgery etc.

Which of the following describes you?
 Doctor
 A patient who is waiting for, or has had, heart surgery
 A carer, friend or family member of someone who is waiting for, or has had, heart surgery
 A healthcare professional
 Other: _____

Healthcare professionals only, which best describes you?
 Doctor
 Nurse
 Allied Healthcare Professional

Healthcare professionals only, what is your role?
 Yes
 No

Have you ever been diagnosed with a heart condition?
 Yes
 No

How would you describe yourself?
 Male
 Female
 Other, please state: _____
 Prefer not to say

What is your ethnic group? (Please leave blank if you prefer not to say)
 70 +
 Under 20
 30 - 49
 50 - 69
 Prefer not to say

What is your age?
 70 +
 Under 20
 30 - 49
 50 - 69
 Prefer not to say

When you are finished, please return the survey to reception.
Alternatively, please complete online by visiting: <https://le.ac.uk/heart-surgery-pssp>

Follow us: @HeartSurgeryPSP

The 2017 IntraClude fellowship in minimally invasive cardiac surgery



Bilal H Kirmani, Consultant Cardiac Surgeon, Liverpool Heart and Chest Hospital

In August 2017, having just completed my national training, I became the first minimally invasive fellow funded by Edwards LifeSciences. In doing so, I undertook the first formal industry funded minimally invasive cardiac surgery fellowship in the United Kingdom, working with Joseph Zacharias in Blackpool.

The idea, of course, raised eyebrows.

A minimally invasive fellowship in the UK?

In Blackpool?! Innovations in cardiac surgery are seldom welcomed with open arms and the concerns were predictable and pragmatic. Would there be a great enough volume? In the current climate for UK surgeons, would I be allowed enough hands-on experience to make progress? Was there even sufficient expertise nationally to start training our own? These seemed legitimate questions to ask before embarking on six months of post-CCCT training and I knew that the answers could only ever be found by attempting a UK based fellowship. In the privileged position of having a substantive post to go back to after the six months were over, I felt I had nothing to lose.

During my twenty four weeks at the Blackpool Victoria hospital, I participated in 115 cases, of which just under half were minimally invasive. Crucially, for a British trainee, I wanted to keep my general cardiac skills “ticking over” and was therefore provided ample opportunity to undertake general cardiac cases with some unsupervised lists: coronary artery bypass grafts (including some total arterial and off pump grafts), open mitrals with arrhythmia surgery and re-do endocarditis patients.

More importantly, however, I was incrementally exposed to complex minimally invasive aortic, mitral, tricuspid surgery and endoscopic conduit harvest. From very little experience of minimally invasive surgery, I progressed to independent setup including the introduction, deployment and management of the IntraClude intra-aortic clamp and the access to the mitral and tricuspid via the right chest. This naturally graduated to intra-pericardial dissection,

atrial closure and eventually valve assessment and placement of annular sutures.

Concurrently with the totally endoscopic mitral surgery (predominantly with the IntraClude, but also on occasion with a clampless fibrillating heart) I was also trained to undertake minimally invasive aortic valve replacement via a right anterior thoracotomy (ART). Having already undertaken some hemi-sternotomy aortic valve replacements at my alma mater in Liverpool, this was an additional experience that I had initially been sceptical about. Convinced by Joe to give it a chance, I did perform one and was pleasantly surprised by the access and the patient’s prompt and painless progress to discharge (see picture of patient on day 4).

We were sometimes operating on two minimally invasive cases a day. This seemed to provide me with the volume required to build experience quickly – perhaps not the volume that might have been possible in the large German or North American centres that usually host British fellows, but with plenty of hands-on in setting up and components of the operations.

Where I wasn’t in theatre, there was strong academic direction from the consultants. During the six months I spent at Blackpool, I had six national presentations and four international presentations accepted. One of these caught the eye of a key European minimally invasive surgeon who proctors and lectures widely on the IntraClude and is currently being adapted for a multi-centre international study on the technique.

Whilst in Blackpool, I also recruited patients for the UK Mini-Mitral Trial during clinics and was actively involved in the research process for this. This collaboration with Enoch Akowuah at Middlesbrough led to my involvement in another planned randomised controlled trial in cardiac surgery and my invitation to deliver a talk at

the SCTS University this year at the national conference in Glasgow. The academic and research opportunities, not to mention the networking, from this short fellowship have, without question, been excellent.

“But did you actually get to *do* any mini-cases?” I have been asked several times since the fellowship ended. Yes, I did. Aside from the procedural parts that many international fellows aren’t allowed to undertake, such as placement of neochordae or annular sutures in mitral valves, I did a redo-tricuspid using a totally endoscopic approach; a right anterior mini-thoracotomy aortic valve replacement and progressed to independent, unsupervised endoscopic vein harvest. In addition to the crucial skills of identifying, managing and setting up these cases, this fellowship has provided me with the foundations I need to help me realise my goals. To my mind’s eye, that’s an excellent result from the first formal minimally invasive training fellowship in the UK. With the exponential increase in interest in Minimally Invasive Cardiac Surgery I hope more trainees can look to doing their fellowship in the UK with the help of industry partners. ■



I performed a hemi-sternotomy aortic valve replacement and was pleasantly surprised by the access and the patient’s prompt and painless progress to discharge

Gliding; something to do on retirement

Nicholas J. Odom, Consultant Cardiothoracic Surgeon, Waikato Hospital, Hamilton, New Zealand



I would like to share with you something that I have very recently started doing, namely gliding. I have always enjoyed the outdoors. My main outdoor recreation during most of my career was hillwalking (or “tramping” as the kiwis call it). I sometimes used to stop my car when out in the countryside and watch the gliders taking off and landing at Camphill in Derbyshire, or at the Long Mynd in Shropshire. At that time however I had neither the time nor the inclination to become actively involved. Having recently retired I now have more time. Sadly my leg muscles are not as strong as they were, I am developing arthritis under my kneecaps and in my left hip, so I simply do not enjoy hillwalking any more. I sometimes go sailing but I am finding that lifting the boat on and off the trailer is becoming too much for my back.

Piako Gliding Club flies from an airfield a few kilometres east of Hamilton. It has been voted the friendliest sports club in New Zealand. Having experienced a few trial flights I decided to join the club and start training as a glider pilot. Flying in a glider is nothing like being in a powered aircraft. The views through the perspex canopy are spectacular and the sense of space and freedom is highly addictive. Controlling a glider requires one to develop a new set of sensory and motor

skills; it is a bit like trying to steer a boat in a lumpy sea, nothing like steering a car. The usual method of launching is aerotow, the glider being towed into the air by a light aircraft. The coordination required during the aerotow is particularly difficult to master, much more so than turning or landing.

Having mastered the basic controls there are numerous other things to learn, both in the air and on the ground. When gliding one cannot be thinking about anything else. One needs to be aware of the wind and its effects at different altitudes, particularly when coming in to land. Navigation and radio skills are needed; the mantra “aviate, navigate, communicate” spells out the order of priorities when flying.

Understanding the atmosphere then comes into play. In order to remain aloft, gliders require currents of upward moving air. The usual method is “thermaling”, circling the glider in an upward air current. Finding thermals requires both skill and luck; one learns to look at cloud formations with a critical eye. A few kilometres northeast of the airfield is a long range of hills called the Kaimai. When the wind is from the southwest gliders can slope soar along the front of the Kaimai ridge, gaining several thousand feet in height and remaining airborne for hours. Flying back to the airfield against a strong headwind can be hairy; this may result in having to land in a paddock (kiwi for “field”), a skill I have yet to master.

I am particularly impressed with the club’s commitment to training and safety. Many of the instructors are of a similar age to me but most have been gliding for several decades. There is a comprehensive syllabus to master and various levels of competence to be achieved. Gliding accidents are extremely rare but when they do occur they can be catastrophic, often fatal (I once repaired a ruptured aorta in a glider pilot who crashed in Derbyshire). Most accidents result from inexperience and bad judgement, very similar to surgery really. There are many parallels between glider training and surgical training.

Learning new skills is important throughout life, to keep one’s brain active and deter senility. It will be a while before I get to fly solo and I am in no rush to do so. I am simply enjoying learning to fly. A fair amount of time is spent helping on the airfield with launching, logging flights, moving gliders on the ground or simply chilling out. Moreover, it is a pleasant outdoor environment that has enabled me to make a new set of friends in the Piako Gliding Club. ■





Quality of life after valve disease: a photographic experience, with Heart Valve Voice

Christina Bannister, Nurse Case Manager in Cardiac Surgery at Southampton General Hospital and Nursing and Allied Health Professional Representative for SCTs



It's been a busy year so far at Heart Valve Voice, the charity dedicated to raising awareness of the symptoms and need for early detection and treatment of heart valve disease and an organisation that I have been an ambassador for the last few years. Their work is close to my heart as a Nurse Case Manager in Cardiac Surgery at Southampton General Hospital where I work with patients with heart valve disease every day and believe that more awareness is needed around this potentially fatal disease.

As an ambassador for Heart Valve Voice I have worked on events, conferences, working groups and provided counsel and knowledge and most recently, I have been asked to be on the selection panel for their first photography competition. The Patient Portraits: A New You Photography Competition in partnership with Heart

Valve Voice and The Royal Photographic Society is aiming to help raise awareness of heart valve disease, its prevalence and symptoms and to educate audiences that with appropriate treatment, patients can return to a good quality of life.

The competition was open to amateur photographers from 12 regions across the UK, Scotland, Ireland and Wales and we received so many brilliant entries. While it was

so difficult to choose, we managed to agree on the winners from each region. For this second phase of the competition, each winning photographer has been paired with a local heart valve disease patient and has been tasked with creating a

photographic documentary capturing what life after heart valve disease means through the eyes of the patient. The documentaries will be displayed in the Houses of Parliament this autumn where we will select an overall winner.

The competition has received some amazing support from a number of places like partner organisation, The Royal Photographic Society who have not only given their stamp of approval but have also provided promotional support advertising the competition throughout their communication channels. Another channel of support for the competition has come from MP Steve McCabe from Birmingham, a former valve disease patient himself and someone who is keen to get behind the work that Heart Valve Voice does. "I am living proof that with early diagnosis and proper treatment, these conditions needn't be debilitating," said Steve.

Recently, one of my fellow selection panel members, Alex Rotas, Professional Documentary Photographer met with Steve to take some photos of him living his best life after valve disease treatment. The photos not only showed Steve going about his busy day as an MP but were a great example of how life doesn't have to end with a valve disease diagnosis. Since Steve has been treated he has



“The Patient Portraits: A New You Photography Competition in partnership with Heart Valve Voice and The Royal Photographic Society is aiming to help raise awareness of heart valve disease.”

gone on to achieve amazing things, “Steve was such a lovely and informative host,” recalled Alex. “My remit was to show that there’s life after heart valve disease, and with Steve’s help I think I managed to demonstrate that. Steve was representative of not only life – but energy, drive, focus and an abundance of joy.”

Steve, as well as the patients involved in the photography competition, and many of the patients that I have worked with heart valve disease are all now able to get the most out of their lives either through going back to work, spending time with their families, getting involved in activities or getting out and seeing the world. Things they would not be able to do without timely diagnosis and treatment. This is why the work that Heart Valve Voice does through events like the photography competition or their upcoming European Heart Valve Disease Awareness day are so important in helping to raise awareness. They are celebrating the ‘power of positive

ageing’, which just so happens to be the theme for the awareness day, through heart valve disease treatment and what can be more positive than getting to have more years to do the things you want to do?

The regional finalists are well underway now photographing their patient models going about their active everyday lives and living them to the fullest after their heart valve disease treatment. It is going to be a real pleasure to have the chance to look through all of the amazing photographic documentaries to choose the national winner. Valve disease patients who have been treated and have gained back their quality of life are truly inspirational and prove that there is real power behind positive ageing.



Alex Rotas, Professional Documentary Photographer, met with MP Steve McCabe from Birmingham to take some photos of him living his best life after valve disease treatment

To find out more about the Heart Valve Voice visit their website: www.heartvalvevoice.com, to see the photographs of our regional winners visit the Patient Portraits website: <https://heartvalvevoice.com/photo-competition> and to learn more about the upcoming European Heart Valve Disease Awareness Day on 8 September visit the website: <https://heartvalveday.eu> ■

Upcoming Courses – 2018

11th September	Introduction to Cardiothoracic Surgery Course Coventry Education Centre
29th September	ST7B – Clinical examination course for FRCS (C-Th) Papworth Hospital, Cambridge
19-21st November	ST3A – Introduction to Specialty Training in Cardiothoracic Surgery Course Location to be confirmed
27-29th November	ST4A – Core Cardiac Surgery Course Location to be confirmed
4-5th December	ST8B – Professional Development Course Pinewood Campus, Wokingham



Aortic Dissection Awareness campaign to improve diagnosis and treatment

SCTS members need to prepare for the impact of a major campaign this year to raise awareness of Aortic Dissection, which it is expected will improve diagnosis of AD and increase the number of referrals for surgery.



Christina Bannister, Nurse Case Manager, University Hospital Southampton NHS Trust

The 'Think Aorta' campaign is being led by patient association Aortic Dissection Awareness (UK & Ireland). Mr. Gareth Owens, Chair of the association, addressed the plenary session of the SCTS annual meeting in Glasgow last March.

'Think Aorta' is a collaboration between Aortic Dissection Awareness (UK & Ireland), SCTS, RCEM and Heart Research UK. Working together, a team of patients and clinicians have created educational resources about Aortic Dissection in the form of a learning podcast and a 'Think Aorta' poster, to increase awareness and early diagnosis of patients presenting with Aortic Dissection. SCTS was represented by Miss Deborah Harrington, Consultant Cardiac & Aortic Surgeon at the Liverpool Heart & Chest Hospital.

The podcast has attracted lots of positive comment since its launch in April and has been downloaded over 5,000 times.

In July, the campaign will follow the success of the podcast by distributing 'Think Aorta' educational posters to every A&E department in the UK & Ireland. Posters will also be provided to cardiac surgery centres upon request.

Catherine Fowler, Vice-Chair of AD Awareness (UK & Ireland), explained: "Aortic Dissection is an emergency that is often fatal when missed. Currently, a diagnosis of Aortic Dissection is considered in less than

half of patients who present with the condition. One third of patients with Aortic Dissection are actively treated in the Emergency Department for an incorrect diagnosis. The 'Think Aorta' campaign aims to tackle this problem. It was inspired by my Dad, Tim Fleming, who died of an Aortic Dissection in 2015 after being sent home from A&E with an incorrect diagnosis of gastroenteritis. In common with many other family members of patients who have died from a missed diagnosis of Aortic Dissection, this heartbreak drives us to want to make a change. We are delighted to have the full support of SCTS, RCEM and HRUK in addressing a problem that the professionals tell us can be solved by increasing awareness and educating clinicians about Aortic Dissection. We would like SCTS members to help us spread the 'Think Aorta' message."

You can download the 'Think Aorta' resources here: www.thinkaorta.org. The team at Aortic Dissection Awareness (UK & Ireland) encourage you to share them widely.

The 'Think Aorta' campaign will dovetail nicely into Aortic Dissection Awareness Day 2018, to be held in London on 19th September. Each year, AD Awareness (UK & Ireland) chooses an Aortic centre that is doing excellent work in the field and awards them the honour of hosting this annual flagship event. This year the honour goes to Barts Health NHS Trust.

Over 200 AD survivors, family members, clinicians and other healthcare professionals will gather

in the historic Great Hall at Barts for a day of inspiring presentations and discussions about the state-of-the-art in treating Aortic Dissection. The theme of the day is 'Caring for the Whole Aorta'.

In the morning sessions, leading specialists and one of their patients will walk through the entire patient pathway for Aortic Dissection, from genetics and screening, through diagnosis, surveillance, BP management, cardiothoracic and vascular surgery, to recovery and follow-up. In the afternoon, the focus will shift to improving standards in the diagnosis and treatment of Aortic Dissection across the UK & Ireland. SCTS President Mr. Richard Page will give a keynote address about implementing the new NHS Service Specification for Thoracic Aortic Dissection.

Event invitations will be posted out shortly. SCTS members who have not already registered their interest in attending can do so via the thinkaorta.org campaign website.

"We are determined to make 2018 a year of change in the diagnosis and treatment of Aortic Dissection" says Gareth Owens. "We have built excellent working relationships with SCTS, RCEM, the Royal College of Radiologists and a number of leading Aortic centres to enable us to do this. Our membership also includes over 220 Aortic Dissection survivors and through them we have links to every Aortic surgery centre in the UK. The 'Think Aorta' campaign and Aortic Dissection Awareness Day on 19th September are two major initiatives that we believe will start to alter the landscape for Aortic Dissection patients in the UK & Ireland. I expect that this will create an increase in Aortic Dissection cases for SCTS members and we are working with the Society to measure this impact." ■





AORTIC DISSECTION AWARENESS DAY UK

DATE: September 19th 2018

VENUE: Great Hall, Barts Hospital

HOST: Mr. Harpaul Flora

THEME: Caring for the Whole Aorta

EVENT PROGRAMME v1.0 – 24/07/18

Session key:

	Expert speaker
	Patient case study
	Interactive session
	Admin session
	Break

MORNING SESSION	
9:15	Arrival & coffee
9:45	Welcome & Introduction to the day <i>Mr. Harpaul Flora & Gareth Owens</i>
10:00	Genetic Factors in Aortic Dissection: Treating the whole family <i>Dr. Bejal Pandya, Consultant in Congenital Heart Disease, Barts Heart Centre</i>
10:15	Aortic Dissection in Children <i>Dr. Elena Cervi, Consultant in Inherited Cardiovascular Diseases Great Ormond Street Hospital for Children</i>
10:30	The surveillance of Aortic Dissection patients <i>Dr. Kate von Klemperer, Consultant Cardiologist, Barts Heart Centre</i>
10:45	Managing Risk Factors for Aortic Dissection: Difficult blood pressure <i>Dr. Mel Lobo, Consultant Physician & Director of the Barts Blood Pressure Clinic</i>
11:00	Case Study (part 1): Genes, childhood and life before Aortic Dissection <i>Gareth Owens, Aortic Dissection Survivor</i>
11:15	Patient Q&A with session speakers <i>Chair: Mr. Sandip Sarkar, Consultant Vascular Surgeon, Barts Health NHS Trust</i>
11:30	Coffee break
11:45	Cardiothoracic surgery for Aortic Dissection – the state-of-the-art <i>Prof. Aung Oo, Professor of Cardiovascular Surgery, Barts Heart Centre</i>
12:00	Vascular surgery for Aortic Dissection – the state-of-the-art <i>Mr. Harpaul Flora, Clinical Director of Vascular Surgery, Barts Health NHS Trust</i>
12:15	The role of Stents in Aortic Dissection <i>Dr. Matthew Matson, Clinical Director of Imaging, Barts Health NHS Trust</i>
12:30	Case Study (part 2): Dissection, Surgery & Recovery <i>Gareth Owens, Aortic Dissection Survivor</i>
12:45	Patient Q&A with session speakers <i>Chair: Mr. Harpaul Flora, Barts Health NHS Trust</i>
13:00	Lunch & networking

Obituary: Andrew Thomas Forsyth

5th June 1945 – 23rd November 2017

Roger Franks, Retired cardiothoracic surgeon



Andy was born in East Melbourne into a medical family. His father was a respiratory physician and his mother a nursing sister. He was the eldest of four children and the only son. In his youth, he was a keen sportsman and had to be dissuaded from becoming a professional Australian Rules Football player. He qualified from Austin Hospital Medical School (Melbourne) in 1970, having been in that institution's first intake of medical students.

He began his early surgical training in Melbourne and it was here that he married his first wife with whom he had two children. He trained first in general surgery and then as a cardiac surgical registrar at St. Vincent's Hospital and the Royal Children's Hospital, Melbourne. In 1979 he and his family moved to England to continue his specialist training (having told his mother he would only be gone for 6 months!).

His first appointment was at the Royal Brompton Hospital as a senior house officer. During this time, he taught his seniors a few surgical tricks and for a short period ran his own lists. Within six months he was made a registrar and over the next two years he worked at Brompton, Harefield and the National Heart Hospitals.

In 1982 he was appointed to King's College Hospital as a consultant where he committed himself to his two professional passions – arterial grafting and data

collection. He had a strong belief in the long-term patency of arterial conduits and this was reflected in his practice. In addition to using both internal thoracic arteries, he also routinely used the gastro-epiploic artery and radial arteries. He was not the only Australian to hold these views, but he was the first cardiac surgeon in England to perform total arterial revascularisation for his patients and he encouraged his colleagues and trainees to do the same. From a trainee's perspective, King's became the place to go to learn arterial grafting.

Andy's interest in data collection stemmed from his view that no surgeon should operate on patients and not know the long-term outcome. With the help of his son, who was a teenager at the time, he developed the first comprehensive cardiac surgical database in 1988 and by 1990 this dataset had been incorporated into the newly available PATS software. It was this dataset which was used to form and develop the first national dataset for our speciality

In 1999 he opened the Sussex Cardiac Centre in Brighton. Many years of planning had gone into this and it wasn't viewed favourably by everyone. However, he stuck with his view of providing a local service for the people of Sussex. He moved down to Sussex with Ruth (whom he married in 1989), appointed the staff and performed the first operation in June 1999.

From 1999 till his retirement, Andy oversaw the maturation of the Sussex Cardiac Centre into a functional tertiary centre and an early adopter of many new innovations in adult cardiac surgery. He created a sense of belonging for everyone who worked with him and close co-operation between surgeons and cardiologists which continues to this day. He was an excellent trainer and many surgeons from all over the world trained under him. He provided both technical and pastoral mentorship and gave juniors the confidence to make their own decisions.

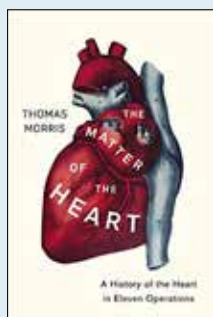
Following his retirement in 2006 he continued to work in the unit ensuring that the database was maintained accurately with full clinical oversight. He remained a visible figure throughout the unit and keen to keep abreast of everything and everyone in the unit.

Outside work he was a keen sailor, and along with Ruth he sailed his boat 'Bye-Pass' at every opportunity he could. He never lost his enthusiasm for sport and delighted in Australian victories. He always felt a close affinity to Scotland and he had started planning a move to Fife. He and Ruth bought a house in Belbo Craigs, near St. Andrews and it was here that he spent his final months surrounded by his family.

Andy is survived by his children and two grandchildren. He died from metastatic renal carcinoma whilst looking out at the view that he had always wanted. ■

Book review

Jules Dussek, Retired surgeon



Title: The Matter of the Heart
Author: Thomas Morris
Publisher: The Bodley Head

A neighbour who has had coronary surgery introduced me to this book which had impressed him and he wanted my opinion of it. Written by a BBC journalist and producer with no apparent connection with surgery, and with a subtitle 'A history of the heart in eleven operations.' it wasn't enticing, but a review on the cover described it as 'Pulse-thumpingly gripping, will be enjoyed by anyone'. I was wrong. I was enthralled right from the first page of the introduction. It isn't a history of the heart in eleven operations, 'chapters' would be better as they range from blue babies through valve surgery, the invention of cardio-pulmonary bypass right up to robotic surgery, transgenic pigs and TAVI.

Chapter one opens with a poetic description of a wood in the Cotswolds, just off the Fosse Way, where he says modern cardiac surgery was born, a provocative statement until you realise that this is where the US military established a field hospital for thoracic injuries, and it was here that Dwight Harken, operating in a corrugated iron hut removed bullets and shell fragments from 134 casualties with no mortality. Morris' description of one operation, a third attempt to remove a shell fragment from within a beating heart, is indeed gripping, both for a cardiac surgeon who can empathise or

a layman who will understand the tension and skill involved. Later in the book on the way to watch a TAVI at St Thomas' hospital, he gives Pevsner's opinion of the white-tiled modernist complex, the new wing, before excitingly describing the operation. Then follows a history of interventional cardiology. To my surprise, I had no idea that Lindsey Allan in 1989 had performed balloon dilatation of stenotic aortic valves in utero at Guy's Hospital while I was working there.

The story of the first Blalock operation is possibly well known but written for a lay reader it is fascinating. The refusal of the first anaesthetist to give the anaesthetic, Denton Cooley's opinion that it would be a disaster (he was an intern at the operation), the invaluable input by Vivien Thomas and Helen Taussig, the tension surrounding this controversial procedure and the operation itself are all vividly described.

It is fascinating to read of the origins of coronary surgery, that Sones discovered by accident he could inject the coronary artery safely with contrast, and that Favaloro was in the same hospital was the start of the biggest development in cardiac surgery. (I remember Alan Yates at Guys Hospital saying to me after Donald Ross' first few cases "it'll never catch on").

I've been associated with cardiothoracic surgery from being a student on Lord Brock's firm in 1964 to retirement in 2003. The 1960's and early 70's were amazing, with new procedures being invented, often abandoned and what would now be considered an incredible mortality and morbidity. If there is a criticism of the book, it is that Thomas Morris presents a slightly sanitised review. In the start of the book he explores the mentality of cardiac surgeons. He has interviewed many. Each of the eleven chapters has about 100 references and there is a comprehensive bibliography.

If much in this very readable book is common knowledge to a cardiac surgeon, it would make an excellent gift for family and friends as it gives real insight into the speciality. ■

• NEW CONSULTANT APPOINTMENTS

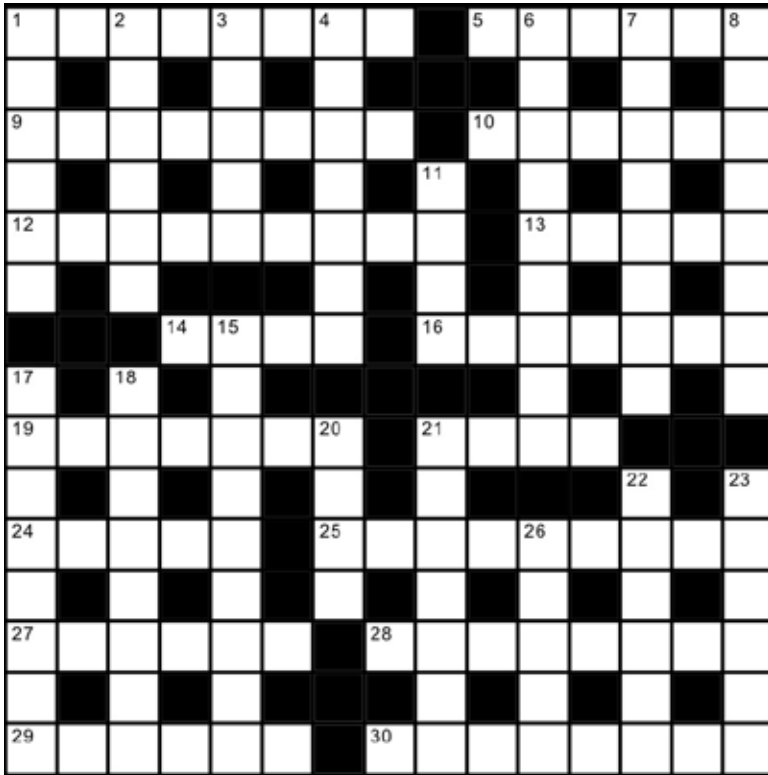
Name	Hospital	Specialty	Starting Date
Lukacz Veres	Southampton General Hospital	Thoracic	January 2018
Shakil Farid	John Radcliffe Hospital, Oxford	Cardiac	March 2018
Vivek Srivastava	John Radcliffe Hospital, Oxford	Cardiac	March 2018
Mohammed Fiyaz Chowdhry	Glenfield Hospital, Leicester	Thoracic	May 2018
Syed Suhail Ahmed Qadri	Castle Hill Hospital, Hull	Thoracic	May 2018
Vasilieos Tentzeris	Castle Hill Hospital, Hull	Thoracic	May 2018
Sanjay Asopa	Derriford Hospital, Plymouth	Cardiac	August 2018
Antonella Ferrara	Leeds General Infirmary	Cardiac	TBC

• OTHER APPOINTMENTS

Name	Hospital	Appointment	Starting Date
Fabio Bartolozzi	Galway University Hospitals, Ireland	Locum Consultant	October 2017
Alia Noorani	King's College Hospital, London	Locum Consultant (Adult Cardiac)	November 2017
Liesbeth Desender	Guy's Hospital, London	Locum Consultant (Thoracic)	January 2018

Crossword

Set by Samer Nashef



Across

- 1/5 Grey skirt in the drawer (8,6)
- 9/10 Moving to the next line in marriage starts with a 90% reduction to income (8,6)
- 12 Henry Holmes into being stripped of registration (9)
- 13/23d Herr Sanger's changed hands for the gang (5,6)
- 14/21d A couple is firm that a chaperone is not required (4,7)
- 16 May be a hair shirt for the last to leave town (7)
- 19 Plots for dogs (7)
- 21 Money hideout reported on the radio (4)
- 24 Start to eat in pleasant setting with part of the family (5)
- 25 13 feature from crazy backwards people (9)
- 27 Cake with calories out? Not so! (6)
- 28 It's good in youth then to have frivolous talk (8)
- 29 West End in messy, chaotic organisation (6)
- 30 A lens, say, to capture you, old girl (8)

Down

- 1/17 Dogs and poultry catch up, but not in the main text (6,8)
- 2/18 Highlights our problem in Arab love for Israel's destruction (6,8)
- 3/26 Cold, cutting inactivity (10)
- 4 Seraglio almost built here? (7)
- 6 The Alps expedition ends badly for them (9)
- 7 Briefly hint flat is a suitable location for nightlife (8)
- 8 They may be poets who keep an eye on the ball (8)
- 11 See 20
- 15 Wine drinking lover turned into a beast (9)
- 17 See 1
- 18 See 2
- 20/11 Dodge has broken down despite circling soft-top (4, 4)
- 21 See 14 Across
- 22 Bug scoundrel among spies (6)
- 23 See 13 Across
- 26 See 3

Please send your solutions to:

**Isabelle Ferner, SCTS, 35-43,
Lincoln's Inn Fields, London WC2A 3PE**

The first successful solution received will win either a bottle of champagne or fine olive oil.

Congratulations to Jonathan Hyde for winning the January bulletin crossword competition (right) for which he received a bottle of champagne.



Recent Retirements

Joseph F Khalil-Marzouk
University Hospital Coventry and Warwickshire November 2017

Alan Bryan
Bristol Heart Institute October 2018

Correction:

In the February 2018 edition of the bulletin, an article was written by David K C Cooper about Christian Barnard. Regretfully, the article implied that it had been authored by Richard Page. Please note that the photo was of the author, David K C Cooper

Departing Officers

- Graham Cooper** - President
- Richard Page** - President-elect
- Simon Kendall** - Honorary Secretary
- Narain Moorjani** - Joint Education Secretary
- Andrew Owens** - Elected Trustee
- Juliet King** - Elected Trustee
- John Dunning** - Elected Trustee

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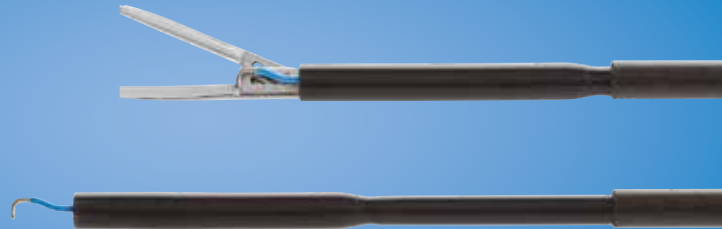
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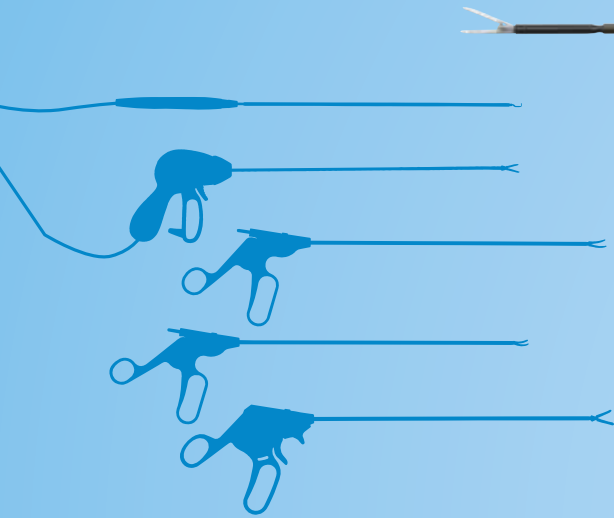
** Reduced INR applicable starting soon after aortic valve replacement. Stable control of the INR as per clinical practice should be performed*

*** Low INR not applicable to patients undergoing multiple valve replacement or at high risk of thromboembolic events (e.g. atrial fibrillation, history of cardiac thromboembolism, etc.).*

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1. Based on internal test report #RE00041188. Validation marketing claims. 2016.
* 29 out of 29 surgeons evaluated agree