Issue 01
January 2017

the bulletin

Society for Cardiothoracic Surgery in Great Britain and Ireland

Allied Healthcare Professional Update p20

Thoracic Surgery State of the Nation Survey 2015 p28

2015 SCTS Ethicon Scholarships — Tales of Two Cities p38

Mr Leslie Hamilton – My Challenge for Retirement p50

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From the Editor

Welcome to this latest edition of the Bulletin. We have a new publisher, and so the format is new. Many of you will be familiar with this format, as Open Box also publish the Bulletin of the Royal College of Surgeons of England.

Vipin Zamvar, Publishing Secretary

As before, office bearers of the Society update you with the various activities of our Society through the pages of this Bulletin.

The SCTS Annual Meeting is the highlight of the UK academic calendar, and it continues to grow from strength to strength. Enoch Akowuah and his team have plans for another exciting annual gathering in Belfast in March (Page 14).

Douglas West (Page 31) outlines the progress made in thoracic surgery audit. Outcomes for early mortality after lung cancer surgery are reported at Unit level; the outcome measure for individual surgeons remains the resection rates for the lung cancer MDTs for which they are core members. Thoracic audit covers only England, and it is a shame that the other parts of the UK are not a part of this.

Chris Bannister chronicles the many activites of the Allied Health Professionals Forum (Page 20). These will be of interest to all our allied colleagues. However, many may not have access to this Bulletin, as they will not be SCTS members. Please bring this Bulletin to their attention, and also encourage them to contribute to the many initiatives of the AHP Forum.

Sion Barnard (Page 26) gives us an update of the progress made with the curriculum change. Separation of cardiac and thoracic surgical practice, in my personal opinion, will be a sad development. It is possible to have a mixed practice, while practicing to the highest standards, and it will be interesting to see how things progress.

> **"The SCTS Annual Meeting is the highlight of the UK academic calendar, and it continues to grow from strength to strength."**

John Butler (Page 16) describes his efforts towards updating the SCTS website. After reading his article, I did explore the website, and was amazed at the amount of material there, to which I had been till now completely oblivious.

Leslie Hamilton continues his series on the Clipper Race - Page 50

Leslie Hamilton (Page 50) continues his series on the Clipper Race. Twenty years from now, he surely will not be disappointed that he did not sail the ocean.

Sam Nashef (Page 62) has once again produced a crossword for our Bulletin, and the theme this time is the Aristocracy. Put on your thinking caps to find out if he refers to the new type based on merit and talent, or the old one decided by wealth and birth.

A number of academic courses are held across the country. Some of them are highlighted in this issue (Liverpool Aortic Surgery, SCTS educational courses). We would be eager to hear about other courses, especially regular ones, for the next issue of the Bulletin.

Philip Kay's article (Page 56) makes very fascinating reading about the practice of cardiac surgery in the 1960s. How things have changed! Reading historical articles is always inspiring, and we look forward to more such articles in future issues.

Clinton Lloyd (Page 39) writes about the birth of a new Society (BISMICS) formed with the goal of facilitating progress in the development of minimally invasive surgery in the UK and Ireland. On a similar theme, Sacha Stamenkovic (Page 53) describes the Newcastle experience with robotic thoracic surgery.

Isabelle Ferner has been the backbone of this issue of the Bulletin, and has been solely responsible for piecing it together. So a huge thank you to her.

As always, please let us have your feedback on this Bulletin, and also send in suggestions what else you would like to see in future issues.

Happy reading, and a Happy 2017. ■

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Edwards

Welcome to our new look Bulletin

Having maintained the same look and feel of the Bulletin for many years, we have given it a revamp. I hope that you like it. We have moved to a new publisher, Open Box, and this has resulted in the December edition arriving in January. I apologise for this but in future we will be back to an edition in July and December.

Graham Cooper

You will also have noted a new look to the website which John Butler has worked hard on for us, he tells you more later in this Bulletin. The website continues to see a lot of traffic; in October and November the main site had 84,000 page views by 12,000 visitors and the Education section 7,500 page views by 2,200 users. In the last couple of months we have published the information from the Adult Cardiac Surgery Audit for 2012 to 2015 and the Lung Cancer Clinical Outcomes for 2014. There were no units or surgeons with a survival less than expected in either audit. This is the first time that all units and surgeons have had results as expected in the Adult Cardiac Surgery Audit. The Lung Cancer Audit showed a further increase in lung cancer surgery, up 16% compared to 2013.

As I mentioned in the July edition of the Bulletin, Rajesh Shah and Mike Lewis have moved on from the Education Secretary posts and I am pleased to tell you that Narain Moorjani and Sri Rathinam have now been appointed to these positions. They vacate the SCTS Tutor roles, responsible for delivering the Ethicon curriculum aligned courses for NTNs, and Carol Tan and Sunil Bhudia have been appointed to these posts.

I was privileged to be part of the ST3A course again in November 2016. Once again the enthusiasm and ability of the delegates was impressive. On this course, as on all of the courses that we run, the dedication, enthusiasm and commitment of the Faculty and Course Directors are outstanding and crucial to the success of the courses. Also in this Bulletin is the report from the National Careers Day which must have the biggest number of delegates of any course we run. Cardiothoracic Surgery remains the most competitive surgical specialty to enter as higher surgical trainee. Introducing A level students, medical students and Foundation doctors to the specialty in this way is, I think, an important part of maintaining a high level of interest in the specialty. Ahmed Al-Adhami and Jacob Chacko, our new trainee representatives are conducting a survey to see if my thoughts have any basis in fact.

I look forward to seeing many of you at the Annual Meeting in Belfast. For this edition I will have to hope that you had a good festive break, but look forward to being able to send my best wishes for Christmas and the New Year in December. ■

Congratulations to our new officers

Michael Lewis, Chair, Intercollegiate Examinations Board

Rajesh Shah, Chair, SAC

Narain Moorjani, Joint Education Secretary

Sri Rathinam, Joint Education Secretary

Helen Munday, Allied Healthcare Professionals Representative

Prakash Punjabi, Elected trustee (2015)

Shyam Kolvekar, Elected trustee (2015)

Carol Tan, SCTS Thoracic tutor

Sunil Bhudia, SCTS Cardiac tutor

Myocbacterium Chimaera – contamination of heater coolers and the subsequent risk to patients in cardiac surgery

Simon Kendall

June 5th 2015...

The end of a successful SCTS executive meeting in Birmingham and looking forward to a welcome drink in a nearby inn. However I notice a missed call from the Medical Director of the NHS...

"Hi Bruce – How are you? All well?

"Simon – this heater cooler issue..."

"Yes" – I said inferring some knowledge and insight.

"Would you work with Public Health England and make sure we do the right things for patients?"

"No problem Bruce – have a good weekend"

And suddenly there's a new issue high on the agenda.

Mycobacterium chimaera From Wikipedia, the free encyclopedia:

Mycobacterium chimaera *is a species of the phylum actinobacteria (Gram-positive bacteria with high guanine and cytosine content, one of the dominant phyla of all bacteria), belonging to the genus mycobacterium and part of the Mycobacterium avium complex (MAC).*

Type strain: strain FI-01069 = CCUG 50989 = CIP 107892 = DSM 44623. Etymology: L. fem. n. chimaera, the chimaera, the mythological being made up of parts of three different animals, referring to the apparent mix of genetic features characterizing the strains.[1]

There is an association of this organism with infections following cardiac bypass surgery, with an onset of symptoms from 1.5 to 3.6 years following the operation. [2] Non-specific clinical findings have led to a time-to-diagnosis of up to four years. Most reported infections are of prosthetic valves or vascular grafts.

Between 2014-15, Public Health England (PHE) were notified of seven cases of Mycobacterium chimaera endocarditis following cardiac surgery: six cases in Switzerland and one in the Netherlands. Both countries attributed the infections to organisms in the heater cooler unit (HCU) of the cardiopulmonary bypass equipment, transmitted to the surgical site by aerosolisation of contaminated water from within the unit. Germany subsequently reported a further case.

PHE initiated a national case search in the UK and 17 patients were identified to have suffered endocarditis, surgical site infection or disseminated infection due to *M. avium* complex following cardiothoracic surgery in 10 different NHS trusts. These cases were all associated with valve replacement or repair and nine of the 17 patients subsequently died. The interval between surgery and diagnosis ranged from three months to five years, similar to the incubation period described in the Swiss report.

24 Sorin 3T Machines were investigated and 19 of them had culturable mycobacteria in the water within the device, (*M. chimaera* was most common in 15 of 19) and in 7 machines there was also culturable mycobacteria detectable in the air around them when they were running. The water in the devices also had other potential pathogens such as *Pseudomonas aeruginosa* and *Stenotrophomonas maltophilia*. These initial tests showed variation between devices possibly due to differences in the age and maintenance of the machines.

A Field Safety Notice was issued by Sorin in June 2015, updating the decontamination regime for HCUs and recommending microbiological monitoring and removal of highly contaminated devices from service, with potential for severe disruption of cardiothoracic services.

SCTS contributed to the risk assessment published by PHE and NHSE at that time indicating that the risk of acquiring infection was likely to be much lower than the risk of delaying cardiothoracic surgery. This included advice that units should consider informing patients of this potential risk when taking consent for their procedure.

All units adopted the recommended protocol for cleaning and maintaining the heater coolers, and Sorin started a major programme of decontamination taking machines back to the factory in Germany. The outcomes remained closely monitored.

However, recent events in the U.S.A have precipitated further review:

October 2016: Los Angeles Health Alert Network LEHAN

This is an official CDC HEALTH ADVISORY

Distributed via the CDC Health Alert Network October 13, 2016, 13:00 ET (1:00 PM ET) CDCHAN-00397

CDC Advises Hospitals to Alert Patients at Risk from Contaminated Heater-Cooler Devices Used during Cardiac Surgery

Summary

The Centers for Disease Control and Prevention (CDC) is advising hospitals to notify patients who underwent open-heart (open-chest) surgery involving a Stöckert 3T heater-cooler that the device was potentially contaminated, possibly putting patients at risk for a life threatening infection. New information indicates that these devices, manufactured by LivaNova PLC (formerly Sorin Group Deutschland GmbH), were likely contaminated with the rare bacteria *Mycobacterium chimaera* during manufacturing. Hospitals should advise potentially exposed patients to seek medical care if they are experiencing symptoms such as night sweats, muscle aches, unexplained weight loss, fatigue, or unexplained fever. In addition, hospitals that use or have used this device are strongly encouraged to make and execute a plan to communicate with potentially exposed patients and to increase awareness among healthcare providers.

October 2016: U.S Food and Drug Administration. FDA.

UPDATE: Mycobacterium chimaera Infections Associated with LivaNova PLC (formerly Sorin Group Deutschland GmbH) Stöckert 3T Heater-Cooler System: FDA Safety Communication

The FDA is updating its June 1, 2016 **Safety Communication** to provide new information about *Mycobacterium chimaera (M. chimaera)* infections associated with the use of the 3T in U.S. patients who have undergone cardiothoracic surgeries. This communication also contains updated recommendations to help prevent the spread of infection related to the use of these devices.
October 13, 2016

Audiences:

- Health care providers who use 3T Heater-Cooler System
- Primary care providers who are responsible for the ongoing care of patients who have undergone cardiothoracic surgery
- Patients who have undergone cardiothoracic surgery
- Hospital staff who are responsible for operating and maintaining 3T Heater-Cooler System
- Health care facilities that perform procedures using the 3T Heater-Cooler System

The analysis of *M. chimaera* isolated from patients and devices in the UK, US and Europe demonstrates a close genetic relationship, supporting a point source outbreak most likely to originate with the manufacturer. Indeed the FDA reported that tests conducted by Sorin in August 2014 found *M. chimaera* contamination in the water supply and production line at the factory. The manufacturer altered procedures at this time and subsequent samples taken by the German Regulatory Authorities in July 2015 did not identify *M. chimaera*. It is unclear whether this has translated into reduced risk from subsequently manufactured devices. In the UK there is agreement that the greatest risk arises from Sorin 3T devices but *M. chimaera* has also been identified in other brands of HCU. This could reflect cross contamination from Sorin devices or local contamination in hospitals since mycobacteria are widespread in the environment but risk of transmission from other brands / models of heater cooler cannot be excluded.

As can be seen in the CDC advisory notice the USA has focussed exclusively on the Sorin device and advised those hospitals to retrospectively notify all patients who underwent open heart surgery involving a Sorin 3T heater cooler.

In the UK the success of the cleaning and disinfection regime requires monitoring and its impact on the risk is not yet clear – as yet there has been no case identified from patients operated on after the introduction of the new cleaning and disinfection regime, although the 'incubation' period still continues.

Graham Cooper contacted the STS president Joseph Bavaria and they agreed the benefit of a joint statement from their respective cardiothoracic societies. This initiative was joined by the European, Asian and Japanese societies.

>>

"Between 2014-15, Public Health England (PHE) were notified of seven cases of Mycobacterium chimaera endocarditis following cardiac surgery: six cases in Switzerland and one in the Netherlands."

So what is the current incidence and risk?

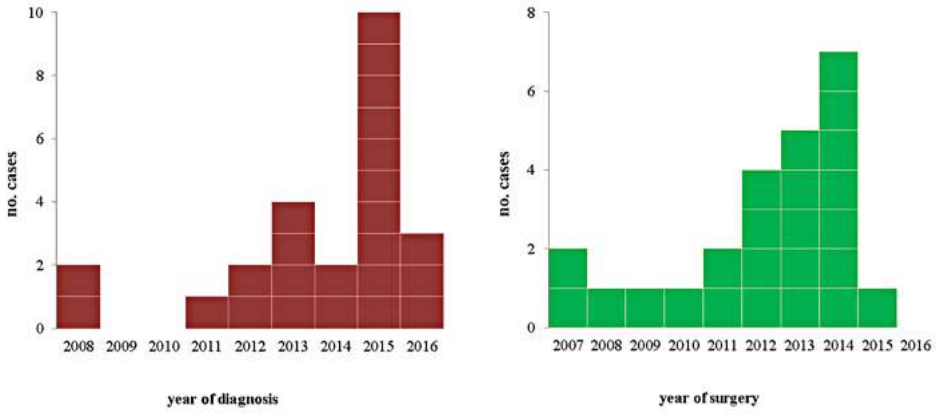
As this article is written 24 of 25 cases of *M. chimaera* infection identified in the UK have been in patients who underwent cardiac valve surgery indicating a significantly higher risk in these patients than CABG (Table 1). The CABG* patient suffered a deep sternal infection.

Table 1 Estimated risk of *M. chimaera* infection based on diagnosed cases who underwent surgery in the NHS in England, 2007-2015

procedure	patients	cases	risk per 10,000 patients (95% CI)
Heart/lung transplant	2824	0	0.00 (0.00 – 13.06)
CABG*	182,314	1	0.05 (0.00 – 0.31)
Heart valve repair/replacement	112,680	21	1.86 (1.15 – 2.85)

More cases were diagnosed in 2015 than in other years, consistent with efforts to raise clinical awareness (Fig 1a).
The number of cases, risk and incidence increased by year of surgery between 2010 and 2014 suggesting a real increasing risk and/or improved case finding (Fig 1b, Table 2).
Most cases were diagnosed within 2 years of surgery – (Fig 2).

Fig 1 Distribution of probable cases (N=25) of severe *M. chimaera* infection associated with cardiopulmonary bypass surgery according to year of a) diagnosis and b) surgery, UK



Therefore only 1 patient who has had surgery since 2015 has developed the infection

Fig 2 Distribution of interval between cardiopulmonary bypass surgery and microbiological diagnosis of *M. chimaera* infection (N=25), UK

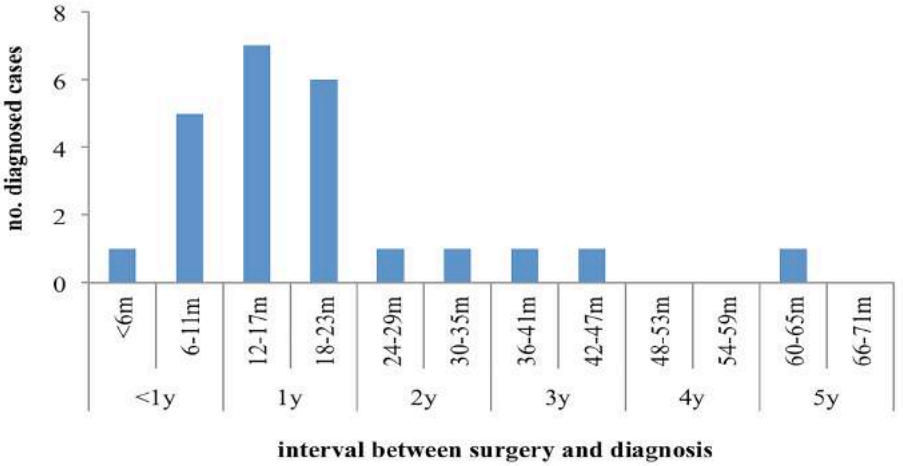


Table 2 Risk and incidence estimates for patients undergoing cardiac valve repair/replacement surgery in the NHS in England

Year	patients*	Diagnosed cases	Risk per 1,000 patients	Incidence rate per 10,000 person-years†
2007	12,245	1	0.082	0.163
2008	13,664	0	0.000	0.000
2009	13,491	1	0.074	0.148
2010	13,726	1	0.073	0.146
2011	13,995	2	0.143	0.286
2012	14,436	4	0.277	0.693
2013	15,137	5	0.330	1.101
2014	15,986	7	0.438	2.189
2015	16,570	0	0.000	0.000
all years	112,680	21	0.186	0.446

* number of unique patients undergoing surgery each year (patients undergoing multiple procedures counted once in each year)
† incidence based on number of cases per 10,000 years of post-operative living assuming a 5 year period of risk

Table 3 *M. chimaera* case numbers and risk estimates associated with cardiac valve repair/replacement surgery according to where patients' surgery undertaken, 2007-2015

	no. cases	risk per 100 patients	Maximum annual risk/100 patients
NHS Trust A	2	0.0007	0.5362
Non-NHS Trust B	2	-	-
NHS Trust C	4	0.0009	0.3226
NHS Trust D	2	0.0003	0.1316
NHS Trust E	1	0.0001	0.1096
NHS Trust F	1	0.0003	0.2188
NHS Trust G	1	0.0003	0.2421
NHS Trust H	1	0.0003	0.2451
Non-NHS Trust I	1	-	-
NHS Trust J	1	0.0003	0.2299
NHS Trust K	6	0.0020	1.3021
NHS Trust L	1	0.0002	0.1616
NHS Trust M	1	0.0004	0.3413

In the era of transparency and to avoid potential and understandable criticism there is discussion amongst the stakeholders which patients who have been exposed to risk should be notified. Using the evidence shared in this article, PHE and NHSE are approaching agreement which patients are to be notified. They would be warned of the risk, what symptoms to be alert to and what to do if there are any concerns.

On the current evidence the risk to patients who have undergone CABG is minimal and notification would may cause more anxiety than benefit. Valve patients prior to January 2013 are almost certain to have already presented and it may cause unnecessary anxiety to notify anyone from this cohort. However that is yet to be decided.

There is increasing agreement that prospectively ALL patients undergoing cardiac surgery are to be notified of this potential risk to be included in the consent process, even though only one patient since 2015 who has so far presented.

The situation will continue to be closely monitored and the advice adjusted accordingly.

SCTS are very grateful to have been closely involved in this process. PHE has engaged all stakeholders including ACTA(CC) and the Society of Clinical Perfusionists. ■

"Using the evidence shared in this article, PHE and NHSE are approaching agreement which patients are to be notified. They would be warned of the risk, what symptoms to be alert to and what to do if there are any concerns."

Cardiothoracic Forum at the SCTS Annual Meeting – Belfast March 2017

The 2017 annual meeting is planned to be held at the Waterfront Conference Centre, Belfast. This will give all Cardiothoracic Forum participants the opportunity to network with nurses and allied health practitioners from all aspects of cardiothoracic care, including those working in theatres and on cardiothoracic intensive care and high dependency units, across the UK, Europe and further afield.

Christina Bannister, SCTS Nursing & Allied Health Professional Representative

The 2017 plans to be a great event, with an international faculty of professionals from Nursing and Allied Health backgrounds attending from the United States, Europe and the UK. Once again we will be offering discounts on registration with one free registration for every five booked.

The meeting in Belfast will run over the entire three days in March; starting with a Nursing and Allied Health Professional stream at the SCTS University. Following the success of previous years' University streams we again have a full practical day planned. The University day will be split into a half cardiac / half thoracic day, which will enable participants to either take part in the entire day, or join for either the morning or afternoon session and then attend another University stream session with other delegates. Kevin Austin and his team from WetLabs will again provide us with an array of hearts and lungs, and we hope it will prove to be an exciting and educational session for all participants. I would like to thank all the company representatives who worked with us previously, Cardio Solutions, Covidien, Maquet and Stryker and also the surgical faculty that took time to teach the nurses, allied health practitioners and all other participants. We look forward to working with you again in Belfast and hope that through increased nursing and allied health participation, we will have another successful University day.

The CT Forum abstract committee worked hard selecting the papers to be presented during the main meeting. This year we have had an increased number of abstracts submitted, from advanced nurse practitioners, SCP's and theatre nurses to research and ward based nurses, physiotherapists, professional allied to health and surgical colleagues. We look forward to the oral presentations from those selected, and the poster presentations from others that were not as successful. The Forum will be able to examine, in-depth, all aspects of care related to cardiothoracic patients, and will look at service developments and improvements across the UK, Europe and the USA.

We have a great number of plenary sessions planned for the CT Forum in Belfast. Once again we will have representation from the RCN presenting within the sessions. Past RCN President, Andrea Spyropoulos and Sarah Murray, the SCTS Lay Representative, both have a background connected to the law and are aiming to give us a fascinating insight into nursing issues and the law. We have also planned a session specific on ECMO, with presentations from the lead nurse from Papworth and a European perfusionist, who will provide information on an ECMO community based service which I'm sure will be amazing for all to hear. Other plenary talks are still being confirmed but we hope to include a theatre session alongside the paper presentations.

Having working with cardiothoracic charities this year, we are hoping to include a couple of presentations which outline the extremely good work they provide within the UK, linking to Parliament and changing legislation and culture to improve the care provided for all cardiothoracic patients and their families.

At the 2016 CT Forum meeting in Birmingham we filmed all presentations which are now available to view on the nurses & AHP Pages of the SCTS Education website: http://sctsed.org. We have also created a short advertising film, and are going to send this to all units for nurses and AHP's to see the exciting opportunities they can gain from attending the annual meeting. Once this film is circulated, please send it on to all within your units to view, and encourage nurses and AHP to participate.

Each CT Forum we have held has been a big success. We have gained a network of core nurses and allied health professionals across the country that have in interest in progressing training, development and service provision with cardiothoracic surgery, from a wide range of backgrounds; from nurses, medical staff, surgical care practitioners, physiotherapists, physician assistants and other allied health professionals across the country. I would like to take this opportunity to thank all the plenary speakers, chairs, presenters and participants without whom the CT Forum could not exist. Not only do we all learn from others at the Forum but the networking and shared working practice information that we all get is invaluable. However, this is only possible with the continued participation from all cardiothoracic nurses and allied health professionals, so we encourage you all to spread the details of the conference, especially the University Day, and to seek support from your managers and medical colleagues to attend. ■

SCTS Annual Meeting 2017

SCTS Ionescu University

12TH – 14TH MARCH • BELFAST WATERFRONT

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Christian Etz
Rune Haaverstad
A. Pieter Kappetein
Jill Ley
Gilbert Massard
Sotirios Prapas
Faiz Z. Ramjankhan
Marco Ranucci
Marc Schepens
Geert Willem Schurink
Frederico Venuta
Mustafa Yuksel

SCTS Programme

Graham Venn Memorial lecture delivered by Clare Gerada (Ex-president of the RCGP)

SCTS symposium on CONSENT - (Mary Agnew, Bertie Leigh, Martin Spencer QC)

Lifetime Achievement award - Citation to be delivered by Sir Bruce Keogh

Plenary session on Clinical trials in Cardiac and Thoracic Surgery

SCTS Annual Dinner – Monday 13th March

Titanic Museum

Welcome Drink • Museum Tour • 3 Course Meal • Entertainment

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Further information contact Isabelle Ferner • sctsadmin@scts.org • 020 7869 6893
or visit **www.scts.org**

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The SCTS 80th annual meeting and Ionescu University

The SCTS 80th annual meeting and Ionescu University was held at the ICC Birmingham and was a huge success. It was one of our largest meetings ever, in terms of registered attendees and also in terms of the support we received from industry. The feedback was extremely positive and the Bollywood themed annual dinner was a major highlight.

Enoch Akowuah (on behalf of the meeting team)

The meetings team, and the Society as a whole, owe a great debt of gratitude to Mr Clifford Barlow who stepped into the post of meeting secretary at a critical period, and delivered two highly successful meetings in Manchester and Birmingham. Mr Maninder Kalkat joined the team in the summer, and we are looking forward to the vast experience he will bring to the team.

We are hugely excited about this year's Annual Meeting which will be held for the first time in Belfast, from the 12th - 14th March 2017. Belfast is one of the fastest growing cities in the UK and will be a great venue for our meeting. It has a fantastic selection of bars, restaurants, museums and golf courses, and we are assured of a warm Irish welcome.

We are particularly excited about the brand new conference facilities which we will be using at the Waterfront and the annual dinner, which will be held at Titanic Belfast. This year it will include a tour of the fantastic Titanic experience and dinner will be held in a replica of the Captains dining room on the upper deck of the Titanic. Early bird registration opened on the 1st December and early booking, especially for the dinner, is highly recommended.

The SCTS Ionescu University remains the educational highlight of the meeting and this year we have a particularly excellent faculty to facilitate the University. Invited guests include Michael Borger, Joe Lamelas, Lars Svenson, Marc Moon, Alec Patterson, Robert Cerfolio, Peter Kappetain and James Tatoulis amongst others.

The University will also include the Cardiothoracic Forum, which this year will be a wet lab session for the allied medical disciplines. We have repeated this format because it was extremely popular in Birmingham and received excellent feedback. We would like all units to encourage their ward, theatre and ICU nursing staff, as well as surgical care practitioners and other allied health practitioners, to attend the meeting. We have seen numbers of AHP attendees grow year on year and we have therefore provided an excellent programme in Belfast to support them.

The main meeting will have a strong educational component but will also include a number of seminars to address emerging professional issues.

For instance, we will have a number of speakers from the defence unions, the GMC and the legal profession to help us to examine the impact of recent court rulings on the consent process. Claire Gerada, the ex-president of the Royal College of General Practitioners will be examining the impact of illness on surgeons, their performance and their teams during the final Graham Venn Memorial Lecture.

One of the highlights of the Plenary session this year will be the presentation of the lifetime achievement award to one of the giants of our specialty. The citation for the award will be read by Sir Bruce Keogh, Medical Director of the NHS.

The National Institute of Healthcare Research, The British Heart Foundation and The Royal College of Surgeons will also be outlining their vision for funding and encouraging clinical research in Cardiac and Thoracic Surgery in the Plenary session.

As in previous years, Isabelle Ferner (**sctsadmin@scts.org**), the lead Conference Organiser, and Tilly Mitchell (**tilly@scts.org**), the Exhibition Organiser, can be contacted by email or directly at the SCTS office with any questions or concerns.

BELFAST 2017 promises to be a stimulating, educationally rewarding and exciting Annual Meeting and SCTS Ionescu University. Early bird registration is strongly encouraged and is available at **www.scts.org**. ■

"We are hugely excited about next year's Annual Meeting which will be held for the first time in Belfast, 12th–14th March 2017."

RMS TITANIC

You are cordially invited to

SCTS Annual Dinner 2017

Monday 13th March

Welcome Drink • Museum Tour

3 Course Meal • Entertainment

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The new SCTS website

Few would argue that the SCTS website was in need of an overhaul. The site had a dated appearance, with poor fonts and text too small for viewing at the resolutions of modern devices.

John Butler

Navigation was unsatisfactory with a scrambled menu system, making it difficult to find items. A search tool was lacking. Information was separated into too many individual pages without a clear site structure. Too many pages had out of date content, with several others apparently still under construction. Many links were broken.

The content aimed at patients was not obvious. Nor was the thoracic outcome data, which had its own separate hospital list. The thoracic surgeon listings on the hospital information pages were far from accurate.

The Education website

My involvement started with a casual conversation about the potential for creating an education website. This was with the then Education Secretary Rajesh Shah, and later with his co-chair Mike Lewis. I met with Rajesh and Mike more formally in June 2015 when we agreed to proceed with the development of **SCTSed.org**. Our aim was to highlight the great work being done by the Education Committee and to display the vast but poorly accessible educational content of the site.

I developed **SCTSed.org** on the Wordpress platform. Knowledge of coding wasn't necessary, although a basic understanding of HTML and CSS was useful. The front page was designed to highlight current news, the video collection and upcoming educational events. Pages were created for each of the educational streams. I did my best to showcase the activities of the tutors with the SCTS/Ethicon courses for trainees, all the work for Nurses and Allied Health Professionals including the Forum, as well as the non-NTN and student sections.

The video recordings of presentations from the SCTS Ionescu University struck me as a great resource which was being undersold. I transferred them all to a YouTube account where they would be far more amenable to organisation into playlists. They remain unlisted on YouTube so they are searchable only through the website itself. All 450 videos have been watched, tagged for keywords and have a descriptive summary.

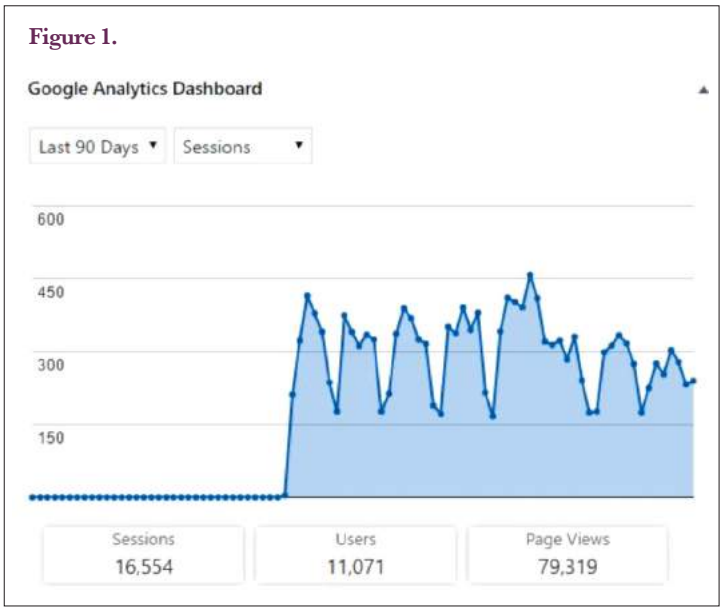
A different video is featured on the front page of the site daily. Furthermore, one of the videos is submitted weekly to CTSNet for publication. This greatly increases their exposure which can be measured by their hit rates. Interestingly, the top five videos thus far are:

- Taggart - CABG is the best therapy for CAD (2416 views)
- Angelini - One arterial graft is sufficient (1619 views)
- Sabik - Off pump CABG should be abandoned (1425 views)
- Mascaro - Aortic arch replacement: the Birmingham approach (1108 views)
- Taggart - Radial artery as the second conduit (1024 views)

The only expense of developing this website has been for web hosting, costing in the region of £65 per year.

Letty Mitchell has shown great enthusiasm as Education Administrator in learning the Wordpress backend and is gradually taking over the task of keeping the site updated.

Figure 1.



Platform

The executive was satisfied with the results of the education website and agreed that it would be a good choice to construct the new site on the Wordpress platform. The old site was built on asp.net, with other options including Ruby on Rails, Drupal and Joomla. The advantages of Wordpress are that it is widely used, has become a fully developed content management system, is easy to learn and is easy to use. With the successful experience of the education site, we chose this as our preferred platform.

The tendering process was conducted with the help of Scott Prenn. I had heard that a similar site developed for another surgical society had cost £40,000 plus VAT, but was still amazed at the estimates which ranged from £4,000 to £36,000. We chose a company by the name of Emmantech on

the basis of a competitive price (£6,750) plus the fact that they had done similar work for other societies. Also, the Creative Director Emmanuel had been very interactive and keen throughout the process.

Branding

We started by considering the general branding, beginning with the society's stationery. Isabelle and Tilly became engaged and interested in the process, contributing valuable insights.

The logo and header colour scheme are distinctive and well recognised, so these were simply given a freshened appearance. The front page was designed to be attractive while allowing easy navigation to pages of interest. The slider will highlight areas of importance, e.g. the upcoming Annual Meeting. The boxed areas in the body of the page should make it easy for patients and professionals to easily identify their areas of interest. Quality content such as bulletin archives is now more obvious. The fantastic Ionescu University video archives are announced in this front page.

Cardiac outcome data

The challenge of adding the cardiac surgery outcome data came in the middle of developing the new site. The deadline was driven by publication on NHS Choices. Our timeframe was short, a matter of weeks, but everything had to be correct with links working to all hospitals and surgeons. It was easy for errors to creep into the results coming from NICOR as well as on the website itself, so all had to be checked; we also had the late addition of an extra set of graphs. It was interesting to see how the professionals do this. Project management is done on a Trello board. While we amateurs might spend a week adding the graphs manually, the developers can write a few lines of code to populate the pages; they/we then spend a week debugging the issues that arise.

It may sound straightforward to upload this data correctly, but it is actually quite challenging with 46 hospitals and 378 (including thoracic) surgeons, having to take into account new appointments, surgeons changing units and retirements. A source of confusion for the developer was the naming of hospitals and trusts, with inconsistency from year to year.

What struck me was the huge amount of work that goes on behind the scenes. Graham Cooper, Richard Page, Simon Kendall and David Jenkins, to name but a few, put in several hours checking the data, allocating surgeons to units correctly and altering text where appropriate. Phone calls from Graham for updates were quite common, usually in the evenings and at weekends - I would respond with reassurance while hiding my underlying panic. Fortunately, the developer had enough faith in me to allow access to the backend. A weekend of grafting allowed me to sort out most of the pages, the menu system, typos and general presentation. The new site went live on October 3rd.

Thoracic outcome data

The next deadline to arrive was the addition of the thoracic data. Many of the issues were similar to those described for cardiac, with some new challenges. An early blip was >>

Figure 2.

Pages	Views
Surgeons | Society for Cardiothoracic Surgery	17,731
Hospitals | Society for Cardiothoracic Surgery	11,806
Society for Cardiothoracic Surgery	6,425
Annual Meeting | Society for Cardiothoracic Surgery	2,593
Cardiac | Society for Cardiothoracic Surgery	1,656
Having Heart Surgery | Society for Cardiothoracic Surgery	1,412
Professionals | Society for Cardiothoracic Surgery	1,350
Patients | Society for Cardiothoracic Surgery	1,148
Outcomes | Society for Cardiothoracic Surgery	1,056

Figure 3.

Referrers	Sessions
nhs.uk	1,123
sctsed.org	373
papworthhospital.nhs.uk	268
ctsnet.org	124
ouh.nhs.uk	109
medical.theconferencewebsite.com	87

Figure 4.

Cities from United Kingdom	Sessions
East Kilbride, Scotland	19
Hamilton, Scotland	8
Glasgow, Scotland	6
London, England	5
Edinburgh, Scotland	4

the addition of thoracic surgeons to the list causing cardiac data to disappear for mixed practice surgeons. That gave me another evening of debugging.

The thoracic data had previously been presented completely separately on the old website. The executive felt it sensible to have to have one list of units and one list of surgeons, allowing for a more intuitive navigation, particularly for patients. Achieving this included changing many of the cardiac units from hospital names to trust names (a stated requirement for the thoracic publication).

The LCCOP data came on a spreadsheet, quite different from the graphs supplied by NICOR for the cardiac data. The presentation required was different from previous years, with a move away from funnel plots. Extra columns were added late in the process which increased the challenge of getting everything correct and published on time. My previously good relationship with the developer certainly became strained.

Again, I was impressed by how the work done behind the scenes is huge, with Doug West putting enormous effort into getting this thoracic data right.

Google analytics

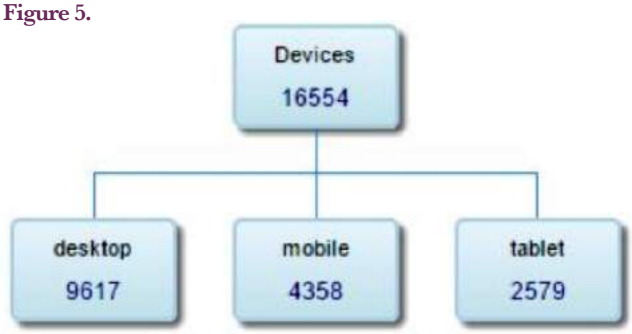
Google analytics gives a fascinating insight into website usage. The total number of visits since the launch is shown in figure 1 and which pages were visited in figure 2. Analytics can tell if a visitor arrived directly or via another website (figure 3). It is possible to identify the location of visitors, the device used (figure 4) and even their browser.

Analytics can give similar data at page level. I can see on my own profile page the level of interest and where it is from - East Kilbride is the location of my cardiac MDT (figure 5). It would potentially be possible to make this level of analysis available to logged-in members.

Outstanding tasks

As I write this, we are hopefully getting close to the finished product. There is still some work to be done. The private members area with a login needs to be completed. There will then be the option of editing profiles. There will be a more attractively designed events page. A search box will be added to the header.

Figure 5.



Benefits

The new website has a clean modern appearance. It has been developed as a content management system, making dynamic use of databases to generate page content. The benefit is that pages are easier to maintain and the whole website easier to upgrade. It has a simplified and rational menu system, making site navigation easy. This, together with the added search function, should make it straightforward to find any content. Resources are hopefully better organised and pages are presented with more visual appeal, making more use of images. The hospital / trust lists have been combined, making the outcome data less confusing. Surgeon lists have been updated on the front of the Cardiothoracic unit page. Data can still be sub-divided into cardiac and thoracic as desired.

The website is responsive, meaning that it is usable on all devices, adapting its appearance based on the user's screen size. Google analytics gives an excellent measure of site performance. It allows us to analyse what pages are being visited and how they are being accessed.

It should be easier for the office staff to add surgeons, pages, news and other items and update the menus as appropriate. It should be easier to keep the site looking fresh and contemporary as Wordpress simplifies the process of upgrades.

I hope that the membership and the public are happy with the result. The longer term plan is for Tilly Mitchell to actively maintain the site. With the enthusiasm that we have in the office from Tilly, plus Letty looking after the Education site, I believe that the Society will have a strong web presence for the foreseeable future. Finally, of course, I must mention Isabelle Ferner who has given me great support throughout this process and will no doubt continue to strongly influence the direction and content of the website in the future. ■

AHP Education portfolio update

Tara Bartley

The Current Education portfolio now hosts the following courses: the Advanced Cardiothoracic Course; Developing an Advanced Allied Health Professional Practitioner Service Course; SCTS/St Jude Medical Surgical Anatomy Course for Theatre nurses; Master Classes in Cardiothoracic Surgery, SCP Revision Course & Exam. A review of Educational courses for nurses and allied health professionals has highlighted a gap in provision for Band 5 & 6 nurses. As a result, we have developed the Core Principles Cardiothoracic band 5 & 6 course.

The SCTS appreciates that study leave is difficult to secure for nurses and allied health professional, as is support for travel and accommodation. The aim is to deliver a course that is easily accessible to nurses. The programme provides a revision of anatomy & physiology, examines the aetiology of cardiac and thoracic disease processes and examines the clinical aspects of caring for patients along the patient journey. The sessions deliver the relevant lectures then delegates break into small groups for skill stations, workshops and wet labs. The programme can been seen on the SCTS website.

The first Core Principles Skills Course for band 5 & 6 nurses took place at the Skills centre Wythenshawe hospital on 8th to 11th April 2016. The course ran over three and half days, two cardiac and one and half thoracic.

The faculty delivered 18 lectures, 18 skill stations/work stations and 11 wet labs. The course was supported by Kevin Austin 'Wetlabs' and Mike Smith and his team who run the Skills Centre at Wythenshawe hospital.

Suggestions for additional topics to be included were Congenital patients, LVAD and Transplant and due consideration will be given to how they may be incorporated into the programme.

Delegates were also asked to complete a pre and post learning assessment, the results of which validate the course over and above the positive comments that have been documented and are recorded below:

- 25% of delegates felt their learning increased in every session.
- 52% of delegates felt their learning increased from 75% to 99% of sessions.
- 19% of delegates felt their learning increased from 50% to 75% of sessions.
- 4% of delegates felt their learning did not increase.

N.B please note band 7 observers also completed the pre & post learning evaluation, which would suggest that the course was pitched at the correct level for band 5/6 nurses.

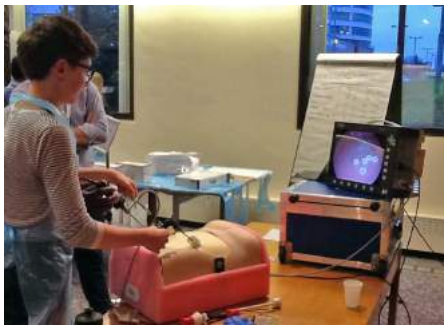
Sessions where less learning was highlighted were:

- Wounds dressings & -ve pressure dressing application
- Pre & post operative investigations
- Pacing wires
- Drains
- Sternotomy re opening - this would suggest delegates have attended the CALS course.

This information has been used to inform future iterations of the course and we have now delivered the second course at the Beardmore Centre, Golden Jubilee Hospital, Glasgow. Again, the course was well received with positive learning outcomes documented.

The course was well received and the essence of delegate feedback is summarised below:

"Very good range of subjects." "Great, it started with the basics and built and revised points as it went."
"The course surpassed my expectations, it was amazing. I highly recommend it."
"Didn't realise we would have such great hands on sessions." "Loved the MDT faculty approach."
"Very well organised, great faculty who were very experienced."
"Great learning opportunities in fun environment." "All faculty were very approachable and knowledgeable."
"High quality lectures." "Wet lab interaction massively helped understanding."



Future plans will be to run the course in seven regions around the country to ensure we make it accessible to nurses who wish to attend. Allied Health Professionals in different roles are also welcome to join us as delegates. We will keep the cost to a minimum, currently we are offering the entire course for £10 as nominal contribution, providing we can secure the funding support. If individual centers would like to run the course, the faculty can be contacted to delivery it in its entirety. For details, please visit the SCTS website, Nurses and Allied Health Professionals page. We look forward to you joining us. ■

Allied Healthcare Professional Update

Christina Bannister, SCTS Nursing & Allied Health Professional Representative

Advanced Cardiothoracic Course

This year's Advanced Cardiothoracic Course was held at the Queen Elizabeth Hospital in Birmingham during November 2016. Once again this was a highly successful course and over 36 participants took part in the interactive teaching sessions with lectures, workshops and wetlabs over the two days of the course. Feedback from the course was excellent, delegate evaluations demonstrating a significant degree of learning from their baseline. We would like to thank WetLabs, Covidien, Maquet and Karl Storz for their support on the skill stations, and faculty (all 23 of them) participated. We would also like to thank Cardio Solutions for their sponsorship of the event, and look forward to working with them again in the future.

"The aim is to create a national workforce of nurses with appropriate knowledge to care for the cardiothoracic patient and to act as a benchmarking assessment tool across the UK and Ireland."

Developing an Advanced Allied Health Professional Practitioner Service Course

Due to the changes in cardiothoracic workforce in the UK related to the EWTD and issues in recruitment of the junior doctor workforce, a course was put together to examine the role of nurses and allied health practitioners in new ways of working. The first course was held in December 2014 at the Royal College of Surgeons of Edinburgh in Birmingham, and Advanced Nurse Specialists across the UK presented their experiences of setting up their services. The feedback was very positive, and we ran the same course again in early October 2015, at St Thomas' Hospital in London. We had a number of delegates from across the UK participating in presentations from centres with established advanced AHP services, and we hope they returned to their units with fresh ideas of new ways of working, and also a new network of colleagues keen to share ideas and service developments. We look forward to continuing this course in 2016/17, if necessary, and will post details of the next course on the SCTS Nursing & AHP pages of the website.

Band 5/6 Nursing Competencies

Following feedback from ward nurses at the annual meeting in Edinburgh, the Nursing & AHP Education Sub-Committee members have created a Cardiothoracic Nursing Clinical Development Course 'Core Principles of Cardiothoracic Surgery and Care of the Patient following Surgery.' This three and a half day course is aimed at Band 5/6 nurses and allied health professionals and is based on a framework of core competencies for intensive care, theatres and ward based nurses working within the speciality. The course is composed of small group teachings and wetlab practical sessions that utilise the resources of formal lectures and content provided by the SCTS. The aim is to create a national workforce of nurses with appropriate knowledge to care for the cardiothoracic patient and to act as a benchmarking assessment tool across the UK and Ireland. During 2016 we have already run two courses, the 1st in Manchester and the 2nd in Glasgow. We have had excellent participation from nurses across the UK on both courses, feedback has been positive, delegates demonstrated enhanced learning and the course reviewed after each session to make enhancements. We offer the course for a nominal fee of £10 and are planning further courses for early 2017 in London and the South of England, providing we can secure financial support to do so. If your unit would like to run the course in-house please contact Tara Bartley at **tara.bartley@uhb.nhs.uk**

Further details from the above courses can be found in Tara Bartley's Nursing and Allied Health Practitioner Education Sub-Committee Bulletin Article.

SCTS / St Jude Medical Surgical Anatomy Course

In July 2016 we held the first theatre nurses' surgical anatomy course at the St Jude Medical Head Office in Stratford; a joint venture between the SCTS, St Jude Medical and Cardio Solutions. The objectives of the course were to improve anatomical understanding of cardiac structures, to acquire the skills and knowledge to assist in cardiac theatres and to increase knowledge to be able to help and support the physicians during the procedures.

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The course had great feedback and the theatre participants enjoyed the wetlab component and the individualised teaching from the surgical faculty that were present.

Details of the course are on the SCTS website and I look forward to providing feedback within the next SCTS Bulletin. Our thanks go to St Jude Medical, Cardio Solutions, and WetLabs for their support with the course, and the entire surgical faculty who have given up their time to participate.

Surgical Care Practitioner Update

Consultations with the Surgical Care Practitioners remain ongoing, currently there are many streams of work progressing.

Throughout 2016 there have been a number of Master Classes in Cardiothoracic Surgery held at the Manchester Surgical Simulation Centre, Manchester in collaboration with SCTS Education and Ethicon. All courses were well attended and feedback was excellent. We would like to thank the surgical faculty and all the clinical international trainers from Maquet, Sorin, Terumo, Sonasite and Karl Storz for their participation in these courses, and we also thank Ethicon for sponsoring the courses.

Following consultations with the Royal College of Surgeons of Edinburgh, the SCP exam will be held annually in December at the RCS, Edinburgh in Birmingham. There is a revision course held prior to the exam in September in the CTCCU seminar room, Wythenshawe Hospital, Manchester; details again on both the SCTS and ACSA websites. Work remains ongoing to update the SCP course for the exam, with a rigorous QA process being developed. Thanks go to the RCS, Edinburgh for all their help, support and backing for this process. A 'silver scalpel' award for the best candidate will be donated by Swann Morton and presented at the annual meeting dinner.

CTSNet Allied Health Portal

The Allied Health Portal is now live on the portal section of CTSNet. This has been created by nurses, perfusionists, physicians assistants and allied health practitioners from the US, UK and Europe. Throughout 2015 we had regular meetings to establish the allied health pages with clinical practice protocols, meeting presentations, published papers, educational videos and an online discussion forum for allied health professionals within the CTSNet site. At EACTS this year Jill Ley, Clinical Nurse Specialist from San Francisco gave a presentation with regards to the new CTSNet Allied Health Portal, and a group of nurses and AHP's from across the globe participated in a number of filmed discussion forums. These are now available for all to view and we encourage all nurses and allied health practitioners to log on and use the information on the site.

For any nurses or allied health practitioners that would like to provide good clinical protocols, journal articles or options for videos please contact me on chrissiebannister71@gmail.com

EACTS

The postgraduate Nurses and Allied Health Practitioner day at EACTS was planned by nurses and allied health professionals from the UK, the Netherlands, and Denmark led by Richard van Valen, an Advanced Nurse Practitioner from Rotterdam. The 2016 postgraduate day was held on Sunday October 2nd 2016 in the Centre Convencions Internacional de Barcelona (CCIB), Barcelona.

The SCTS CT Forum top marking presentations were invited to present at this meeting, and we also listened to plenary talks from Specialist Nurses and Allied Health Practitioners from across Europe. We shared knowledge and experiences with other nurses and health care professionals from across Europe during the day, and gained many insights into differing ways of working.

Once again, the presentations were peer reviewed and EACTS provided an award for the best presentation. The 2016 award was given to Dr Doa El-Ansary, Senior Lecturer in Physiotherapy at the University of Melbourne for her presentation on 'motor vehicle driving after cardiac surgery

via a median sternotomy: mechanical and neurocognitive considerations'. Congratulations go to Doa and our thanks go to EACTS for their continued support.

The EACTS Quality Improvement Programme (QUIP) programme still continues – looking in-depth at quality standards across Europe with the concept to bring together common aspects and setting a benchmark for establishing quality improvement. This involves a review of current nursing quality outcomes; the implementation of a quality pathway for patients, and a review of outcome measures, examining established protocols and practice guidelines.

For any nurses and allied health professionals that would be prepared to share good practice with our colleagues around Europe and get involved with the QUIP programme, please contact Tara Bartley, Lead Nurse for QUIP at **Tara.Bartley@uhb.nhs.uk**

SSI Network

The Cardiac SSI (Surgical Site Infection) Network aims to share best practices to reduce the incidence of SSI, as well as to share cardiac surveillance methodologies. This is also a forum to collectively review new research and national initiatives as to reduce the incidence of surgical site infections. We have been able to discuss, from a national perspective, issues around wound surveillance and surgical site infections, and have linked with the National Cardiac Benchmarking Collaborative (NCBC) to create national definitions and data collection. This network is a fantastic forum for all units to work together to reduce the incidence of surgical site infections. Presentations about current research have been presented in both the CT Forum at the SCTS annual meeting, at the postgraduate nurses and AHP day in EACTS, as well as within national cardiac conferences held in the UK. Work is ongoing to commence a number of multi-centre studies.

If you are a healthcare professional with an interest in SSI surveillance in cardiac surgery we would be delighted to hear from you. Please either contact myself at chrissiebannister71@gmail.com or connect to the SSI Network to join the group at **www.networks.nhs.uk/nhs-networks/ssi-cardiac-network**

Bupa/SCTS Patient Information Website Portal

The patient information pages for Aortic Valve surgery are now published on the SCTS and Bupa websites. These pages have both written information and videos from patients, surgeons and nurses detaining pre and post surgery information, and experience undergoing surgery. We have created a central repository of Quality Assured information which provides accurate information regarding cardiac surgery for both patients and their relatives; and also provides a resource for nurses and allied health practitioners working with cardiac patients. I have been invited to create a Bupa guest blog for the website which hopefully will promote nursing care within cardiothoracics and also enhance the patient information they receive.

We are planning to expand this information to other areas of cardiac surgery, and wish to create some aortic surgery information. If any nurse or allied health practitioner would like to get involved in the project or has specific patient information they would like to share please contact me on chrissiebannister71@gmail.com

Heart Valve Voice

Since the annual meeting in Birmingham, I have been working with the Heart Valve Voice charity to promote their message and raise awareness of the signs, symptoms and treatment options that people across the UK may have. Through a simple stethoscope check at the GP surgery more people may be diagnosed with early valve disease and receive the care we all provide for them. Both Tara Bartley (representing the RCN) myself and other nurses working across the UK participated in an evening reception in parliament where Heart Valve Voice launched its report, 'Towards a Heart Healthy Future: a 2020 Vision for Heart Valve Disease' on the 1st November which was attended by MPs, clinicians and patients from across the country. The report sets out recommendations to prioritise the development of NICE guidelines to ensure that people living with heart valve disease receive a timely diagnosis and have equal opportunity to access effective and appropriate treatment for the condition, regardless of where they live. We are continuing to link with this charity to further promote the excellent work they have started and are planning to attend football matches, and other media events to publicise the issues.

Please link to the Heart Valve Voice website for further information and to add your support to their campaign at **www.heartvalvevoice.com**

SCTS Nursing & Allied Health Professional Working Group

At the end of the SCTS Annual Meeting in Belfast, March 2017, I will be standing down as Nursing & Allied Health Professional Representative. After five years within the role I am going to focus on enhancing patient involvement within the society and improving the cardiothoracic surgical information they receive. I will miss organising the CT Forum and meeting all the participants from across the UK, Ireland, Europe and the US.

At the 2016 meeting in Birmingham we held the interviews for the new lead, and were greatly impressed by the applicants knowledge, passion and commitment not only to cardiothoracic care but to the expansion of the CT Forum, and education of nurses and allied health professionals throughout the UK and Ireland. Following discussions with the surgical leads for the SCTS we have decided to create a Nursing and Allied Health Professional working group to promote Nursing and AHP working within all aspects of the speciality. This shows the commitment of the surgeons to work collaboratively and each sub-committee within the society now has a nurse or allied health professional connected. From March 2017, when I step down this group will be

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led by Helen Munday, Trust Matron at Papworth, and I'm sure she will continue to do a fantastic job, and continue the integration of nurses and AHP's within cardiothoracic surgery. The Nursing and AHP group consists of Helen Munday (Papworth), Bhuvana Krishnamoorthy (UHSM), Amanda Walthew (LHCH), Heather Wyman (Harefield), Julie Quigley (Papworth), Julie Sanders (Barts Health) and Melissa Rochon (Royal Brompton). Tara Bartley and I look forward to working with them all throughout the coming year and with future endeavours, and I'm sure their input to the nursing and allied health agenda will result in a number of extra articles for future Bulletins.

National Nursing & Allied Health Developments

This year the Royal College of Nursing celebrates its centenary. In 1916 Dame Sarah Swift, Matron-in-Chief of the British Red Cross, was supported by Sir Arthur Stanley MP and matrons of several leading hospitals to found a College of Nursing. The Colleges aims were to champion a consistent curriculum for nursing education, a standard examination, and a register of qualified nurses. Over the past 100 years the RCN has expanded exponentially, and has made many changes to nurses working lives and for those, the patients they care for. Throughout 2016, the RCN is celebrating its centenary with many events across the UK, one event for each year of the RCN's history, and we urge all nurses to be involved. Celebrations are culminating in a two-day Centenary Conference which celebrates nursing with International and National presentations from nursing colleagues.

Janet Davies, RCN Chief Executive and General Secretary highlighted major issues in the nursing workforce. A recent labour market review revealed that half of nurses were over 45yrs and eligible for retirement within the next ten years. The research also identifies a number of risk factors that will affect the future supply of safe staffing levels. These included the aging workforce, rising demand, uncoordinated workforce planning, changes to student nurse funding, real terms cuts to nurse pay and the impact of Brexit on international recruitment. The RCN therefore is asking the Government to scrap the 1% pay cap for NHS staff, warning that unless nurses pay reflects the increase in the cost of living, trusts will struggle to attract enough staff to provide safe patient care.

Janet said; "The trends indicated in this report add up to a perfect storm of risks to the future supply of nursing staff. Many of these risks could have been avoided, and now immediate action is required."

We encourage all nurses to join in the 100yr celebrations and events, and keep abreast of nursing issues via the local and national press. Please also link to the RCN website for details of all the up to date nursing issues, current events and also for Congress in Liverpool in May 2017.

SCTS CT Forum Contacts

The SCTS Website – the Nursing and Allied Health Professionals page, has a home page, meetings pages and useful links. Please continue to check these pages for up to date courses and information. If you have any courses to be advertised please contact me on the email addresses below. Please also link to the SCTS Education website, again on the Nursing & AHP page for further information.

The SCTS CT Forum Facebook and Twitter pages continue. The CT Forum is for all nurses and allied health professionals to belong to and I encourage you all to sign up to these pages and help us to communicate between all health care professionals working in the field of cardiothoracics, whether it be in outpatient departments, wards, intensive care, theatres or the community. We would like as many nurses and allied health professionals to join, to show that cardiothoracic health professionals have a voice and want to work together to improve the care provided for all patients.

The links for the pages are as follows, please pass these details on to as many nurses and allied health professionals that you all know and encourage everyone to participate.

Follow us at Twitter - **@SCTS_CTForum**
Join the Facebook Group - **SCTS CT Forum**

If any of your colleagues would like to become an associate member of the Society or would like to add their names to the SCTS Allied Health Professionals database, so they can receive the emails that are sent out then please forward their name, address and title to me at **Christina.Bannister@uhs.nhs.uk** or **chrissiebannister71@gmail.com** or direct to Tilly Mitchell at **tilly@scts.org** or Isabelle Ferner at **sctsadmin@scts.org**. ■

Report from the Exam Board

Can I try one on Science and Nature, please? For the greyer haired amongst us the recollection of those stressful couple of days attending the exam still linger. For those who look forward to taking the test, there is a lot to think about.

Mike Lewis, Chair of Intercollegiate Board for Cardiothoracic Surgery 2016

The fear of tripping over one's shoelaces in front of people we know is a feeling that everyone is acutely fearful of. Being a small specialty, we often know our examiners. This makes an already tense day or two, even worse!

For those yet to enjoy the fun, the exam is now spilt into part 1, a written examination with both extended matching items and single best answer sections. Successful candidates are able to proceed to section 2. Eligibility to proceed is determined through the Angoff method for each written paper. Section 1 occurs in January and July each year.

Section 2 occurs in May and October. Examinations are held over 2 days, with clinical long and short cases in cardiac and thoracic surgery on the first day and vivas in cardiac and thoracic on the second. Each section is marked individually by 2 examiners. An overall pass mark must be achieved. There are no "killer" stations and it is possible to compensate from one station to another to achieve an overall pass.

There is no proportion of candidates who must fail. If everyone meets the standard on the day then everyone can pass.

To pass the exam is a real achievement. This is a high stakes assessment and candidates must demonstrate knowledge in the full breadth of the specialty to achieve the required standard. Feedback from candidates usually notes the fact that they felt that their knowledge has been tested widely.

As Board Chair, I do not normally have to examine candidates unless we are very hard pressed. I therefore get to hang around and listen to exams progressing all around me. By way of reassurance, it is a real privilege to hear the careful and considerate way that the examiners try to get the best from the candidates. The days of the crusty surgeon turning up with a bunch of weird and wonderful x-rays to baffle the candidate have long gone. All written and viva questions are scripted and quality assured prior to the exam. The clinical exams are subject to rigorous standard setting.

Both the written and oral parts of the exam are analysed, at each and every diet by a psychometrician. A report is made that is looked at by an independent quality assurance committee. Examinee and examiner performance is scrutinized to ensure that there is no bias for or against particular demographic groups.

Examiners receive both objective and subjective feedback on their performance. Performance levels are high and excellence is virtually routine. Being an examiner is regarded as a great privilege and responsibility by those who undertake the role. I continue to be greatly impressed with the energy that all the examiners put into this process. The quality and merit of the exam is down to their efforts alongside those of the excellent secretariat who administer these complicated and challenging examinations with efficiency and kindness, whilst maintaining the very highest of standards.

> **"To pass the exam is a real achievement. This is a high stakes assessment and candidates must demonstrate knowledge in the full breadth of the specialty to achieve the required standard. Feedback from candidates usually notes the fact that they felt that their knowledge has been tested widely."**

For those who have the exam ahead, I hope this article has helped to explain the process. For those who have the exam behind them, please feel free to contact me if you would wish to be an examiner - we have a large number of potential retirements from our panel of examiners over the next couple of years and I am keen to recruit to fill these posts! Being an examiner is a key part of ensuring the future of our specialty. It is hard work, but it is also highly enjoyable and rewarding work. I look forward to hearing from you. ■

SAC Chairman's report

By the time of writing this short report on an update of the SAC activities, I will have fully handed over to my colleague, Mr Rajesh Shah, Consultant Thoracic Surgeon in Wythenshawe Hospital, Manchester, who was appointed as the new SAC Chairman in June.

Sion Barnard (FRCS Eng)

He and I have been liaising through the summer and early autumn months, handing over parts of unfinished work and agreeing work ahead. We have both been on a recent SAC review of the Republic of Ireland training programme.

Curriculum Change

One of the key and controversial points that I have partly dealt with in the last three years has been curriculum change.

This, despite some preconceptions, has been to reflect the job opportunities at a Consultant level, there being only essentially only cardiac and thoracic posts now available, as Trusts change with the times and sub-specialisation occurs. These have been explored in a joint Workforce document published in 2015 jointly by the SCTS/SAC and led by Simon Kendall.

Although I have always been supportive that mixed training could be undertaken, and I hope that when/if curriculum change does finally come to fruition, that there is still a flexible clause within it to allow a small number to have a more mixed training in Cardiothoracic surgery, so that areas, mainly geographically isolated, can still have a mixed practice Surgeon. However, in practice the vast majority of training posts should be geared to either cardiac or thoracic surgery.

Not only are the Consultant posts in either speciality (and of course congenital itself) driving this change, but also trainers and trainees were supportive of this, if only to give them direction in their training.

After numerous discussions in the SAC committee from 2012 to date, it was decided that the split should be 5 years of one speciality and 1 year of the non-speciality.

In the last few months the stakeholders who will be affected by the change have responded positively to invitations to comment on the proposal, and discussions developed with the senior members of the JCST who had strong grounds for objection.

Whilst this was going on and continued to be debated, the GMC have moved from London to Manchester and the person responsible for curriculum change, Tara Wilmott, did not take part in that move and re-engagement with GMC has been delayed until they are further settled into their new venue. I will continue, not on the SAC as such, but to see through this block of work under the guidance of GMC who are ultimately responsible for curriculum change.

> "I do not anticipate, although as we have seen two political surprises this year, that things will change such that we will go back to ST3 only or have ST1 entry only in the foreseeable future."

National Selection

Cardiothoracic surgery has been at the vanguard of National Selection since 2008 and I have been fortunate in following previous Chairs, particularly Mr Graham and Mr Livesey, in refining this process and helping to introduce the popular ST1 entry point. Again the GMC are involved with continuing the ST1 pilot and we hope to have a full 5 years (2013 – 2017 entry) of ST1 entry, by June of 2017, by which time we will gather information on how the trainees joining the specialty at ST1 are faring and hopefully get the green light from GMC to make ST1 entry permanent.

As far as I see it, both as outgoing SAC Chair and outgoing co Lead for National Selection, I think there will be 2 entry points in the future, one at ST1 and one at ST3.

I do not anticipate, although as we have seen two political surprises this year, that things will change as such that we will go back to ST3 only or have ST1 entry only in the foreseeable future. The speciality, as a whole, has maintained good application ratios at both entry points, in the face of diminished applications to surgery in general. We have also incorporated the ST7 congenital post into the selection process in 2016 and also in 2017. Information sharing with other surgical specialties on technical aspects of the national selection process has been revived in the past two years.

Case Delegation

This is a slightly controversial title and essentially is the number of cases that are

given to a trainee. Indicative numbers were worked out about a year or two ago at around 200 during the six year training, although this is not a fixed figure and again the GMC would not turn down a CCT application of a trainee who undershot this number, if there are good reasons.

However, I would suspect that somebody who had a total number of major cases around the 140 mark would find it difficult to get signed off at their final ARCP and go on to subsequent certification by the GMC.

Our hope is that the indicative numbers, will drive up standards through the earlier years by making a certain number of cases part of the learning agreement particularly in ST3/ST4/ST5, so that the final 2-3 years training builds on the earlier years of delegation. These numbers have been underpinned by the efforts of Mr Joel Dunning and Clare Burdett, in defining a major case. A block of work has been started with the ISCP to look at e-log books and try and get a picture across the country of the number of major cases done by trainees in the ST3-ST8 years of the training programme.

This will help to identify areas of outstanding training/delegation but I would be against league tables of high delegating deaneries versus low delegating deaneries as this could be a minefield, as individual consultant cardiac surgical outcome data demonstrated.

Curriculum Aligned Course

A success story in the specialty, for which I can take little credit, are the Curriculum aligned courses, kindly funded by Ethicon and giving each national trainee opportunities every 6 months to attend carefully thought through courses relevant to their training level and the specialty owes a debt firstly to Ethicon for the ethos and funding, but also to Sri Rathinam and Narain Moorjani for the huge efforts in getting these courses delivered. They have been another example of close working between the Society and the SAC.

As I have come to the end of my SAC Chairmanship it is natural to look back at my time. I am not clear if I have achieved as much as I had hoped to do, partly from the speed at which I and other agency's work, and also with a feeling that we should try and get it right first time rather than have multiple goes at a flawed concept.

My predecessor told me it was the most worthwhile thing that he had done and I would certainly agree with him and encourage those who wish to take part in training the surgeons of the future to apply for posts on the SAC, as it can be a highly rewarding part of our career.

In addition, I am overseeing my 10th year and last year in National Selection, although I may come back as an assessor at some point, my role and that of Jonathan Unsworth White who has put the most effort in to the National Selection in the last 2 or 3 years, has been taken over by two well established SAC members, Mr Steve Rooney and Mr Jonathon Hyde. I wish them well in their endeavours and hope this continues to attract the very ablest young Surgeons into our speciality. ■

ADVERTORIAL

Enhanced deliverability means new surgical valve is now easier to implant

The new St. Jude Medical™ Trifecta™ valve with Glide™ Technology (GT) features several enhancements that make the device implantation easier in patients with challenging anatomies and minimally invasive approaches.

This year, St. Jude Medical launched the company's Trifecta™ valve with Glide™ Technology (GT) for the treatment of diseased, damaged or malfunctioning aortic heart valves. The new Trifecta™ GT tissue valve is designed to provide physicians with enhanced valve delivery to ease implantation in challenging anatomies, while combining with the proven best-in-class hemodynamic excellence of the Trifecta™ valve.

A major differentiator of this next-generation valve is the soft sewing cuff, which is designed to more easily conform to the patient's annulus. Another update is a streamlined, conical valve holder designed for better access and visibility. The holder is now a single-cut, quick release holder designed for greater efficiency.

"From a surgeon's perspective, passing your sutures through the Trifecta GT valve cuff is now easier because the needle glides through; facilitating the surgical implant," Michael Borger, director of the Cardiovascular Institute and the director, Aortic Surgery, Columbia University Medical Center, New York. "Overall the enhancements to Trifecta GT valve make surgical aortic valve replacement an easier operation for the surgeon to do. Anything in cardiac surgery that simplifies the procedure will always be welcome from the surgeon's point of view."

Key enhancements with Trifecta™GT valve

- Soft compliant sewing cuff with minimal needle penetration, suture drag and parachuting for smooth valve delivery.
- Additional cuff scallop follows the contour of the annulus.
- Suture markers aid in optimal needle placement and spacing.
- Streamlined conical valve holder for better access and visibility.
- Increased radiopacity for future valve considerations.

Rooted in Evidence

The original Trifecta valve provided surgeons with a tissue valve designed to function in the same way as their patients' native aortic valve. The improvements made to the Trifecta GT valve provides a tissue valve option that is easier to implant but that retains the best-in-class haemodynamic performance of the original Trifecta valve.[1]

In the largest prospective evaluations of surgical aortic valve prosthesis, Bavaria et al[2] found that among patients who underwent surgical aortic valve replacement with the Trifecta valve, 83.5 percent were in New York Heart Association (NYHA) class I with no patients in NYHA class IV and 96.1 percent of patients were free from NYHA class III or IV symptoms at two years post-implant. "At one year follow-up, average mean gradients ranged from 10.7mmHg to 4.7mmHg and average peak gradients ranged from 19.9mmHg to 9.2mmHg for valve sizes 19mm to 29mm, respectively," the authors report.

Concluding, Bavaria et al comment: "The St. Jude Medical™ Trifecta™ valve is a unique pericardial bioprosthesis with design elements that incorporate significant improvements in hemodynamic performance over previous-generation valve while providing ease of implantation."

1. Levy, F., Donal, E., Biere, L., Szymanski, C., Remadi, J., Flecher, E., Tribouilloy, C. (2013). Hemodynamic profile changes during exercise of the new St-Jude trifecta aortic bioprosthesis: Results from a French multicentre exercise echocardiographic study. Archives of Cardiovascular Diseases, 106(4), 250

2. Ruggieri et al. Eur J Cardiothorac Surg 2016; 49: 972–77.

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Thoracic Surgery State of the Nation Survey 2015

The SCTS Thoracic sub-committee set out to survey the current practice of the nation with regards to the Thoracic Surgical Practice in the United Kingdom. The aim of the survey was to analyse the current practice, workforce update and provision of support staff to the various units.

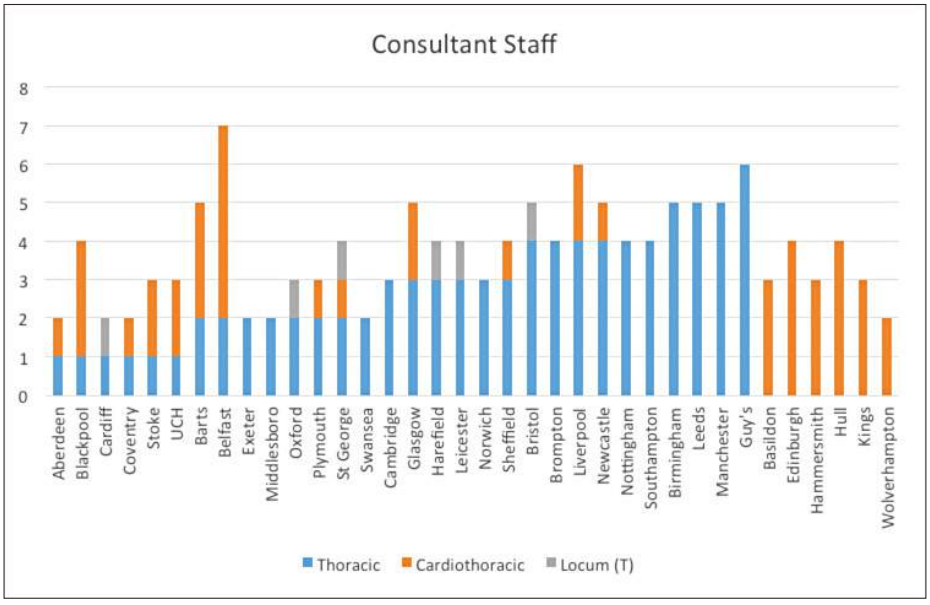
Sri Rathinam – on behalf of the SCTS Thoracic sub committee

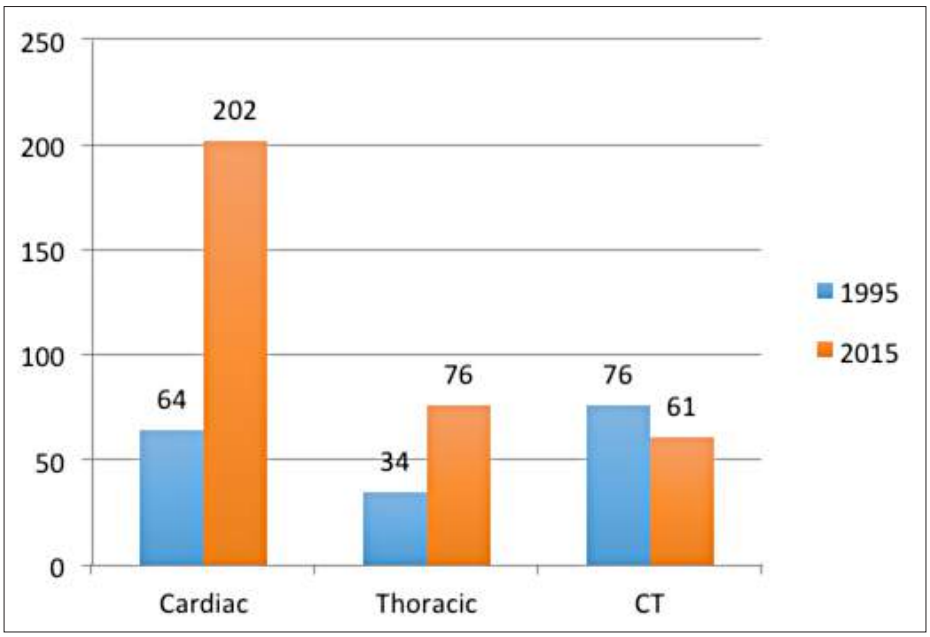
The survey was planned at a juncture when the thoracic HRG was putting forward draft recommendations for provision of thoracic services and NHS England was considering consolidating specialist services in select specialist centres.

The survey was conducted by Sri Rathinam on a survey monkey questionnaire using the template created by John Edwards on behalf of the SCTS in 2014. We thank the unit representatives who responded from the United Kingdom.

Although the survey looked at a variety of factors, which is available in detail on the SCTS website, we present a few key areas here.

There were 81 General Thoracic Surgeons and 44 Cardiothoracic Surgeons which was a slight increase in Consultant Thoracic Surgeons from the work force planning.





It was gratifying to see the change in the distribution of the workforce in comparison to 1995. The impact of the SCTS and SAC initiatives which have resulted in increase in the number of specialist general thoracic surgeons in the last two decades.

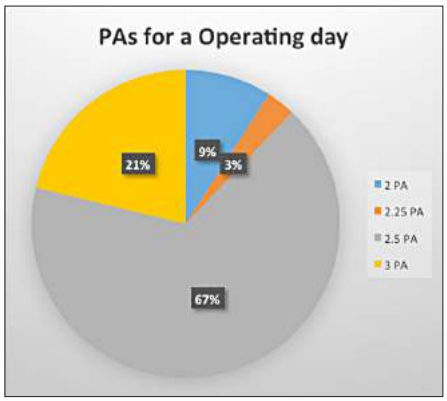
Job Plans and Sessions

The survey identified a variety in the spread of job plans in terms of clinic allocation and theatre time across the nation.

The theatre sessions ranged from 1 to 2.5 days for thoracic surgery in a week with a national average of 1.6 session. Some units had a flexible session to cross cover leave.

The length of an operating session and Programmed Activity (PA) associated with it varied across the nation from 2-2.5 PAs.

The average operating day was 9.8 hours (range 8-13 hours) with a 2.4 PAs associated with it.



The average central outpatient session was 0.95 (Range: 0.33-1) and peripheral clinic of 0.9 (range 0-3). The central thoracic MDT sessions and Peripheral MDT sessions per week were 0.9 (range 0-2.0) and 1.28 (Range 0-3) respectively.

The Outpatient sessions varied across the nation, as well as between central and peripheral clinics. There was also variation in the presence of Nurse practitioners between central and peripheral clinics and cardiothoracic and thoracic units.

MDT Sessions

There was a significant spread in the number of MDTs covered by units.

Thoracic Practice in Cardiothoracic Surgeon

The Cardiothoracic surgeons were surveyed about the percentage of thoracic work. The high volume surgeons had separate cardiac and thoracic lists (n=13) with the rest performing mixed lists; with thoracic caseloads varying between <25% to >75%.

"There were 81 General Thoracic Surgeons and 44 Cardiothoracic surgeons which was a slight increase in Consultant thoracic surgeons."

Trauma Provision

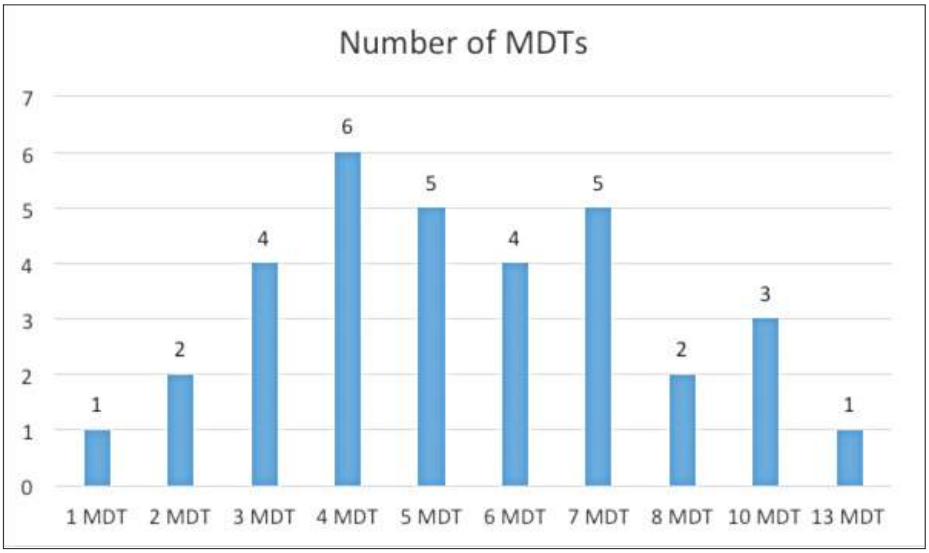
The survey looked at English units in the context of Major Trauma Centres. 15 centres stated they were not MTC. 5 units were MTCs, with it being in a different site within the trust and 12 co-located in the same site.

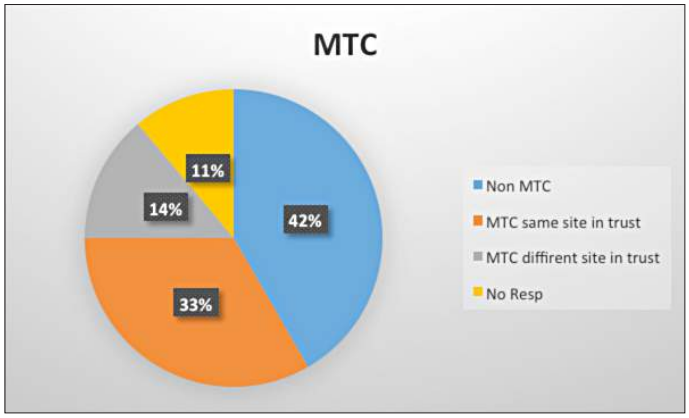
On call provision for trauma: There was a combination in provision of out of hours cover for trauma with General Thoracic Surgeons, combination of Thoracic, Cardiac or Cardiothoracic Surgeons offering the service. The survey also looked at junior doctor presence, level post-operative care and the availability of allied health professionals.

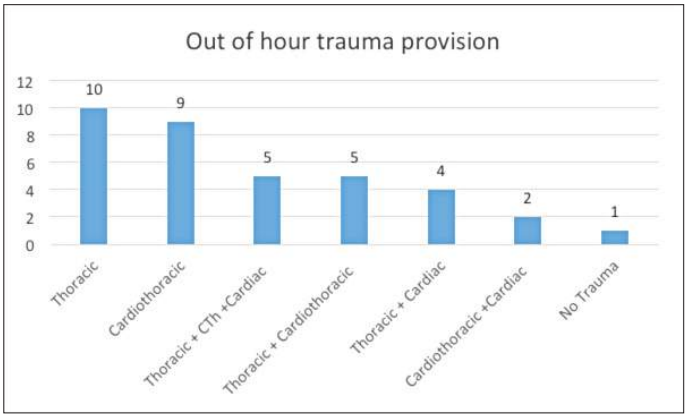
It was a valuable survey which offered a good insight into current state of affairs. We are mindful that things change with merger of units, movement of consultants and restructuring job-plans in individual units.

This also offers valuable information in work force planning and appointment of future trainees.

We will soon be sending the unit leads the 2017 survey which we promise will be shorter than previous versions. We would be grateful if you can complete all the sections as it will then be a true reflection of the state of the nation. ■







Update from the Congenital Committee

Congenital Cardiac Surgery has seen a number of important developments over the last year with regards to the future organisation of services in England.

Carin van Doorn

Following the completion of the New Congenital Heart Review in 2015, NHS England published the New Congenital Heart Disease Standards in May this year. This sets out a model of care, a set of standards and service specifications for the delivery of Congenital Cardiac Services.

In contrast to earlier recommendations, the new standards do not only cover surgery, but the entire patient pathway from antenatal diagnosis to grown-up care and end-of life. The model of care will be based on Networks with, at its centre, a Level 1 Specialist Congenital Surgical Centre where essentially all surgical and catheter interventions will take place. These centres are supported by Level 2 Specialist Cardiology Centres which in turn receive input from Level 3 Local Cardiology Centres.

An extensive specification has been drawn up for the infrastructure and manpower requirements at the various levels, both with regards to the delivery of paediatric cardiac services as well as for adult congenital cardiac services. From the surgical perspective important standards relate to a minimum of 4 surgeons per centre and 125 [Nicor reportable] operations per surgeon per year (averaged over a three year period). The final commissioning of Units to deliver the service has not yet been finalised.

NHS England is currently assessing the self-assessment of existing Units against the New Standards, and a public consultation is due in the near future, about closure of units that are unlikely to meet the Specifications. The whole process remains very unsettling and the time line for finalising the commissioning arrangements continues to be drawn out.

This month also saw the start of the Review of Paediatric Critical Care and Specialised Services in Children. This is of importance since access to adequate PICU beds is necessary to meet the number of operations set in the Standards. The SCTS is represented on the Stakeholder Panel for the Review.

In the meantime surgical outcomes (reported as Unit outcomes) for congenital cardiac operations in the UK are amongst the best in the world. Although the official report of the 15/16 audit has not yet come out, the early indicators are that performance has remained excellent across the board.

This is in spite of updating the model for risk adjusted outcome as the old version over-estimated risk.

Within the SCTS, the structure of the Congenital Committee has recently been changed. The committee has expanded and now includes a representative from each UK congenital cardiac unit.

Carin van Doorn was elected Chair earlier this year for a term of 3 years. She is supported by Simon Kendall as co-chair from the Executive.

The committee meets yearly at the Annual meeting and holds a number of teleconferences during the year. The committee is currently discussing staffing issues both at consultant and junior level, the possible role of advanced nurse specialists, training, and PICU capacity.

Finally, a congenital 'Blue Book' is in the making. It will be based on the same principles as the adult Blue Book and aims to be a celebration of 15 years congenital cardiac surgery in the UK. ■

"An extensive specification has been drawn up for the infrastructure and manpower requirements at the various levels, both with regards to the delivery of paediatric cardiac services as well as for adult congenital cardiac services."

Thoracic audit update

As this Bulletin goes to press, the third LCCOP report has just been released, covering the 2014 calendar year. It is time to look at how this project has evolved, since its inception as part of HQIPs Consultant Outcomes Publication.

Doug West, University Hospitals Bristol

LCCOP's main effect so far has been to reassure patients and the public that the quality of lung cancer surgery in England (currently the only nation covered) is of a high standard. We have seen increasing volumes of surgery, and survival rates that not only compare well to international data, but are improving year-on-year. Survival has been consistent across units, and to date no "alert" level outliers have been identified. Surgeons across the country have worked hard to validate their data, and the quality of the care that they provide is now clear.

The Society has argued consistently for reporting to remain at unit level, believing that this reflects both the reality of the choice offered to patients and the organisational level where quality improvement efforts are most effective. The title change from "Consultant" to "Clinical" Outcomes Project by HQIP this year perhaps suggests that our approach is finding favour.

There are improvements to make. Peri-operative mortality is mercifully low, but this makes it very hard to use this metric as the only outcome on which to judge performance, even at unit level. One way to address this issue is to report longer time periods, perhaps three or five year rolling averages. However, this risks missing deteriorating performance in previously successful units, a problem for a project partly intended as an early warning system for quality issues.

We have chosen instead to add more detail, providing a dashboard of both process of care and outcome data. Our hope is that by providing extra data, units will have some insight into areas of their practice where improvements could be made. This year we have started by adding median length of stay, derived from Hospital Episode Statistics (HES) data.

"We have seen increasing volumes of surgery, and survival rates that not only compare well to international data, but are improving year-on-year. Survival has been consistent across units, and to date no "alert" level outliers have been identified."

Options being considered for future reports include procedure rates (e.g. pneumonectomy or sublobar excision rates), and perhaps longer term outcomes such as one-year survival. To guide this development, we really need feedback from patients on the outcomes that would most help them to make decisions about their treatment.

Beyond the recent focus on LCCOP, we must continue to advocate for an expanded audit programme, one which addresses thoracic surgery beyond lung cancer, and which includes the devolved nations and Ireland. On non-cancer surgery, the SCTS has now commissioned a pilot study with the Clinical Evaluation Unit at the English College, assessing whether HES data could be used to audit benign thoracic surgery. A precedent for this approach exists in the SWORD programme within UK upper GI surgery (see **http://www.augis.org/sword/**).

This approach has the advantage that, if successful, it could run without clinicians having to input extra data.

Lastly, the third thoracic blue book is due out in 2017, with 35 years of the SCTS returns data, supported by funding from Johnson and Johnson. The report will be available for free download from a newly updated SCTS.org.

The current thoracic audit programme underlines the Society's commitments to quality improvement, patient safety and transparency in this expanding subspecialty.

Please contact me direct if you have any questions or feedback on thoracic audit. **doug.west@bristol.ac.uk** ■

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Hans Jonsson MD PHD
Department of Cardiothoracic Surgery and Anesthesiology
Karolinska University Hospital Stockholm

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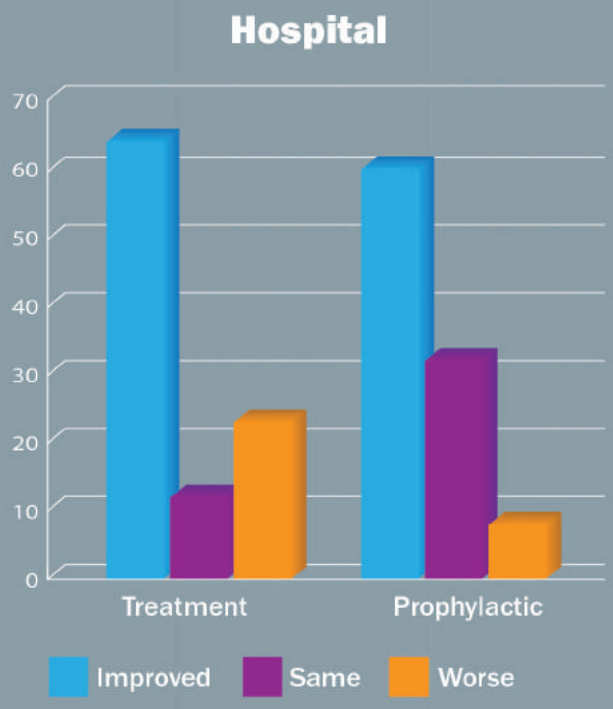
IMPROVED
Mobility - Self Care - Activity

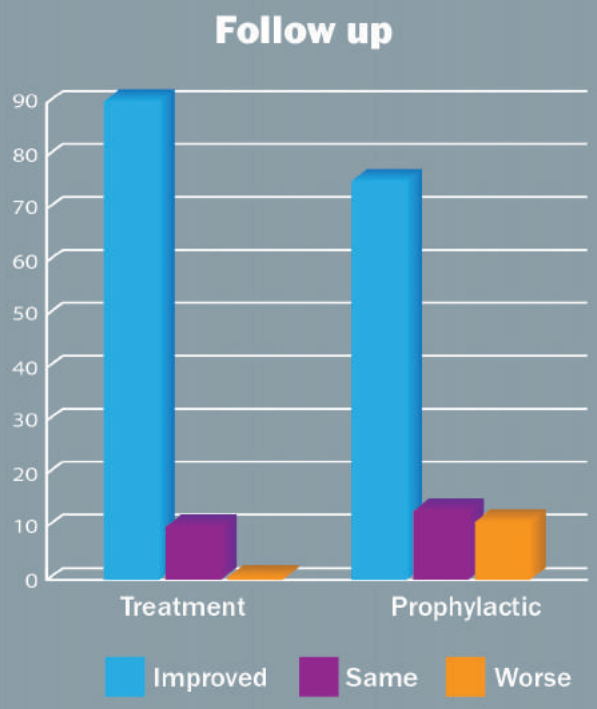
Prospective Randomized	Group A (n=155) with vest	Group B (n=155) no vest	P-value
Freedom of Limitation in Mobility	70 %	30 %	0,001
Self Care	73,5 %	46,4 %	0,002
Limited Activity	10,3 %	24,5 %	0,005
Freedom from Pain	43,2 %	10,3 %	0,001
Absence of Anxiety	49,7 %	29,6 %	0,05

EQ-5D Test for Quality of Life Score

Mechanical sternum complications prevention and anatomical recovery improvement post median sternotomy with the posthorax support vest. *Philippe Caimmi et Al. 2014*

Patients have Less Pain with Vest





SCTS Education Report –January 2017

Time flies when you are having fun they say, time seems to have flown away and we have completed our three years as SCTS Tutors. We would like to thank the SCTS Executive for appointing us as Education secretaries.

Sri Rathinam, SCTS Education Secretary
Narain Moorjani, SCTS Education Secretary

We thank the SAC and all the members for its invaluable support over the last three years in delivering the SCTS Education's portfolio of courses in conjunction with the SAC and Ethicon.

As Tutors we had the vision and plan but it was the commitment, time and efforts of the course directors and faculty which has led to the great success of this venture.
We have to thank the outgoing Education secretaries, Mike Lewis and Rajesh Shah, for their great vision and stewardship during which SCTS Education have thrived. They move to greater roles as the Chair of the Intercollegiate Specialty Exam Board and Chair of the SAC respectively.

As the new Education secretaries we thank them for their valuable contribution and will endeavour to continue their work in our new position as we have in our Tutor roles.

We have appointed Sunil Bhudia and Carol Tan as the new Cardiac and Thoracic Tutors respectively on 2nd December.

SCTS Ethicon Portfolio of training courses

The courses have completed a full cycle with constant improvements with feedback from the faculty, SCTS officers and the external quality assurance visits by the Education department of Royal College of Surgeons of Edinburgh. This is the only portfolio of courses that has been designed to mirror the specialty ISCP curriculum and that is provided free of charge to all trainees. This is made possible by fantastic financial and logistical support from our industry partners, principally Ethicon.

In times of financial austerity every plan and process is stringently scrutinized and the funding from our industry partners is no exception.

The President Mr Cooper, Narain and I have had a few meetings with Ethicon in continuing our partnership and delivering it for the years to come. Due to both internal restructuring and financial review there will be reduction in funding to our portfolio from Ethicon. We have negotiated to keep the funding for next year, as well as agreed to a few changes to the way we have to proceed from now.

Narain and I have spent a few weeks looking at the programme to reduce the number of faculties without compromising the core principles of our structure.

The work has been constantly appraised and updated and the evidence has allowed us the present in training meetings both in United Kingdom and in Europe where the model has been greatly appreciated. We have summarised our work in a scientific manuscript and are working on more to come.

Medical students

Under the leadership of Aman Coonar, it has been one of the highly successful streams. There have been Medical student engagement programme and sessions in the SCTS AGM. The events for medical student section in the SCTS have showcased the value and the significance of specialty attracting young bright sparks to the speciality. SCTS Ionescu medical student bursary has been increased to £500 for 2017.

SAS portfolio

The SAS (Non NTN) portfolio has been running robustly with two courses, one providing clinical update and the second addressing professional development.
We are really keen on continuing the current structure in the Coventry site. SAS Fellowships have been offered to SAS doctors to further develop their skills and portfolio.
We are grateful for the contribution of

Maninder Kalkat and the support from Uday Dandekar in coordinating these in Coventry.

Allied Health Professionals

The SCP stream has gone from strength to strength with the successful course being run in Manchester under the leadership of Bhuvana Bibleraj. The SCP exam is almost restructured under the leadership of Norman Briffa in partnership the Royal College of Surgeons of Edinburgh.

Nursing Education continues to excel with the successful cardiothoracic nursing forum and SCTS Practical course in Birmingham. The introduction of the Band 6 course has been implemented thanks to the vision and hard work of Tara Bartley and Chrissie Bannister.

Consultant Education stream

SCTS has offered the consultants a management and leadership programme in partnership with the Academyst. This offers insight to the consultants on the wider challenges NHS. We will encourage colleagues to make use of this great opportunity to enhance their management skills.

www.sctsed.org

The revamped education website **www.sctsed.org** has valuable educational resource. We have to thank John Butler for his laudable effort in restructuring the SCTS as well as SCTSEd websites. The vision will be to use it as the platform to showcase our educational activity to join all streams of SCTSEd so that the web traffic and presence improves.

"The courses have completed a full cycle with constant improvements with feedback from the faculty, SCTS officers and the external quality assurance visits by the Education department of Royal College of Surgeons of Edinburgh.

Fellowships

SCTS will continue to offer fellowship for continuous knowledge and professional development. The Marion and Christain Ionescu Consultant Fellowship, Ionescu SAS Fellowship, Ionescu AHP Fellowship and Medical student bursary will be offered. We hope to continue the Ethicon NTN Fellowships as well pending confirmation, The details will be constantly updated on our website.

Our vision

As Education secretaries the key challenge for us is the sustainability in the future years, we will strive to ensure there is on-going funding for the portfolio of courses as well as other streams to continue this.

We would like to introduce Wet-lab based courses to the SAS doctors to complement current courses to increase opportunities for development and learning skills.

We are planning to introduce faculty development courses for our faculty as a 'Training the trainer' refresher to ensure there is standardisation of delivery and feedback.

We will continue on-going educational projects looking at the various aspects of delivery and incorporate skills assessment and knowledge assessments by MCQs.

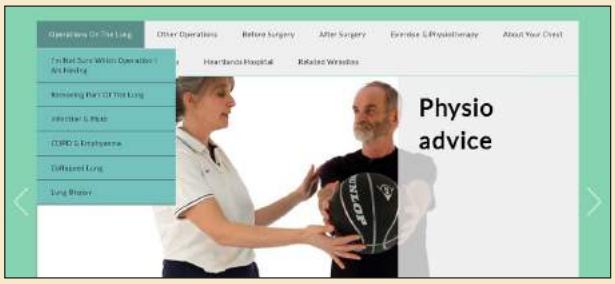
We seek your continued support in the years to come in helping us to deliver the SCTS vision on Education as the Education secretaries. ■

What do patients really want to know about their surgery?

Development of a patient-centric thoracic surgery website

Baba Naidu

The Thoracic surgery patient information website resource was developed by the Research Team at Heart of England NHS Foundation Trust, in response to patients' demand for information which is patient-centric. The website at **www.thoracicsurgery.co.uk** was developed over a 9 month period with the help of patients and the full breath of health care professionals involved in their care including pre-op nurses, physiotherapists, lung cancer nurses, surgeons and so on. It covers the breath of thoracic surgery, not just lung cancer, and is unique in that it captures the patient journey in their own words in a series of short videos. With this multifaceted approach to patient information we hope to improve shared decision making, as well as patient preparation and experience of their surgery. For feedback or information on the website contact us at **b.naidu@bham.ac.uk**



Basic surgical skills workshop

National Careers Day 2016

On a crisp Saturday in November, we welcomed around 200 medical students, sixth form students and doctors to the annual SCTS Education/RSM Cardiothoracic Careers Day, held this year at St Bartholomew's Hospital.

Jeesoo Choi, Tang Chu Yik & Aman Coonar

Following the success at Cambridge in 2015 and Bristol in 2014, a committee of students from King's College London and Barts and the London medical schools came together to keep the momentum up and make this year's event even bigger!

The day was introduced by Alex Shipolini, Consultant Cardiac Surgeon at Barts and Aman Coonar, Consultant Thoracic Surgeon from Cambridge and lead for student engagement. The morning then kicked off with our talks on the Cardiothoracic subspecialties, which were given by:

- Michael Sabetai – Adult Cardiac (Consultant Cardiac Surgeon, St Thomas')
- Ashok Kar – Thoracic (Registrar, Barts)
- Catherine Sudarshan – Transplant (Consultant Cardiothoracic Surgeon, Papworth Hospital)
- Jonathan Unsworth-White – Training Pathway (Consultant Cardiac Surgeon, Derriford Hospital)

The talks were stimulating and thought-provoking, giving our delegates a realistic insight into the day-to-day life of a Cardiothoracic Surgeon, how medical students can get involved and advice on applying for the training programme. There was great engagement and networking with our speakers and we hope many were inspired by our speakers.

The Women in Cardiothoracic Surgery question and answer panel was an exciting new feature this year, chaired by Farah Bhatti (Professor & Consultant Cardiac Surgeon, Morriston Hospital) with Catherine Sudarshan and Melanie Jenkins (Consultant Thoracic Surgeon, St George's Hospital). With Cardiothoracic Surgery having historically been a male-dominated specialty, this was an amazing opportunity to dispel any preconceptions. Students asked insightful

questions about dealing with criticisms, overcoming barriers and other particular issues surrounding training as a woman. Though the focus was on women, we are sure the advice imparted by our experienced panel struck a chord with both males and females in the audience.

We would like to express our gratitude to our speakers and panel, who gave up their time generously and are so dedicated to the education of medical students.

Getting The 'Hands-On' Early

In the national cardiothoracic surgery specialty training recruitment, the candidates are assessed on their ability to demonstrate surgical skills. We therefore introduced workshops to expose medical students to surgical techniques: basic suturing skills, surgical hand tie, thoracoscopic skills, chest drain insertion and aortic anastomosis. The participants were given the chance to practice their surgical skills using animal tissue, under the guidance of experienced cardiothoracic trainees and consultants, who use these techniques on a daily basis.

Widening participation

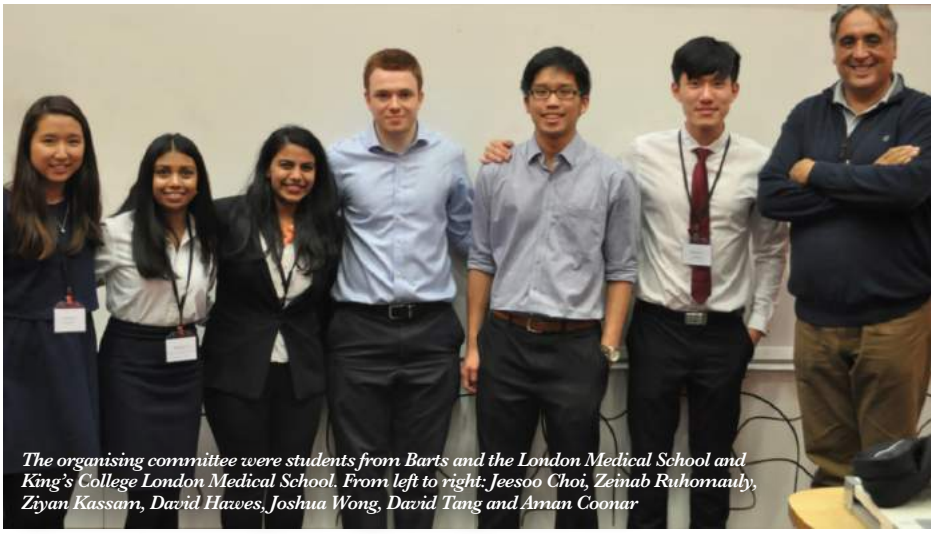
From inception, this programme has reached out to 6th formers with various partner schools and indeed the first 6th former to attend the programme is herself now a medical student.

Medicine is regarded as a 'middle-class' profession and that brings with it certain challenges and some may say even barriers to entry if you are not from such a background.

This year we purposefully established partnerships with some school that do not have a history of sending many people to medical school or even University. We were delighted to see them at this event and enjoyed their participation.

This year, new workshops were introduced for 6th form students. A team of senior medical students from all over UK gave them excellent tips on medical school applications, on getting involved in voluntary work and gaining work experience. They also enjoyed the more practical opportunity of learning to save a life during the basic life support workshop.

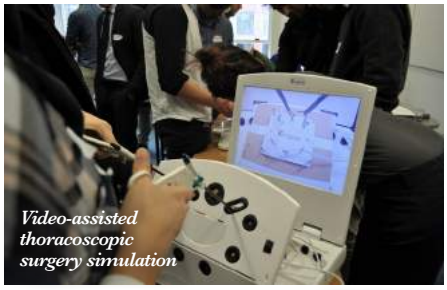
"This year we purposefully established partnerships with some school that do not have a history of sending many people to medical school or even University. We were delighted to see them at this event and enjoyed their participation."



The organising committee were students from Barts and the London Medical School and King's College London Medical School. From left to right: Jeesoo Choi, Zeinab Ruhomauly, Ziyan Kassam, David Hawes, Joshua Wong, David Tang and Aman Coonar

From left to right: Alex Shipolini, Farah Bhatti, Michael Sabetai, Catherine Sudarshan, Jonathan Unsworth-White, Melanie Jenkins, Aman Coonar

Chest drain insertion station with realistic animal tissue



Video-assisted thoracoscopic surgery simulation

Participants having fun learning basic life support

Future Events

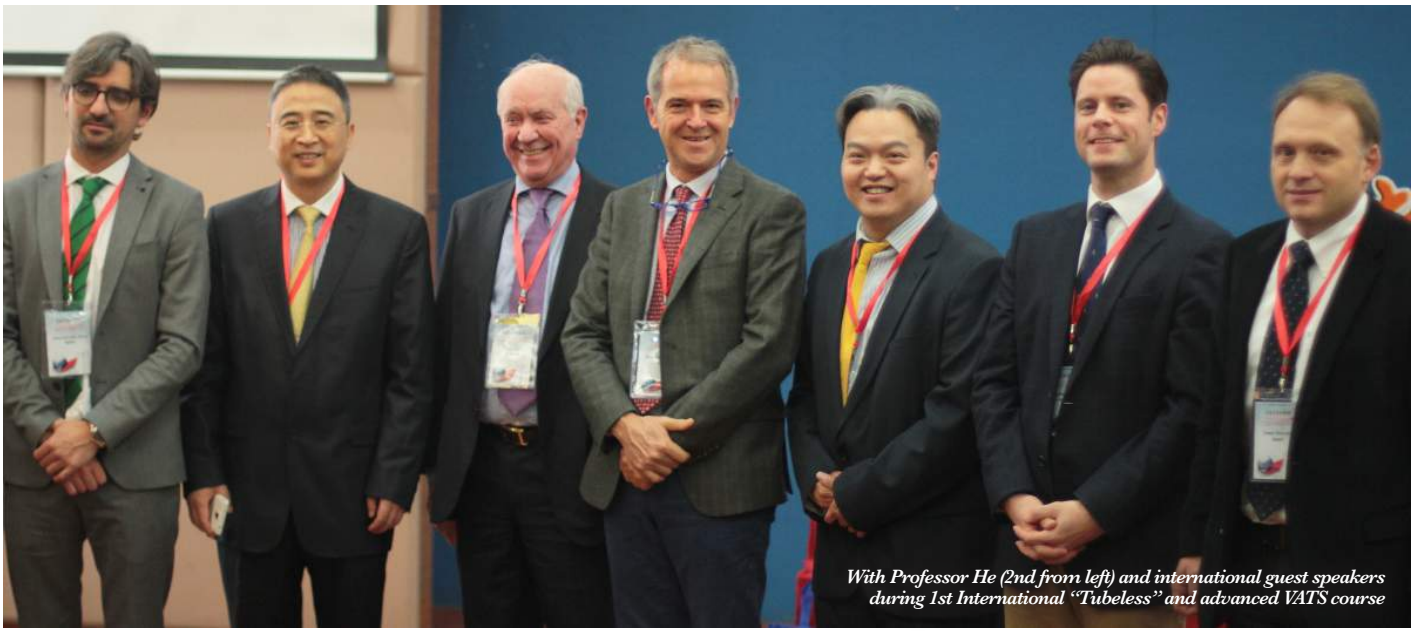
We are broadening our outreach and repertoire of activities at each annual event. Possible new additions to our careers day would include workshops on making cheap surgical practice sets to practice skills at home and a session on encouraging involvement in cardiothoracic surgery academic research. This careers day also provides a platform for participants to build connections with like-minded cardiothoracic surgery enthusiasts. Most importantly, the continued warm and supportive environment gives a positive impression of the specialty and will hopefully attract and inspire talented students, who will become to future of cardiothoracic surgery. More information on the event can be found on the official website: **www.cardiothoraciccareers.co.uk**

The next SCTS/RSM student engagement event is at the national meeting in Belfast. ■

2015 SCTS Ethicon Scholarships – Tales of Two Cities

I was privileged to be one of the two recipients of the prestigious SCTS Ethicon Scholarship in 2015.

Keng Ang, Consultant Thoracic Surgeon, Glenfield Hospital



With Professor He (2nd from left) and international guest speakers during 1st International "Tubeless" and advanced VATS course

The scholarship provided me with a unique opportunity to advance my interest and skills in Minimally Invasive Thoracic Surgery in two culturally distinctive international centres – China and Canada. This complimented the Thoracic Surgery training I was getting at East Midlands Rotation, which offered training in various VATS and open thoracic surgery, as well as more specialised thoracic procedures such as LVRS, mesothelioma surgery and oesophageal surgery.

China: First Affiliated Hospital of Guangzhou Medical University

My first stop was China. This is not a "traditional place" for fellowship and very little is known about their training and surgical practice historically. The other reason is that Mandarin remains the main language of communication in their clinical practice. It was, hence, difficult to truly appreciate their clinical practice, unless you understood their language. I was blessed that I can speak "Mandarin" and therefore was able to fully obtain the maximal benefit of this fellowship. The institution I went to was in fact amongst the first to introduce VATS in China in the 1990s and they have since built up vast experience in VATS ranging from simple lung resection to more complex sleeve resections. They also have amassed a lot of experience on the use of non-intubating approaches for thoracic procedures. As I speak their language, I was able to participate in patient's care. I also attended theatre sessions regularly to learn VATS and non-intubating approaches for thoracic procedures, under the tutorship of Professor He, one of the leading Thoracic Surgeons in the country. In the true spirit of fellowship exchange program, I was able to contribute back to their program. I have helped them set up regular research/teaching programmes for their trainees. I was also involved in the organisation and conduct of their 1st International "Tubeless" and advanced VATS course.

Canada: Toronto General Hospital

Toronto General Hospital has a long established tradition of fellowship exchange programmes with the UK. It also has a reputation for training and clinical excellence in all areas of thoracic surgery. Though my main supervisor was Professor Waddell, I was able to work with all surgeons of the department, Dr Keshavjee, Dr Darling, Dr DePerrot, Dr Yasufuku, Dr Pierre, and Dr Cypel just to name a few. I have learnt various approaches for complex thoracic surgical procedures and their management. I also gained experience in advanced bronchoscopic techniques, LVRS, robotics surgery, and Mesothelioma surgery (EPPs).

In addition to refining my skills in minimal invasive approaches to lung resections, I was taught how to perform total minimal invasive oesophageal resections, to compliment my experience in oesophageal resection acquired in Nottingham. For those interested in lung transplantation, they are also the leaders in this field.


With the Toronto General Hospital Thoracic Team

Reflection

It was difficult to put down all the positive experiences I have benefited from this fellowship within word limits of this bulletin. What I have gained from my visits goes far behind the clinical experience and skills I have acquired – I have learnt different organisation and management setup, new culture experiences, and most important of all, many new friends for life! All these experiences are very valuable in my present appointment as a Consultant Thoracic Surgeon. Having heard about the challenges Mr Ionescu had to go through during the conference that year, I felt that I was very fortunate to be given this great fellowship by the SCTS and Ethicon. Mr Ionescu's speech has also inspired me that in order to keep the legacy of this fellowship, I need to do more than just implementing my new skills learnt in my present Consultant clinical practice. My hope is to establish international collaboration here and share the skills and experience I have gained so my colleagues do not have to spend expenditure and time travelling great distances.

Acknowledgements

I would like to thank everyone who has helped me in one way or another during this fellowship. In particular, I want to thank Mr Duffy, Consultant Thoracic Surgeon, Nottingham City Hospital, who has helped me a lot in securing this fellowship, as well as being my local educational supervisor. I would also like to thank my Deanery – East Midlands Deanery, my past TPD – Mr Lotto, and present TPD – Mr Rathinam for supporting my fellowship. I am also indebted to my overseas supervisors Professor He and Professor Waddell, and my overseas host institutions for having me. Finally, I like to thank Ethicon, and SCTS (in particular Mr Lewis and Mr Shah) for this generous award to complete this wonderful fellowship experience. ■

BISMICS Meeting, Birmingham (10/11/2016)

C. Lloyd

The inaugural meeting for BISMICS (British and Irish Society for Minimally Invasive Cardiac Surgery) was held in Birmingham in November 2016.

The charitable group was set up in 2015 with 3 main aims:

1. To foster interest in minimally invasive cardiac techniques, by surgeons in the UK, by increasing the number of patients having these procedures and increasing the number of surgeons doing these procedures.

2. Increasing the awareness for trainees of techniques and promote training in these fields. In part, this would be to address requirements for future trainees of the change in skill sets that may be required in future years.

3. Greater interaction with industry and clinicians in how to deliver these techniques safely, cost effectively and sustainably.

Despite some centres performing small numbers, there is a perception that the UK and Ireland is not adopting these techniques as rapidly as other countries, particularly the USA and Europe. The BISMICS meeting held alternatively across the Atlantic and Europe has been a very successful platform for the development of programmes in those countries and we anticipate that a focused BISMICS meeting would benefit the UK and Ireland.

The 2-day meeting included presentations from leading UK surgeons in their field of expertise focusing particularly on how they set up their programmes and how they overcame the many obstacles that these techniques posed. In addition to the main meeting, a number of wetlabs were run by industry to provide delegates with a more interactive experience with some of the new technology available today. Following an enjoyable evening dinner, the second day was capped with guest lectures by Hugo Vanermen and Bill Walker who shared their experiences in becoming recognised world leaders in cardiac and thoracic minimally invasive techniques.

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. Plans are already in progress for our second annual meeting at the end of 2017. ■

SCTS, Ionescu Scholarship for Non-NTN Doctors in Cardiothoracic Surgery, 2016

Thanks to a laudable initiative of the SCTS I was granted a Scholarship aimed to be utilised for further education, training and development of surgical doctors and their teams, and for wider service improvement.

Adrian Crucean

As a Specialty Doctor in Congenital Heart Surgery I developed a particular interest in cardiac morphology. I strongly believe that in the complex field of congenitally malformed hearts, a thorough knowledge of various anatomical patterns is paramount for the formation of accomplished surgeons. Fortuitously my enthusiasm was put to good use at Birmingham Children's Hospital (BCH) where a remarkable archive of cardiac specimens of almost 2000 hearts has been awaiting for formal analysis, study and classification.

The SCTS scholarship could not have been granted at a better time as a proper Curatorial Committee has been set up to overlook the increasing use of this unique collection. Hence, in the past year, the following objectives have been achieved: the creation of a cardiac morphology laboratory, an increased programme of teaching and education based on the archive, establishing useful professional connection at national and international levels, and the creation of a digital database for this collection.

This long standing and dormant archive has been recently audited and reviewed in order to ensure compliance with all necessary legal and governmental requirements. This has been largely based on an extensive analysis of the archive that took place with the support of Professor RH Anderson, the most well-known and widely published cardiac morphologist in the world. Nevertheless, with SCTS support, a complete redevelopment of the area housing the specimens has been achieved including an AFOS ventilated specimen table, dedicated shelving and individual medical grade containers and labels, formalin-monitored and temperature-controlled in a fully ventilated room.

The programme of teaching and education continued throughout the year and was based on lectures, hands-on examination, photographs and audio-video recordings. This is achieved through the full involvement of the BCH Illustration department who use state-of-the-art video and photography equipment. To list but just a few of these activities: West Midlands Cardiothoracic Surgery Regional Training on core curriculum heart pathologies, BCH Annual Workshop on hypoplastic heart syndrome, Morphology and Echocardiography in Neonates and Children Joined BCH and Southampton Children's Hospital Course, presentation at the British Society of Echocardiography, several in house teaching sessions and grand rounds to surgeons, cardiologists, intensive care doctors and anaesthetists. The collection has been further analysed by Dr Bill Chaudhry from the Institute of Genetic Medicine at Newcastle University who made several presentations based on a particular subgroup of the archive hearts. Two presentations were held at the Annual SCTS Meeting in Birmingham in March 2016 and these were largely based on specimens with arterial valves malformations and transposed hearts with obstructed outlets. There is also an Intercalated Programme in Clinical Anatomy that has been initiated

with the University of Birmingham and the first two fully dedicated students have started their year of studying the hearts with transposed great arteries with or without ventricular septal defects.

Through this SCTS scholarship I was also able to improve my knowledge and develop useful links with similar heart collections by participating at the Masterclass in Cardiac Morphology held at Pittsburgh Medical Centre and visiting Laurie's Children's Hospital in Chicago, US (Dr Carl Backer) in September 2016. That provided further proof that from an organisational point of view the BCH collection is now on par with the largest collections in the world and is ready for extensive international collaboration. Furthermore we continued to collaborate with the curators of the archive held at Great Ormond Street Hospital and Institute of Child Health in London and I was able to participate at the European Course in Cardiac Development in Newcastle in November 2016.

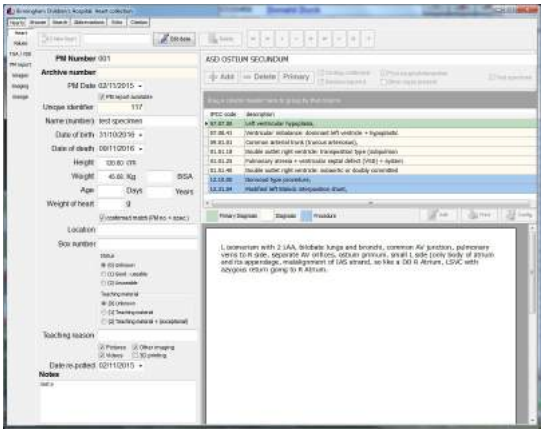
Probably the most important achievement was the development of the first of its kind heart collection database that includes all specimens and is linked to the BCH clinical heart software (Heartsuite).

The data is stored securely in a Microsoft SQL server database which also holds the majority of the logic of the data relationships.

"The most important achievement was the development of the first of its kind heart collection database that includes all specimens and is linked to the BCH clinical heart software (Heartsuite)."

Most actions trigger stored procedures within the database. Access to the application is three-fold at the level of access to the Domain, access to clinical Heartsuite and finally registered users. The application is written in a rapid application development (Delphi: Embarcadero® RAD Studio 10.1 Berlin Version) – this help reduces the development time involving writing the codes, debugging, testing and subsequent refinement.

The advantages of this are that all of the necessary libraries of codes are compiled into the executable file (application controls & database connectivity). This results in an application that does not require any installation and can be run on any PC within the Trust. It runs in an RDP (remote desktop protocol) connection – this also means it can run on Apple iPAD or Android devices with the correct connectivity. Data is primarily stored within the database in a relational format. Furthermore additional files (such as post-mortem reports), video recordings and supplementary images are stored as files within the departmental server with appropriate access controls in space. This makes the use of the images and video easier to manage and use for teaching.



Each specimen is described in three ways: a short description of 150 characters, a longer description stored as a RTF (Rich Text Format) field which can accommodate text, tabular data and images and also by using the latest IPCC (International Paediatric Congenital Cardiac) codes in short version. The IPCC codes are the same codes used for the NCHDA (National Congenital Heart Disease Audit) data collection. This enables us to use the same queries to link the specimens within the heart collection to patients in the departmental database. The codes are linked to ICD10 (International Classification of Diseases) and OPCS (Office and Population Censuses and Surveys) codes for further comparison.

To our knowledge this advanced flexible electronic mode of storage and archiving is not used by any other cardiac archive in the world. Its adoption would enable an easy transfer of information between various collections, thus enabling projects of different calibre to take place without the need of examining each specimen or their detailed information. This renders the BCH collection as a fully functional archive that can be extensively used by the SCTS or other interested organisations with the scope of teaching, education and research of malformed hearts.

Acknowledgements

I would like to express my sincere gratitude to:

- The Society for Cardiothoracic Surgery for providing me with this fantastic opportunity through its Ionescu Scholarship scheme and for supporting Non-NTN Doctors in this specialty.
- The cardiac surgical team at BCH (in particular Mr David Barron), Mr John Stickley and the BCH Trust Board (in particular Dr Fiona Reynolds) who unanimously supported my curatorship role of the archive and the various activities undertaken during the last year.
- Mr WJ Brawn for his tireless way in which he showed me guidance and assistance for this project even after leaving the exciting environment of the surgical theatre.
- Professor Robert H Anderson for his expertise and unbelievable enthusiasm as a role model in teaching so many generations of medical professionals interested in the complex field of congenital heart pathology. ■

SCTS Ionescu Scholarship for non-NTN doctors

I was sincerely honoured to have been selected as the recipient of the SCTS Ionescu Scholarship for non NTN doctors earlier this year. I am extremely indebted to Mr Ionescu and the Society of Cardiothoracic Surgery for this award.

Andreas Paschalis

After completing my training in cardiothoracic surgery and successfully passing the Greek and European Board Cardiothoracic exams, I felt it would be an interesting opportunity to broaden my horizons with a Master in Business Administration-- MBA in Healthcare. I was successfully accepted by Sheffield University to start earlier this year as an Executive MBA student through its international Faculty. The funding I have received from the scholarship was of great help in paying my educational expenses.

As a clinician all these years I was focused on my patients, their operation and their recovery. I was not really interested what was happening around my department, who was taking the decisions, who was paying for the material I was using, who was bringing my sterile instruments in theatre and why as a department they should achieve target goals.

Almost a year after starting the MBA I believe my way of thinking in many aspects has changed. Keeping and evolving my surgical skills, I can now think more broadly and make suggestions about how my department should be operating.

The first year's modules of the MBA covered business economics, financial and management accounting, logistics and supply chain management, information management, strategy formation and processes--operations developing. By the sound of these words they are by far away from any familiar medical terminology. This is actually misleading as if you actually apply these terms in healthcare everything matches.

After attending the MBA modules, you need to submit an assignment relevant to its topic. Most of my assignments were based either on the NHS or my department's operation. This gave me the opportunity to start investigating several problems we were facing as a department and I tried to suggest solutions. I found myself interviewing our theatre manager in order to identify any logistics issues (logistics and supply chain management) and organising meetings with the ward managers to collect information about any ward malfunctioning (information management). I followed the patient flow from the A&E admission until their discharge, identify processes and operational bottlenecks, investigate academic literature and make suggestions for improvement.

I have recently been appointed as a Locum Cardiothoracic Consultant at Wythenshawe Hospital and participated in meetings that took place in Manchester where the merging of the two cardiothoracic departments was discussed. These were meetings mainly of clinicians discussing managerial issues and how their voice should be taken into account in the decision making. I was surprised but pleased at the same time when the consensus was to make a strategy plan from the clinician point of view and not leave it to financial managers.

The role of an NHS Cardiothoracic Consultant is mainly to treat his patients but there is also an element of management in order to succeed in its commitments. I feel that the MBA in Healthcare is giving me the appropriate qualifications to improve my personal development as a consultant and as a leader.

Once again I would like to express my gratitude to Mr Ionescu, the SCTS education committee and especially Mr Shah and Mr Lewis of awarding me with the scholarship and supporting a non-NTN doctor to achieve his goals. I am also indebted to Professor Yonan who supported my application. ■

SCTS Ionescu Scholarship for Tracheal Surgery

Syed Qadri, Consultant Thoracic Surgeon

Tracheal diseases are fortunately rare but can be very debilitating pathological conditions, with significant impact on quality of life and potentially poor long term prognosis. Malignant conditions are mostly treated with palliative non-surgical modalities. However, benign diseases which are more common have a greater effect on quality of life and require long term treatments which are on the whole palliative. There are certain benign diseases and occasional isolated tracheal tumours that can be treated surgically with a curative intent.

There are very few centres in the world that have dedicated tracheal surgeons performing regular high volume tracheal surgery. There is no dedicated tracheal centre or surgeon in the UK, especially for adult tracheal diseases, although few senior Thoracic/Cardiothoracic Surgeons in the UK have had some training in tracheal surgery and perform occasional tracheal surgery. These procedures are so small in number that they are not included in the UK Thoracic National Database.

During my training as a Non-NTN trainee, I have been exposed to some tracheal resections with senior surgeons. Although these are technically challenging procedures, I am very fascinated by this surgery and its end results. At the completion of my training as a Thoracic Surgeon, I was very keen to acquire skills to deal with more complex thoracic conditions such as tracheal surgery. After a lot of research, I found a centre at Massachusetts General Hospital, Boston, which provides a well-organised tracheal surgical training program. There is a short term educational program, the Visitor Education Program, for limited durations, from one week to three months; it is mostly an observational education program.

I took the opportunity to apply for the newly established "SCTS Ionescu Scholarship for Non-NTN doctors in Cardiothoracic Surgery" and was grateful to the Society when my application was approved and I was awarded the scholarship.

I contacted the tracheal surgical unit at Massachusetts General Hospital and in particular Dr Mathisen, who is the lead surgeon of the department, and known for

his outstanding tracheal surgery globally. I then had the opportunity to meet him and discuss with him how I can commence and participate in this programme. He explained the variable referral pattern they have, with no tracheal surgical cases for several months while occasionally they can have three cases in one week. Therefore, due to the unpredictability of cases, he advised me to be available on short notice for multiple short visits rather than going for a fixed planned period. Dr Mathisen's secretary kept me informed about the list with tracheal surgery 1-2 weeks before the operative day. Although it is difficult for me to travel on short notice while working as a consultant, I discussed it with my colleagues and hospital management and was fortunate to find that they were very helpful regarding the potential opportunity. Therefore, I committed to Dr Mathisen's team for short visits to observe tracheal surgery when he would be operating.

It is especially difficult and stressful organising my sessions here by swapping lists and clinics for me to travel to MGH on short notice. The flight and hotel were very expensive and I hardly had any time to adjust to jetlag due to a tight and busy schedule. However, it has been a very interesting and educational visit. I have been fortunate enough to observe and discuss tracheal resection with various benign and malignant pathologies. This scholarship is only enough to do 2 - 3 short visits, which is not enough to learn tracheal surgery to a level of competency. Nevertheless, I am very thankful to the Society and Mr Ionescu for this scholarship, which not only offers me the opportunity, but provides me with the inspiration to achieve my ambition. I have an agreement with Dr Mathisen's team to keep me updated regarding their theatre list in advance as much as possible, and will continue visiting them to learn more about tracheal surgery, as far as my scholarship allows. I will hopefully start tracheal surgery with the assistance of my experienced colleagues at my hospital, and serve the suffering patients in improving their quality of life and long term outcome. ■

3rd Liverpool Heart Research UK Aortic Arch Masterclass

Deborah Harrington, Consultant Cardiac & Aortic Surgeon, Liverpool Heart & Chest Hospital, Arch Masterclass Course Director

On 11th November the University of Liverpool played host to the 3rd Heart Research UK Aortic Arch Masterclass. The course was entirely funded by Heart Research UK and organised in conjunction with the Aortic Service of Liverpool Heart & Chest Hospital.

Aortic arch surgery is an area of subspecialisation uncommonly encountered by the majority of cardiac surgeons. In most UK centres it is difficult to train in arch surgery due to both case complexity and low volume. Most senior cardiac surgical trainees will never perform arch surgery and most recently appointed Consultants will have had only limited exposure to such cases.

The aim of this course was to provide a unique opportunity to gain hands on experience of total arch replacement in a human cadaveric model, supervised by an expert Faculty. The Masterclass was aimed at recently appointed Consultants and senior trainees in cardiac surgery who were already operating independently for the generality of cardiac cases.

We were delighted to have an excellent Faculty, including our SCTS President Mr Graham Cooper, Mr Alex Cale from Hull, and a full turnout of colleagues from Liverpool, with Professor Aung Oo, Mr Manoj Kuduvalli and Mr Mark Field all providing hands on support and expertise. Unfortunately, Mr Jorge Mascaro was unavoidably detained by emergency clinical commitments in Birmingham, resulting in a last minute substitution for the cerebral protection discussion.

The course began with presentations and discussion on cerebral protection for aortic arch surgery and practical tips and tricks on the technical aspects of arch replacement.

The remainder of the day was spent in the operating room where course delegates worked in pairs each supervised by a Faculty member. All delegates were able to perform a complete total arch replacement, assisted by their colleagues. The day ran very successfully and we were grateful to the participants for their positive feedback.

We were also hugely grateful to Vascutek who supplied a whole range of arch grafts, allowing us to select the most appropriate for each situation. We are also indebted to Covidien for supplying the sutures, and to Kevin Austin from Wetlab for the instruments.

Thank you to all the delegates for being excellent participants, Faculty for their time & expertise, the University of Liverpool Human Anatomy Resource Centre, and finally Heart Research UK for their support in improving outcomes for our aortic patients. ■

Professional Development Courses

Aman Coonar

The mission - 'Every consultant cardiothoracic surgeon should be a clinician-manager-leader'. Following a very successful and oversubscribed pilot, we started a programme of targeted education with our partner Academyst.

In 2016, three courses were run.

- Understanding the complex healthcare environment
- Leading in healthcare
- Negotiating & influencing

The feedback was excellent but it's also true that the numbers were lower than at our pilot. We've asked why and it's multi-factorial.

We are exploring ways to maximise the benefit and condense the courses so that more education can be packed into a short time-scale. Asking nurses to join us was definitely an asset.

We hope that SCTS can continue to subsidise these courses which are important at this time of enormous pressure on services. We are very grateful for the substantial investment from SCTS and their donors.

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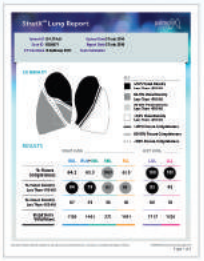
90% Combined Accuracy
of StratX™ Lung Analysis and Selective Use of Chartis



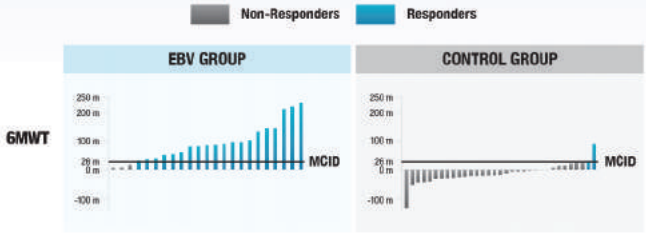
StratX Lung Analysis Platform

Chartis Pulmonary Assessment System*

Source: Koster TD. et al. Predicting Lung Volume Reduction after Endobronchial Valve Therapy Is Maximized Using A Combination of Diagnostic Tools. Respiration. 2016 (in press).

Significantly Greater Responder Rates
for EBV-treated Patients than Standard of Care

MCID responder results among patients who completed the study.



12,000+ Patients Treated
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Source: Supplementary appendix STELVIO Trial 'Endobronchial valves for emphysema without interlobar collateral ventilation' Klooster et al. Nov 18, 2015, p 30.

Almost **1,000** Patients Studied in Clinical Trials

Across multiple RCTs, patient outcomes consistently exceeded the MCID in measures of lung function, exercise capacity and quality of life.

RCT	Design	Follow-up Period	FEV_1% Improvement†	6MWT Improvement†	SGRQ Improvement†
NEW **IMPACT**[1]	n = 93 1:1 RCT Valves vs. SoC Homogeneous	3 months	**17.0%***	**40 m***	**-9.6 pts***
STELVIO[2]	n = 68 1:1 RCT Valves vs. SoC Heterogeneous & Homogeneous	6 months	**17.8%***	**74 m***	**-14.7 pts***
BeLieVeR-HIFi[3]	n = 50 1:1 RCT Valves vs. Sham Heterogeneous	3 months	**20.9%***	**33 m***	**-5.1 pts**
VENT[4] (US + OUS)	n = 492 (122 in subset) 2:1 RCT Valves vs. SoC Heterogeneous & Homogeneous	6 months	**24.7%**	**28 m**	**-8.4 pts**

Source: 1. Valipour A, et al. Am J Respir Crit Care Med. 2016; 2. Klooster K. et al. N Engl J Med. 2015; 373: 2325-36 + Supplementary Appendix; 3. Davey C et al, Lancet. 2015; 386 (9998): 1066-73 + Supplementary appendix; 4. Scuirba F.C. et al. N Engl J Med. 2010; 363(13): 1233-44/ Herth F. J. et al. Eur. Respir. J. 2012; 39(6): 1334-42/ Ad hoc analysis on file at Pulmonx.

*Intention to treat analysis
†Difference between valve and control groups

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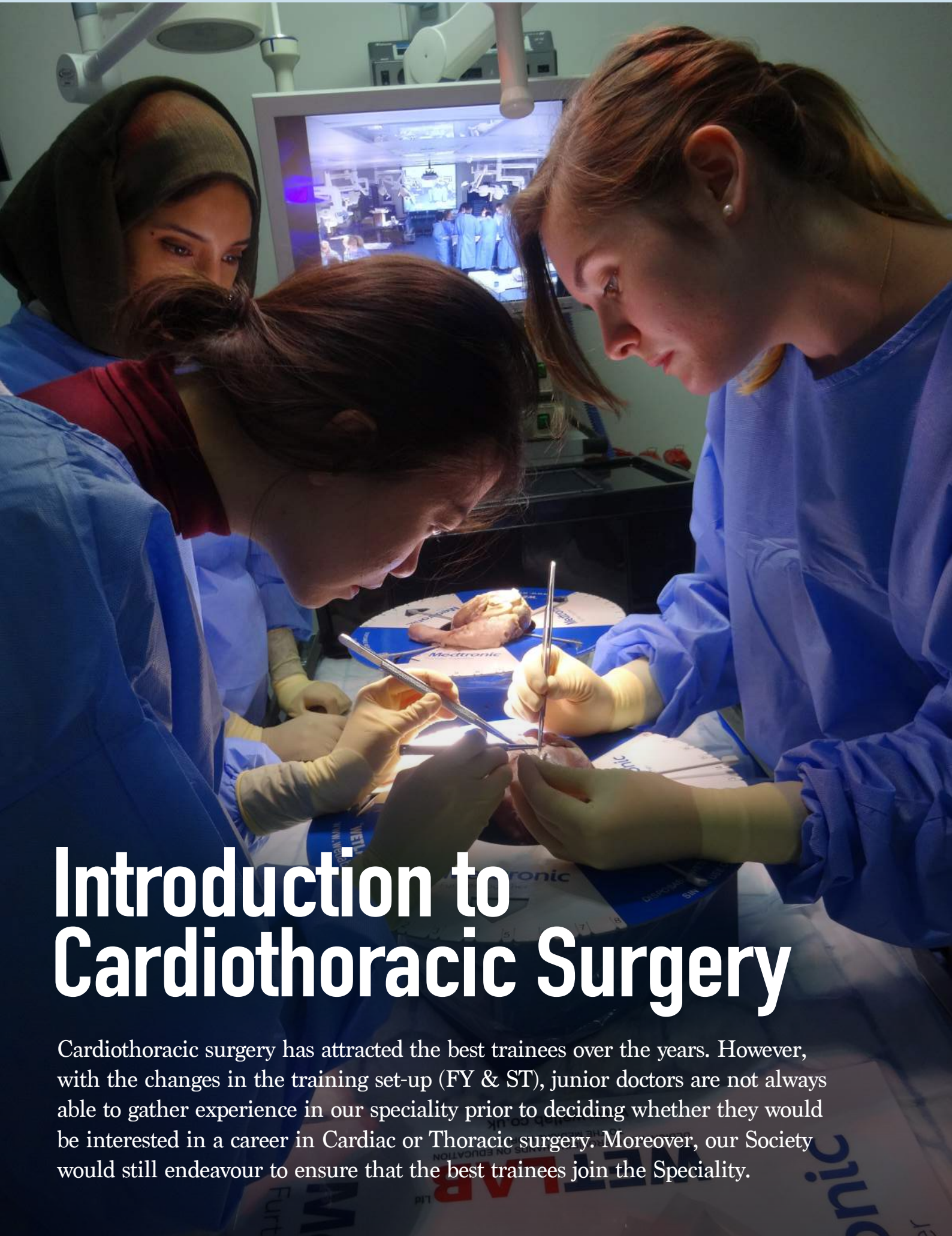
CAUTION: The Zephyr Endobronchial Valve is an investigational device in the US, limited by US law to investigational use.
*Availability of Chartis console models may vary by country.
CAUTION: The StratX Lung Analysis Platform is not available in the US.



Introduction to Cardiothoracic Surgery

Cardiothoracic surgery has attracted the best trainees over the years. However, with the changes in the training set-up (FY & ST), junior doctors are not always able to gather experience in our speciality prior to deciding whether they would be interested in a career in Cardiac or Thoracic surgery. Moreover, our Society would still endeavour to ensure that the best trainees join the Speciality.

Heyman Luckraz,
Karen Harrison-Phipps

With this idea in mind, the Cardiothoracic Surgical Tutors (Mr Moorjani and Mr Rathinam) contacted Karen and I with a view to set up this Course for junior doctors who may be wishing to have a taste of Cardiac and Thoracic Surgery. The Royal College of Surgeons Edinburgh agreed to be the main Educational sponsor for the Course, along with SCTS. After a couple of telephone calls and many email exchanges, the first one-day course was set up and ran at the RCS Edinburgh on 27th November 2015 and was entitled "A day in the life of a Cardiothoracic Surgeon". It was attended by nine delegates. Based on the feed-back from the delegates (course fees and location) we decided that future Courses will need to improve on both these accounts.

Last year, the one-day Course was held in Coventry (West Midlands Surgical Training Centre) on 23rd September 2016 and was still educationally supported by RCS Edinburgh and SCTS. Medtronics (through Noel Kelly) were very helpful and agreed to sponsor the Course. Thus the Course was entirely free for the attending delegates.

Last year's Course was entitled "Introduction to Cardiothoracic Surgery". We delivered a few short lectures followed by wet lab sessions covering Thoracic topics such as chest drain insertion, lung cancer resection and VATS surgery while the Cardiac topics included coronary revascularisation and aortic valve replacement. There was also a general lecture on "National Selection for CTS and ST1 Interviews" by one of our Cardiothoracic Trainee. The Course was centrally administered by Letty Mitchell at SCTS Education.

The Course had eighteen delegates (mostly FY1 and FY2) and seven Faculty members. It was a great success and both the delegates and the Faculty had a fabulous time. Last year's delegates' feedback included:

- It was extremely useful to hear about what a career in Cardiothoracic surgery entails and how candidates are selected onto the training programme. This has now informed me exactly of what I need to achieve over the next year before applying.
- Informal interaction with friendly and diverse senior faculty members throughout the day in an unhurried and relaxed environment.
- It was very well structured and I found it extremely useful to have a programme which was lecture followed instantly by practical – it meant you could immediately apply your knowledge to hands-on experience. Also, knowing what to expect as a cardiothoracic trainee was very useful.
- Wet lab sessions were very useful, really enjoyed being able to practice those skills and learn the basic principles behind them. Never had the opportunity to do this before so it was very educational. The quality of the specimens was great and the materials and instruments provided were ideal. Thank you very much!
- I found the talk on national selection extremely useful as it was delivered by a trainee who had recently gone throughout the process, and who was very knowledgeable about the subject. The wetlabs were also excellent and had a very good tutor: participant ratio allowing for excellent supervision, teaching and feedback.

When asked about any further changes required to the Course, the delegates' feedback included:

- Nothing at all. All things were relevant - great, clear structure to the course.
- I really struggle to find fault with the day; it was really excellent. All aspects were useful, though perhaps a little more time spent discussing the detail of the training pipeline may be of interest.
- None: It was all very useful and helpful to know in terms of introducing us to career in cardiothoracic surgery.
- Nothing was least useful as everything was brilliant. I would have liked to hear about ST3 application in a little bit more detail, only because that is what you may need to apply for if, like me, you came to cardiothoracic surgery later than CT1, but I appreciate that the course is not geared for that at present and is more focussed on ST1.

Based on this current level of feedback, it seems that the change in the location as well as a free Course contributed to more trainees joining in. We will be planning another Course in 2017. We are in negotiation with Medtronics for sponsorship and hope to run the Course in Coventry with minimal charge for the delegates. If you know of any Junior Doctor who might benefit from this Course, please ask them to contact Letty via email (**education@scts.org**). As importantly, if you wish to be part of the Faculty for the next Courses then please do not hesitate to contact Karen (**Karen.Harrison-Phipps@gstt.nhs.uk**) and I (**Heyman.Luckraz@nhs.net**). ■

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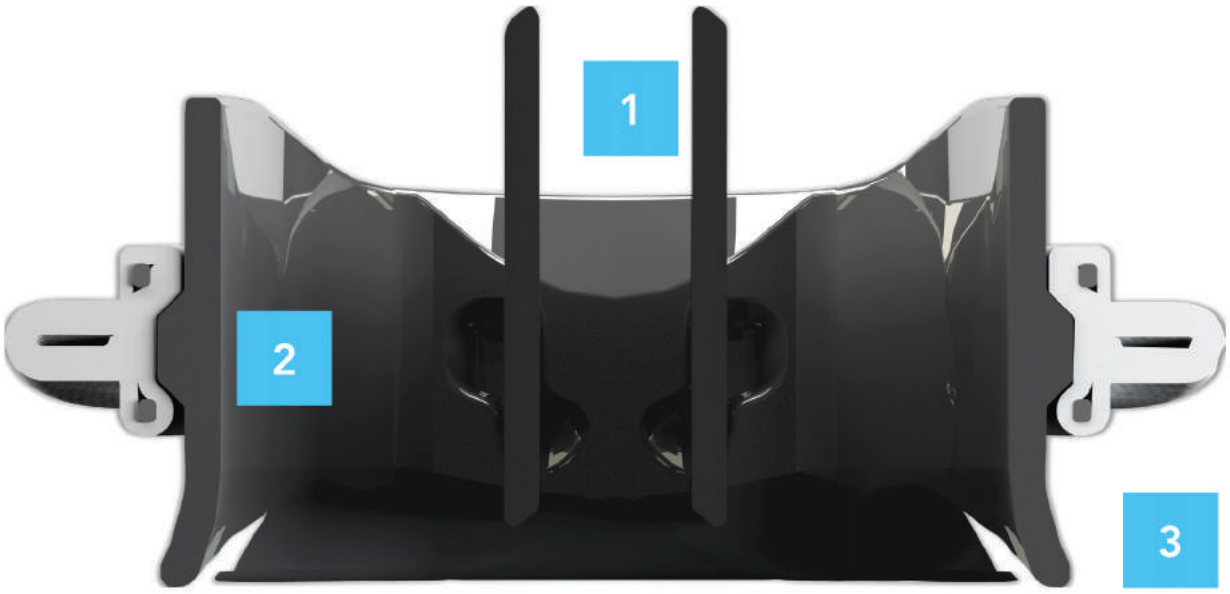

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*Reduce INR after 3 months standard therapy[1]

1. On-X Prosthetic Heart Valve Instructions for Use. 2. LaGrange L et al., Compatibility of carbon and blood. Hegyeli RJ, Editor, Proceedings, Artificial Heart Program Conference, Washington, DC, June 9-13, 1969, 47-58. 3. Normal INR is considered 1. WHO Expert Committee on Biological Standardization, 33rd Report, World Health Organization, 1983. http://apps.who.int/iris/bitstream/10665/39217/1/WHO_TRS_687.pdf, downloaded on 06/29/2016.

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My Challenge for Retirement

At the age of 63 (please tell me I don't look that old!) I was finding the challenge of being on-call for heart and lung transplants difficult to cope with, not only because of the disturbed sleep (multiple phone calls about donors) and long operations but also increasing frustration at being in the hospital at weekends when the family (especially new grandchildren) would come to visit.

Leslie Hamilton

I was thinking of taking early retirement but wanted something exciting to start me off - something physical to prove to myself that I was still able to do things. I was looking for ideas.

I have written previously about my application (Bulletin 2015). I had seen a note in a local paper about a talk on the Clipper "Round the World Race" - I was vaguely aware of what it was about. I went along with my daughter (a keen sailor who was home for Christmas – she went out to New Zealand after F2 and has not come back). I had no notion of signing up for the race. My sailing experience was in dinghies, with a couple of holidays in Greece where my wife complained if the boat leaned over and spilt the G+Ts. However, I brought the brochure home. I mentioned it over dinner. My wife did not think I would cope - I get sea sick! A challenge. I was hooked. I couldn't sleep and remember filling in the application form at 4am. Weeks later, a question from my wife - did I know anything about a cheque for £500 (initial deposit) going out of our account? Confession time!

A telephone interview - how would I cope with lack of sleep? (4 hours on "watch" and 4 hours off). After on-calls, no problem. How would I cope with lack of privacy (mixed sex crews with common bunks)? Surgical changing rooms and theatre. I was in. Crew allocation day in Portsmouth was a spectacle - 400 excited (slightly mad) people in red Clipper race jackets ranging in age from 18 to 73yrs. I was allocated to Team Great Britain. Then booking the 4 weeks of training in Gosport. I did not have enough leave left so I had to retire. Training was done on the boats used in the previous races. They assume no previous "big boat" experience (40% have never sailed before). Training is very safety focussed with regular man overboard drills. They take you from novice to ocean racer in 4 weeks – with an appraisal at the end of each week with the skipper. Some don't pass (ARCP 4).

The race was started by Sir Robin Knox-Johnson 20 years ago. He was the first person to sail single handed non-stop around the world - the only one to finish the Sunday Times "Golden Globe" race in 1968. He wanted to give "ordinary" people the chance to sail across oceans. The race has grown over the years and the 2015 -16 race had 12 identical 70 foot yachts with crews of around 20. About 40% of the crew do the full "round the world". It takes 11 months and this race had 8 legs with 14 races. The route has some interesting stop-overs: London - Rio - Capetown - Australia - Tasmania (the classic Sydney to Hobart race) - eastern Australia - Vietnam - China - USA (Seattle) - Panama Canal - New York - N Ireland (Derry / Londonderry) - Holland – London. My races (leg 8 had 3 races) started in New York. On June 20th I said goodbye to my wife and went on board. Leaving New York, we had a "parade of sail" with the Manhatten skyline as a backdrop and then past the Statue of Liberty.

I knew from training it would be physically hard. The sails (many sizes and shapes to cope with all conditions) are heavy and must be manhandled - the largest foresail takes at least 5 to lift it. Everything is done manually - no fancy electric winches on these boats. Twin "grinders" to cope with the loads. What I had not anticipated was the mental challenge – wind constant, sails set and so nothing to do on "watch" except look at the sea. I love the sea but when there is nothing else in the world to look at except the sea …. I can see why solo sailors go "mad". Some interesting philosophical discussions about man's place in the universe.

At induction they show you videos of the extreme weather conditions. They tell you about the insurance you must take out to cover being airlifted off the boat and treatment abroad. The skippers have extra

"What I had not anticipated was the mental challenge – wind constant, sails set and so nothing to do on 'watch' except look at the sea. I love the sea but when there is nothing else in the world to look at except the sea... I can see why solo sailors go 'mad'."

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trauma training and have an extensive medical kit on board. Fractured limbs are not unusual (our Watch Leader broke his arm while up the mast in a storm). Although they try and have a doctor or nurse on board each boat, the Skipper is responsible for medical care. Two people died during this race (the first deaths they have had in 10 races). Mother Nature can be a formidable adversary. Evacuation by helicopter is a not uncommon occurrence. No luxuries either – it is a racing boat. No washing facilities as fresh water (from a de-salinating machine) is precious. Living in a confined space with 20 other people can be challenging. No showers. "Baby wipes" rule OK. So, no hidden surprises. But an amazing esprit de corps comes from being in it all together.

Life is lived for the most part with the floor at 45 degrees - the boats typically sail on one side of the hull. Moving around the boat can be a challenge. Going to the toilet deserves a separate article. Sleeping is difficult, aside from the short time available. There is a pulley system to adjust the angle of your bunk when the boat is heeled over but that means waking up every time the boat changes tack. There is constant noise from the generator, the winches and sails, and the other "watch" on deck. Cooking (one person from each "watch" acts as mother for 24 hours) for over 20 people when the boat is at 45 degrees and bouncing through the waves is interesting. Woe betide you if you don't produce something tasty as food is important for morale. Freshly baked bread for breakfast and a cake for after dinner are basic expectations. I still lost a stone in weight - the most expensive weight reduction programme in the world!

But what a wonderful experience. I would not have missed it. The satisfaction of crossing an ocean; seeing dolphins playing in the bow wave; the camaraderie; the elation when the team work smoothly together and a difficult sail change / tack / gybe goes well; the excitement of racing 11 other boats; meeting so many other fascinating people from all walks of life and other countries and seeing so many different places. Tower Bridge opening to allow us through. And we held on to 3rd place by one point (I have never been sprayed with Champagne before). Finally, being reunited with family is special. ■

The Rise of the Robots – Interest developing in robotic thoracic surgery

There has been an evolution of surgery that has seen procedures moving from open surgery through rigid instrumented laparoscopic/thoracoscopic op-erations to 3DHD enhanced vision and fully-articulating effector arms that constitutes what we know as robotic-assisted surgery today - the DaVinci robot.

Sasha Stamenkovic

In reality this is a form of tele-manipulation or assistant robot rather than a programable device that is ubiquitous in the car industry, and so represents the 3rd generation of robotics.

This platform continues to evolve and at least two other massive healthcare industry players are developing their version of an automated device to assist the surgeon and improve the recovery of the patient. It has not always been so.

For over 15 years one, Intuitive Surgical, has led the way with a robotic platform and it is only recently that the penny has dropped that this type of surgery is very much here to stay.

The Last 10 Years

The DaVinci robot has changed over the last 20 years. It started as a 2-arm and camera device, with 2D optics.

There was very poor uptake in thoracic surgery and only a few chiefs of surgery seemed to be the maverick operators who were proselytising their experience.

The robot of today is an extremely sophisticated machine with precise sensing and movement, capable of automated docking, dual cavity operating, completely exchangeable port-instrumentation and 360-degree rotating staplers.

There is an array of tools and software applications that can be used by multiple disciplines of surgery, and the thoracic surgical community has started to discuss more widely the application of this robot.

In the UK the way was led by Mr Rex Stanbridge in St Mary's who used the S-version and found little applicability.

Seven years passed and in 2013, the Thoracic surgery department at the Freeman hospital, as one of the multi-disciplinary surgical teams asked by the Chief executive, started to evaluate this technology in the Trust.

By this time there was some evidence of the possible benefits of robotic-assisted thoracic surgery.

The Newcastle group has pioneered this surgery in the UK with the modern 4-arm DaVinci machine leading to other centres developing their own programmes.

The Main Players

Franca Melfi was the first to perform and the first to publish the use of the DaVinci robot in thoracic surgery in 2002. In this article she laid out the advantages of this platform.

She went on in 2005 to publish her early experience and Giulia Veronesi discussed the single institution's results at the 85th meeting of the AATS in 2009.

Bob Cerfolio wrote about the Alabama early experience in 2011 and is also on the pilgrim trail for anyone wanting to see a large volume robotic thoracic centre.

The Newcastle Experience

A consultant, charge nurse and surgical trainee team, with experience in VATS and open thoracotomy, trained for 2 days at the Ecole Europeene in Paris on a cadaveric model in October 2013, and risk and clinical governance structures were devised to allow clinical procedures.

We planned to prospectively record all data from the robotic operations and to use video-recording as much as possible to enable a shorter learning curve.

Proctored technically straightforward procedures were done, followed by visit to Dr Melfi's unit in Pisa where case observation took place.

We performed the first UK robotic-lobectomy with a DaVinci Si system under the guidance of our proctor in April 2014, with all 3 consultants surgeons and the original team present including the lead cardiothoracic robotic anaesthetist, as planned.

We set aside a whole day and performed a relatively straight-forward operation (fissure grade 1) with 50ml blood loss.

This 77 year lady had an all-day operation, had a pain score of 1 out of 10 (visual analogue score), and went home on the 6th day.

At the time the conventional VATS lobectomy median post-operative length of stay was 4 days and the pain score was approximately 5, making for an encouraging initial experience of the technique.

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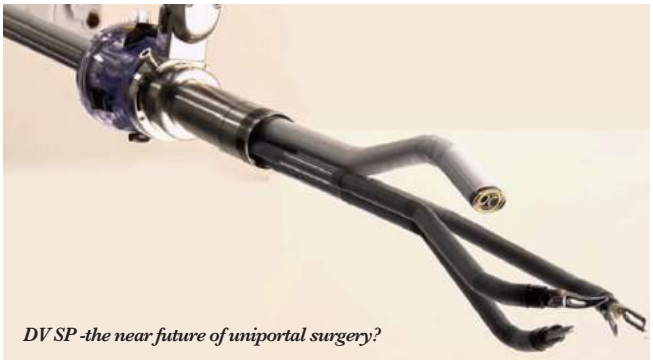


DV SP -the near future of uniportal surgery?

As the program has matured, to date we have performed over 100 operations using the robotic platform.

In year 2 we performed 44 robot operations (0.84/week) and in year 3 we have done 1.6 per week.

Lesson Learned

What has become clear is that the complexity or grade of the operation that can be performed using the robot is far higher than that achieved by VATS.

The 3DHD vision and the fully articulating effector arms have allowed operations that would have been performed normally by an open technique to be undertaken by a robot-assisted one.

This means that patients who would have naturally had more pain and the complications of an open operation, and who would have stayed in hospital for at least 5-7 days, could go home earlier, with less pain, and with quicker rehabilitation.

A percentage of patients need adjuvant treatments and we have shown that a robotic technique gets patients those treatments and with a better ability to withstand the toxicities of those treatments.

The robotic surgical repertoire has also expanded and we have also performed resection of mediastinal masses notably thymectomy including in those with myasthenia gravis. This has meant that we do not need to perform a sternotomy and this is important in older female patients who have a risk of osteoporosis-induced poor sternal wound healing.

We have also performed diaphragm plication operations for patients with paralysed diaphragms, operations which were done using a thoracotomy in the past.

Complexity of Operation

In a patient with dense adhesions or a grade 4 fissure, the patient is likely to have a conversion to proceed.

6% patients had a grade 4 fissure but the operation was managed with a robotic technique in all but one (aspergillus-lung welded to diaphragm) largely due to the far superior vision and the articulation of the effector arms.

Most of these patients were able to go home within 3 days.

We are not only able to perform first time complex operations but we have pushed the boundaries and are able to perform redo operations where a patient has had that side operated on before, leaving multiple adhesions that would preclude any VATS operations and make an open operation difficult.

One patient had a prior open sub-lobar operation for metastatic disease and had a redo (same-side) lung resection and thymectomy, where we found multiple adhesions using the robotic approach.

He commented on how little pain (score 1) there was post-operatively in comparison to his open operation two years previously, and how quickly he could go home (day 3).

5% of our patients have had redo operations and have got home far quicker than they would have done with an open operation, as they had pain scores of 1-3. In summary there is clear evidence of the ability to use the robotic platform to do more complex operations and get patients home quicker.

Conversion Comparison with VATS

Since changing from VATS to a robotic platform, there has been a 66% reduction in conversion rate.

This in turn correlates to more patients having a shorter hospital stay, less pain, less analgesia, fewer HDU days and a lower complication rate.

There have been some early operations where we have failed to progress due to unpredicted anatomical or tumour features It is possible that this has been part of our learning curve and further such cases will not be continued robotically.

Day-one pain scores and long-term neuropraxia

Pain scores are correlated to length of stay and post-hospital speed of recovery.

Our first patient was kept in hospital for observations but had a pain score of 1 on day 1. She was publicised in the local and national news as being able to walk her grandson to school within three weeks.

Other patients have written in to say that they were on their horse within a week of surgery. This post-operative rapid rehabilitation is one key element of the use of the robotic platform that is an improvement on VATS operations.

It is accepted that a lot of VATS and most open patients have some lasting neuropraxia due to intercostal space levering or opening. This type of chronic pain can lead to a slower recovery, and the need for chronic use of neuropathic analgesia. In our series, we found 6% complaining of this type of discomfort in the follow-up clinic (cf: 75% for open).

We have found that those patients with chronic pain issues and regular analgesic-use pre-operatively do not have higher pain scores but in the main, they stay longer in hospital.

Fibromyalgia patients often have chronic fatigue and pain issues. One such patient with a very weak grip strength was determined to get home quickly and left on day 3.

World First

We pioneered and published a sub-xiphoid approach for lobectomy in October 2015 to insert endoscopic staplers and extract often quite-significantly air-trapped lung specimens (CTSNET May 2016).

This means that no anterior utility port through an intercostal space is made and that patients can more consistently be sent home on day 2. Two patients were actually well enough to go home on day 1 and 10% of patients have said that they have no pain on day 1.

Model made from Leonardo DaVinci sketch book 1420

In summary, the robot-operated patients seem to have considerably lower pain scores and this equates to them having a reduced hospital stay and a quicker recovery phase at home.

Costs

The amortised costs will be shared among the different surgical teams using the robot, and the more the robot is used over its lifespan, the cheaper that will become.

The disposable costs when the team started these robotic pro-cedures was more than £1500 and this has been reduced to about £1000 due to efficient use of drapes and equipment, and due to the team consistently using four Intuitive robot instruments to do the operation.
This figure can be off-set against the reduction in length of stay.

Further reductions in costs can be achieved by not requiring an HDU bed, physiotherapist input or blood cross-matching (the operative suction canisters measure tiny blood losses).

Training

As part of a premier teaching hospital we continue to train all competent surgeons.

To date four consultants and three trainees have performed robotic operations, having followed a dedicated training pathway including many hours on the simulator.

DaVinci Xi model 2014

It has been extremely useful having the dual robot console, allowing both the trainer and the trainee to see exactly the same 3DHD image of the operating field with the ability to place markers to guide the operative steps, and to pass control of some or all arms. In addition the training has been significantly enhanced by recording operations. Time spent watching/editing playback has streamlined this process.

As a result surgeons who have not trained in VATS resection operations have been able to perform minimally-invasive procedures.

The operative times for trainee robotic surgeons is not markedly different to the consultant surgeons, showing that standardised operating leads to efficient outcomes.

Our team has comprised the Faculty of the the first UK robotic thoracic course, contributing to the training of surgeons from an international arena as far as Hong Kong.

The Future

Several centres in the UK and Ireland have started proctored robotic thoracic programs (Middlesbrough, Guy's, UCH, Leeds, Galway and Dublin and there are more online to get going (Barts, Liverpool).

It is no secret that two medical conglomerates have invested in robotic technology, as they see the benefits of robotic-assisted surgery. This will bring competition to the surgical robotic marketplace for the first time and will lead to more advances of this technology, and drive down costs.

There is a world-wide push for minimally-invasive thoracic surgeons to perform uniportal surgery and this is on the near-horizon (DaVinci SP). There is clear interest from NHSE, and the government is monitoring these developments.

The Science and Technology chair was present at a Westminster meeting recently confirming that the UK is set to be part of the 4th industrial revolution (robotics and artificial intelligence) with healthcare high on that agenda. A European fully prospectively-collected database is on the way, and there is discussion about a subsidiary UK robotic-thoracic interest group.

Robotics in healthcare is considered unstoppable. The near-future will include surgery by some form of partially-automated articulating device, controlled by surgeons.

Data collection and detailed quality of life and cost-utility studies are required in thoracic surgery to provide the best evidence base for NHSE, and address the health technology assessments.

Already patients are seeing the benefit of this technological advance. ■

• NEW CONSULTANT APPOINTMENTS – AUGUST 2016–JULY 2017

Name	Hospital	Specialty	Starting Date
Mesbah Rahman	University Hospital of Wales	Adult Cardiac	September 2016
Ainis Pirtnieks	University Hospital of Wales	Thoracic	September 2016
Keng Ang	Glenfield Hospital, Leicester	Thoracic	2016
Christopher Efthymiou	Glenfield Hospital, Leicester	Cardiac	2016
Ian Paul	James Cook University Hospital	Thoracic	October 2016
Paul Vaughan	St George's Hospital	Thoracic	June 2016
Szabolcs Misckolczi	Southampton General Hospital	Adult Cardiac	January 2017
Niall McGonigle	Belfast Health & Social Care Trust	Thoracic	February 2017

• OTHER APPOINTMENTS

Name	Hospital	Starting Date	Appointment
Dimitrios Pousios	Liverpool Heart & Chest Hospital	February 2016	Locum Consultant
Nicolas Nikolaidis	New Cross Hospital, Wolverhampton	August 2016	Locum Cardiac Consultant
Nigel Durry	Birmingham Children's Hospital	October 2016	Academic appointment
Alberto Albanese	Essex Cardiothoracic Centre	November 2016	Locum Consultant
Mazzy Kanani	St. James' Hospital, Dublin		Locum Consultant

An interview with an angel

One of the more interesting consequences of writing historical articles for The Bulletin (which I had thought had a relatively restricted circulation) has been that somehow my second article "A Tale of Two Presidents" found its way to a Rectory in a small village just outside Norwich.

Philip Kay

The lady who read it contacted the SCTS Office at The Royal College of Surgeons and asked to meet me. She introduced herself as Elizabeth (Widdy) Padfield and wished to tell her story of being Sir Thomas Holmes Sellors Ward Sister in the 1960's.

Widdy started her training as a first year nurse on De Morgan Ward at the Middlesex Hospital in 1958. She qualified after three years of training and became a Staff Nurse. In 1963 Sir Thomas, supported by Jack Belcher, arranged her promotion to Ward Sister.

De Morgan Ward was a mixed surgical ward specializing in Cardiothoracic and Plastic Surgery. On the Cardiothoracic side there were six male, six female and three recovery beds. There was no Intensive Care Unit. Right from the start, Widdy's favourite task was "specialing " (1 to 1 nursing) the patients after surgery. These were the days of Blalock-Tausigg shunts, coarctation repair, closure of a persistant ductus arteriosus, pulmonary valvotomies, closed mitral valvotomies and ASD repair using the hypothermic ice bath technique. Sir Thomas had a large series of approximately 200 of these procedures.

During her time Sister Padfield experienced first hand the transition from closed to open heart surgery when mitral valve repair and replacement, aortic valve replacement, closure of VSD and repair of Fallot's Tetralogy were added to the surgeons armamentarium. It was during this time that Sir Thomas was working with the Mayo-Gibbon heart lung machine incorporating a disc oxygenator. Initially she worked with Sir Thomas Holmes Sellors and Jack Belcher. On retirement

Sister Elizabeth (Widdy) Padfield and Sir Thomas Holmes Sellors

Sir Thomas was replaced by Mr (later Sir) Keith Ross. He soon moved to Southampton and Marvin Sturridge joined the team. Sister Padfield also remembered a bright young trainee who she felt would go far – Tom Treasure.

During "Uncle Tom's" reign there was one cardiac operation per week, performed on a Wednesday. Often, the procedure would be practiced on a dog in the laboratory the day before so that all the surgical team were familiar with the technique to be used. In those days the parents of the child to undergo surgery simply handed over the child to the ward and went to pray. On the morning of surgery Sister Padfield would bring the child to the operating theatre at 7.00am. She would then spend the rest of the day supporting the family. The patient would normally arrive back on the ward in the late afternoon. Then "the battle" began. The patient would be "specialed" by one of the Staff Nurses and Sister Padfield would remain in support until the outcome was settled (for good or bad).

The ventilators and machinery were very primitive. Blood pressure was recorded using a mercury sphygmomanometer. ECG and blood tests were performed by

separate technicians. The importance of serum potassium became apparent and a measuring device was kept by the bed. These were difficult and dangerous times with mortality following open heart surgery in the region of 40%.

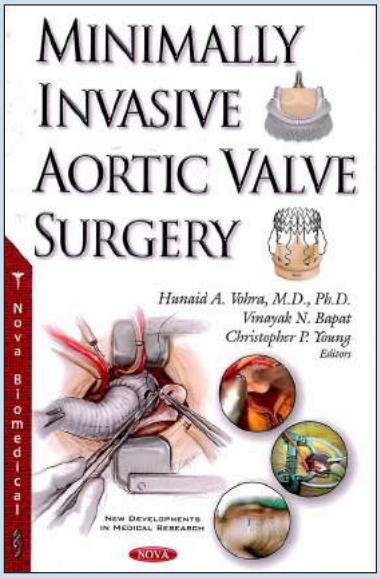
Sister Padfield retired from nursing in 1970 when she married. Forty six years on she fondly remembers her boys (the Consultants) and her girls (the nurses). To her they were a family who worked strongly together sharing triumph and disaster just the same. She described vividly the amazing exhilaration of success and the pain and suffering of a loss. She told of the joy of seeing a child recover when she had overruled the doctors and insisted that the child had an extra day on the ventilator.

She recounted her delight on learning that a 60 year old lady, whom she had nursed as a 12 year old recovering from surgery for Fallot's Tetralogy, had become a grandmother. Her loss was evident when she recalled surgery on twin boys with Fallot's only one of whom survived. At the end of the operating day, frequently late in the evening, the team would drift away to a local restaurant and review the day in triumph or in sadness.

Sister Padfield's message was clear. The Heart Unit family learned from both success and failure enabling it to move forward laying a platform for the next generation of cardiac surgeons to transform the "difficult and dangerous" into the "production line" surgery with the excellent results we expect and enjoy today.

During my training I was always taught to respect and regard the nurses as angels, a view that I carried throughout my career. It was a great privilege to meet Sister Padfield and to see how much pride she took as a pioneer alongside her eminent surgical colleagues. In her words "It was an astonishing era, overwhelmingly filled with Uncle Tom and his colleagues and the birth of major cardiac surgery in the UK, which with their great skill and courage has changed the lives of so very many people". ■

Sister Padfield and "the special one"



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Book Review: Minimally Invasive Aortic Valve Surgery

(New Developments in Medical Research) 2016

Shubhra Sinha

This book provides an overview of the exciting new field of minimally-invasive aortic valve surgery. The chapters cover a multitude of topics including how to set up a minimally invasive surgical programme, patient selection, imaging techniques, anaesthetic considerations, cannulation techniques and types of surgical approaches, including endoscopic and robotically-assisted surgery, re-operation, the use of rapid deployment valves and minimally invasive aortic surgery.

The chapters are well structured and informed. There is judicious use of diagrams, CT and echocardiographic imaging and operative photographs to help illustrate key points. The style of writing is akin to that of a lecture series and as such makes the material easy to digest whilst providing a list of references that would aid further development of knowledge in the desired sections.

This book would be of use to surgical trainees at all levels. For a junior trainee it provides a good level of background knowledge into an increasingly popular new area of cardiac surgery. For more senior trainees, it will help to consolidate their information prior to sitting their final exams. It would also be a useful resource for anaesthetic and nursing colleagues involved in the peri-operative care of these patients. ■

Obituary: Donald Nixon Ross

(1922–2014)

BSc, MB, ChB Cape Town 1946; FRCS 1949; FACC 1973; FACS 1976; Hon DSc CNAA 1982; Hon FRCSI 1984; Hon FRCS Thailand 1987; Hon FRSocMed 1996

Philip Kay

Donald Ross was one of the great pioneers of heart surgery in Britain, leading the transition from closed to open procedures. He embraced the technology of cardiopulmonary bypass, forging ahead with the most complex procedures.

Donald Nixon Ross was born on 4 October 1922 in Kimberley, South Africa. He studied medicine at the University of Cape Town, graduating in 1946 with a first class degree and the University Gold Medal. He was a contemporary of Christiaan Barnard.

After house appointments at Groote Schuur Hospital in Cape Town he moved to England for postgraduate training, including time with Ronald Belsey in Bristol. In 1953 he became a Research Fellow at Guy's Hospital, London working with Sir Russell (later Lord) Brock. As a senior registrar he was responsible for the development of techniques in hypothermia. During this period he developed the Guy's-Ross heart lung machine based on a disc oxygenator. In 1958 he was appointed to a Consultant position and together with Brock rapidly propelled Guy's to the forefront of cardiothoracic surgery.

At a time when most of the world was looking towards the new Starr Edwards mechanical valve, Ross kept his focus entirely on bioprostheses thereby avoiding the need for anticoagulation. In 1962 he performed the first homograft aortic valve replacement. Four years later he used an aortic homograft to reconstruct the right ventricular outflow tract. He was keen to find a solution for children with congenital aortic stenosis. In 1967 he developed the "Ross procedure".

The patient's own pulmonary valve was excised and transplanted into the aorta where it grew naturally with the child. A homograft was then used to reconstruct the pulmonary circulation, thereby transferring the problem of homograft degeneration to the low pressure system where failure occurred slowly.

1n 1963 he moved part of his practice to the National Heart Hospital where he joined Sir Thomas Holmes Sellors. It was there that he performed Britain's first heart transplant in May 1968, six months after the original by Christiaan Barnard. The donor heart was harvested at Guy's Hospital. The recipient survived 45 days before succumbing to rejection. Following two further unsuccessful cases, a moratorium was placed on cardiac transplantation in the United Kingdom until the control of immunological rejection was better understood.

Donald Ross had a great intellect. He held a weekly scientific meeting in the Homograft Department of the National Heart Hospital. He introduced Cardiac Surgery to India and Egypt where he would take a full team of surgeons, anaesthetists, theatre and ITU nurses, perfusionists and physiotherapists for 10 days each year. He was showered with honorary Fellowships from around the Globe.

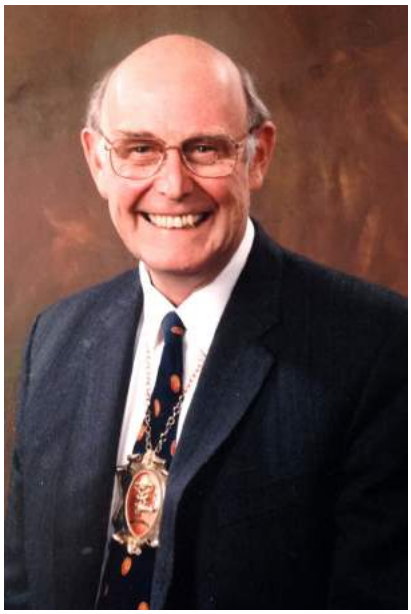
DNR was always happiest in the operating theatre where he would perform five cases per day, six days a week. He was truly one of the finest trainers in the United Kingdom. With foreign trainees queuing up to work for him he must have trained a generation of cardiac surgeons across the globe. These trainees, many of whom had watched the sun rise over the Post Office Tower whilst caring for his patients, went on to form the Donald Ross Surgical Society which met at International Conferences around the world.

I had the privilege of working as his senior registrar at the National Heart Hospital in 1984 and 1985. It was immediately apparent that he had amazing manual dexterity and a simple approach to the most complex of cardiac cases. Facing such challenges in later life I would always recall his approach to the situation. His calm demeanor and gentle grace portrayed a surgeon who was always in control. At any hint of tension the scrub sister would nod to the perfusionist and the theatre would be filled with the sound of Karen Carpenter singing "On top of the World". Donald's head would move to the rhythm of the music and his soft hands and quick nimble fingers would be back on course.

At leisure he wore smart suits, always with a carnation, drove fast cars (in my time it was a blue Ferrari) and ate at fashionable restaurants in Marylebone. Away from London he enjoyed riding and breeding Arabian horses.

Donald Nixon Ross died on 6 July 2014. He is survived by his second wife Barbara and Janet, the daughter of his first marriage to Dorothy.

He will be sorely missed by all those whose lives he touched. ■



Obituary: John Stuart Bailey

(29/09/1933–18/09/2016)

Consultant Cardiothoracic surgeon:
Groby Road and Glenfield Hospitals Leicester 1977 - 1995.
Past president Society of Cardiothoracic surgeons of Great Britain and Ireland.
Past president Society for clinical perfusion scientists.

Ian Bailey

JSB was born in Jerusalem, Palestine. He spent his early years in Cairo before being evacuated in 1940 to Durban and on to England. Educated at St Peters Exmouth, Sherbourne School, Gonville and Caius Cambridge and St Mary's, graduating in 1958.

After house jobs he started national service and converted to a short service commission with the RAMC. He saw active service during the Brunei campaign as surgeon to the Far East Field surgical team.

On return to the UK from Singapore he worked as a general surgeon before joining Charles Drew at St George's as thoracic registrar. He subsequently spent 11 years as registrar and senior registrar in thoracic and cardiac surgery at Westminster hospital. During this time he spent a fabulous year (70/71) as Gallie fellow to WG Bigelow at Toronto General Hospital.

Finding a consultant post in the mid 70's was difficult and required resilience. JSB finally escaped London for Leicester in 1977. He enjoyed a happy and successful career to his retirement in 1995.

JSB was part of a major transition generation in Cardiac surgery. Beyond the early pioneers he and his generation established safe and routine cardiac surgery. He was ahead of his times. An early medical manager, he strove to understand the true costs of NHS care and pushed for honest, open and comprehensive reporting of outcomes. He was prepared to tackle controversy. On one occasion he challenged coronary surgery in those that continued to smoke, provoking an aggressive public debate. (BMJ 1993; 306: 1047-50).

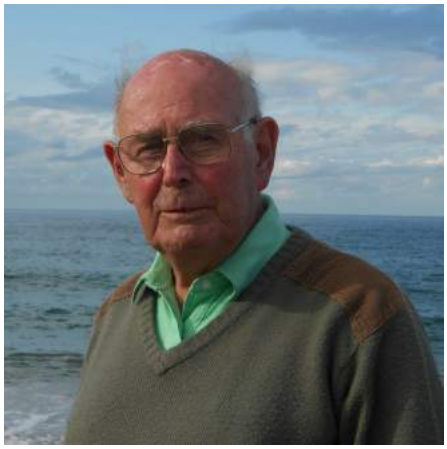
He believed fervently in the NHS and social model of health care. He did not like the effect "for profit" health care had on services and some surgeons.

He reminded me, as a trainee general surgeon, when I was struggling with confidence after an unpleasant session with a "trainer" not to become an egotistical self congratulatory surgeon.

"Remember it is the patients who are being brave!"

His beliefs and principles put him at loggerheads with parts of the surgical community (presidents letter Bulletin vol 1 August 1994). He clearly did not alienate you all, becoming your president in 1994.

"JSB was part of a major transition generation in Cardiac surgery. Beyond the early pioneers he and his generation established safe and routine cardiac surgery."



JSB understood the importance of the whole team. He finished his career helping the perfusionists establish a recognised professional structure, becoming their president.

JSB was made an honorary fellow of the Polish college of surgeons in 1987. In 1992 he received further recognition for his work with Polish cardiac surgeons, with an award from the Bruchner foundation. He and Alison had many happy visits to Poland making many friends.

Retirement did not create a void. He announced within weeks that he did not understand how he ever had time to go to work!

Golf, genealogy, an amazing photographic record of butterfly life cycles, travel, community, friends and a growing extended family filled 20+ years of healthy and happy retirement.

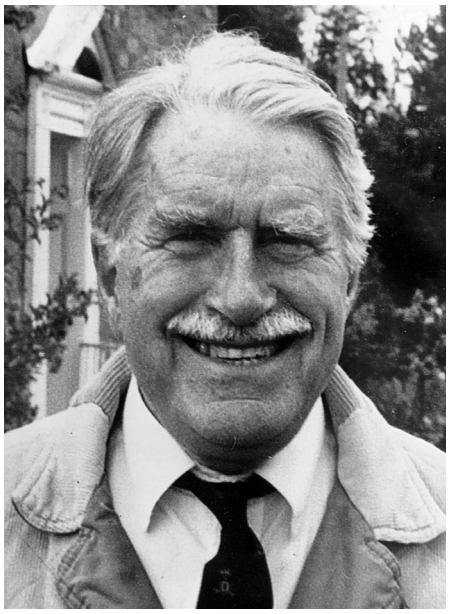
He died suddenly, at home, just short of his 83rd Birthday. He leaves his wife of 58 years Alison, 3 children, and 10 grandchildren.

His ashes will be scattered in Kintyre Argyll his beloved holiday retreat of 44 years. ■

Obituary: Roger Abbey Smith

(15/08/1916–24/07/2016)

Consultant surgeon at the Walsgrave Hospital, Coventry.



Dr Paddy Matthews

Roger was born in Birkenhead, attended Birkenhead School, and went on to study medicine at Liverpool School of Medicine, winning the A.C. Rich prize in Medicine, and the gold medal for Obstetrics and Gynaecology.

At the age of 11 he was deeply affected by the early death of his mother from psittacosis pneumonia caught from the family parrot, despite being attended by Lord Cohen of Birkenhead - arguably the most celebrated physician of the twentieth century. His father never remarried, and having three brothers, Roger was brought up in an entirely male household.

His mother's death set him on course for a medical career, with a focus on pulmonary disease. Qualifying in 1940, and, after becoming a Fellow of the Royal College of Surgeons of England in 1943 while still only 26, (having previously obtained the FRCS (Edin.)), he enlisted in the RAMC, and saw active service first on D day aboard the hospital ship Batavia 11, and then in Burma. Following that he was posted to the Augusta Victoria Hospital - a 1200 bed hospital - in Jerusalem, which had been requisitioned as the 16th British General Hospital.

> **"Roger took a keen interest in the careers of his junior staff, but I am told, terrified the theatre staff, demanding nothing but the very highest standards."**

This was where his interest in thoracic surgery began under George Qvist, later consultant surgeon to the Royal Free Hospital, and Lloyd Rusby, later chest physician at the London Hospital. After demobilisation and a spell at St. Wulstan's Hospital Malvern -a large TB sanatorium, he left for a year in Sri Lanka under the 'Colombo Plan', sailing there and back with his wife, Teddie and three children.

On his return in 1953, he was appointed consultant thoracic surgeon to the Birmingham Regional Hospital Board, based at the King Edward VII Memorial Sanatorium at Hertford Hill, near Warwick.

In the late 1960s the chest unit moved to the new Walsgrave Hospital in Coventry, where Roger remained for the rest of his professional career, holding satellite clinics in Worcester (with Stan Kalinowski) and at Burton-on-Trent. Over time his principal clinical interests were TB, oesophageal and lung cancer surgery.

Roger was the editor of Thorax from 1970 to 1976, and co-editor with R. E. Smith of The Surgery of the Oesophagus in 1972. With J. Leigh Collis and D. B. Clarke, he coedited the 4th edition of d'Abreu's Practice of Cardiothoracic Surgery in 1976.

During his career, he wrote over 25 articles in eight different journals and contributed to five international textbooks. In 1974 he was elected president of the Thoracic Society, and in 1976 president of The Society for Cardiothoracic Surgery.

He travelled, operated and lectured abroad, mainly in Spain, the Benelux countries and America, including the Mayo clinic, and the Massachusetts G.H.]. He was an honorary member of many international thoracic associations.

From 1975 to 1979 he was advisor in cardiothoracic surgery to the Dept. of Health under Sir Henry Yellowlees. Roger took a keen interest in the careers of his junior staff, but I am told, terrified the theatre staff, demanding nothing but the very highest standards.

He retired in 1979 to rural Herefordshire. He was an enthusiastic gardener, a keen ornithologist - particularly knowledgeable on birds of prey - and enjoyed salmon fishing and shooting. He holidayed every year with his family in the hills above Harlech in North Wales, which was the childhood home of his mother.

He died peacefully, having lived in his own home until the last fortnight of his life, three weeks short of his 100th birthday.

He is survived by Teddie, his wife of 73 years, his four children, 12 grandchildren and 13 great grandchildren. ■

Obituary: Armand Piwnica

Professor Gérard Bloch

Professor Armand Piwnica, a long standing member of the Society, left this earth, his family and his friends on Saturday 8 October 2016 in late afternoon. Full of life and energy, of intelligence and curiosity, he left us when one heart beat became his last, surround by his family, as was his custom on a Saturday.

A terrible blow for his close family: Huguette his lifelong companion and spouse (they met and married young), his children (his pride: his daughter a brilliant member of the Paris, Bar and his son a celebrated barrister before the Supreme Court), and their children, grand-children and great grand-children who were the apple of his eye. Armand Piwnica's twin passions were his family, whose lynchpin he was, and his métier.

His parents hailed from Poland and by dint of unceasing endeavour won outstanding and well-earned financial and social success.

Armand was born in Paris. Of an exceptional intelligence, he venerated hard work. Curious about all things, he was so particularly in medical matters. After school at Lycée Voltaire and medical studies in Paris, he rose with undisputed merit to pre-eminence as surgeon and Professor of the Hospitals of Paris, following the footsteps of his much honoured master, Professor Charles Dubost who in his time was the pioneer of European cardiovascular surgery and remembered as the first to successfully treat aortic aneurism by resection.

However rapid his professional ascendancy, Armand Piwnica had the wisdom and forethought, first, to accept a bursary from the American College of Surgeons and spend a year training in the United States at Mayo Clinic in Rochester, in Minneapolis, and Houston working with or under the masters of the time. Here the values of collegiality and research were impressed upon him.

All lives pass through stages and Armand's took him to being Head of Department at Lariboisière Hospital in Paris, where his human and organisational qualities helped him forge the outstanding Department where I had the honour of succeeding him.

No matter how difficult it must have been to relinquish his responsibilities as Head of a hospital Department (which was with his family his whole life), he fashioned his departure in such a way that, torch undimmed and whatever the twinge of sadness, the handover of the flame was as smooth as it was efficacious.

After years of consultancy and work in the French Academy of Surgeons, his life-long passion for Medicine and Surgery found a new vent as Medical Director of the American Hospital of Paris, where he is remembered as a charming and talented negotiator.

Indeed, in addition to his undiminished memory as a person, Armand bequeaths us 800 papers and some 30 extensive studies, among which are some of the first work on isotopic pacemakers, cardiac transplants, intra- aortic balloon circulatory support, pericardial bio-prostheses, bileaflet valves, among many more.

His work was an inspiration to his faithful and talented assistant, now Professor Philippe Ménasché of Georges Pompidou Hospital, the internationally recognized surgeon and researcher.

Armand Piwnica was a brilliant Surgeon. His patients loved him and bore him life-long gratitude for his outstanding outcomes, that came with a bedside manner whose homeliness and honesty boosted courage and recovery. He was held in unfailing affection and admiration by staff both medical and paramedical. Many were in attendance at his funeral.

Chevalier de la Légion d'Honneur, Professeur Piwnica won academic and professional distinctions of the highest order. He was an active member of the most famous International Scientific Societies, among them the Society for Cardiothoracic Surgery of Great Britain and Ireland. He was for sometime President of the European Association of Cardio-Thoracic Surgery (EACTS) and Société Française de Chirurgie Thoracique et Cardio-Vasculaire (SFCTCV – French Society of Thoracic and Cardio-vascular surgery), and presided their Congresses.

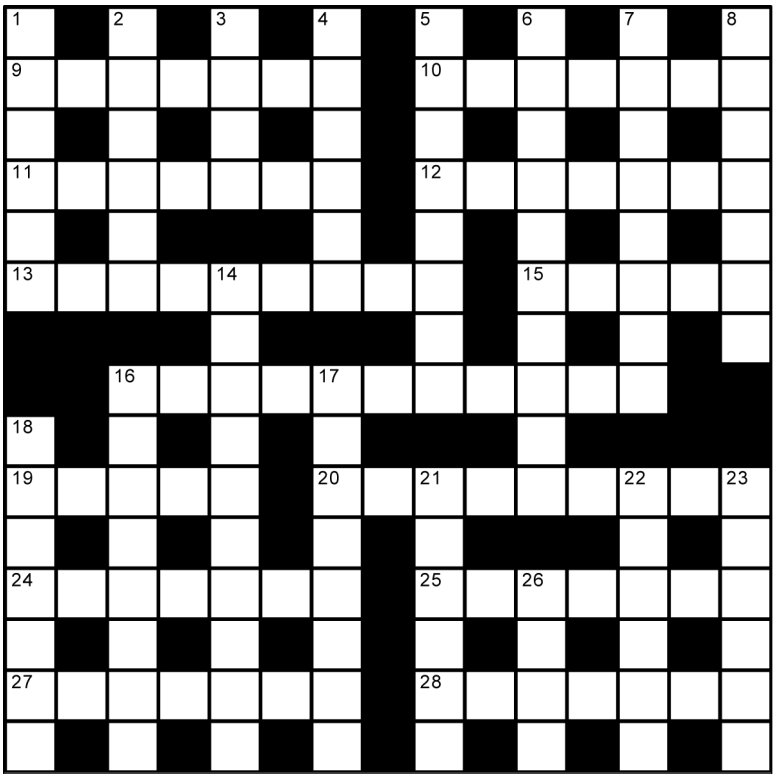
Above all, he was the Ambassador of French Cardio-vascular surgery. He was deeply committed to closer international ties among members of our speciality. He promoted visiting young surgeons from abroad and showed them the most personal attention. He ensured that their stays were marked on their return home with a Souvenir and Diploma from France awarded by the French College of Thoracic and Cardiovascular Surgery. A majority of such budding surgeons were able subsequently to establish, foster or further develop cardiac surgery in their countries of practice. Armand also undertook many missions abroad as a surgeon or teacher, in the Middle East, Saudi Arabia and Egypt. His first ever open heart operation in North Africa, in Algiers in 1976, was a landmark.

Nor were these his only qualities. Armand Piwnica was unusually perspicacious in musical and artistic matters. To tour the MOMA in New York in his company was to be as with a museum curator.

These few, and inadequate, words are in praise of the young man who left us aged 89. We are sad. Our sadness accompanies that of his family, who feel his loss with greater acuteness. For our part, we have lost a Master and Friend. But his memory will remain a spur to life. Imperishable, his spirit is among us and will forever inspire our actions and thoughts. ■

"He promoted visiting young surgeons from abroad and showed them the most personal attention."

Crossword



Please send your solutions to:

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

First successful solution received will receive either a bottle of champagne or fine olive oil.

Winners of the July 2016 crossword competition:
Jonathan Hyde and Rana Sayeed. Both received a bottle of champagne.

Across

9 In the morning, girl is continent (7)
10 X may be a soldier (7)
11 Easing of tension with Iran may be entertained (7)
12 Hates 11 when north and east at last turn to south (7)
13 Read my sad, sad fantasies (9)
15 See 26 Down
16 1, 2 scary aortic rupture (11)
19 Butch at less than the speed of sound? (5)
20 House recedes in disarray (9)
24 Incessant, perpetual, forever....as the list may be (7)
25 Exam includes part that goes round (7)
27 Vexatious Indian reservation starts blowing smoke (7)
28 Tesco up on Sainsbury's vouchers (7)

Down

1/2 The elite touched down smoothly in Tokyo (6,6)
3 Evidence of soldiers up north (4)
4 I left 9 reeling and snapping equipment (6)
5 Copper scaled rocky dead end (3-2-3)
6 Ask about the heartless governors' wheels (10)
7 Conservative cries: first tear-jerker (3,5)
8 See 21
14 A thick-skinned individual could get rich sooner (10)
16 Half of archives duly kept by Franz Ferdinand? (8)
17 The Shard may be beaten (8)
18 Compiler's through with extremes of institutional risk (7)
21/8 NHS doc acts appallingly, raising fuss to get a drink (6,3,4)
22 Not charge? There's an idea! (6)
23 Join silent movement (6)
26/15 16 in veins (4,5)

Letters

"I have just read Denton Cooley's obituary in the Times today, 29th November 2016, and was reminded that he spent a year at the Royal Brompton Hospital studying under Russell Brock. Dr. Cooley told me over dinner once that it was a very frightening experience and he never mastered the art of rigid bronchoscopy.

He remembers the theatre technician at the Brompton saying to him, "You just hold that tube steady (the rigid bronchoscope) sir, and I'll thread the patient up over it." Almost certainly the rigid bronchoscopies were performed under local anaesthesia. As a student, I remember holding many patients down for bronchoscopy under Robert Brain at Guy's.

Jules Dussek

Departing officers

The Society would like to give thanks for the outstanding work performed by the following members:

1. Heyman Luckraz, SCTS Representative on the SCPS Council
2. Michael Lewis, SCTS Joint Education Secretary
3. Rajesh Shah, SCTS Joint Education Secretary
4. Sion Barnard, Chair, SAC
5. Narain Moorjani, Joint CT Tutor
6. Sri Rathinam, Joint CT Tutor
7. Christina Bannister, Allied Healthcare Professionals Representative

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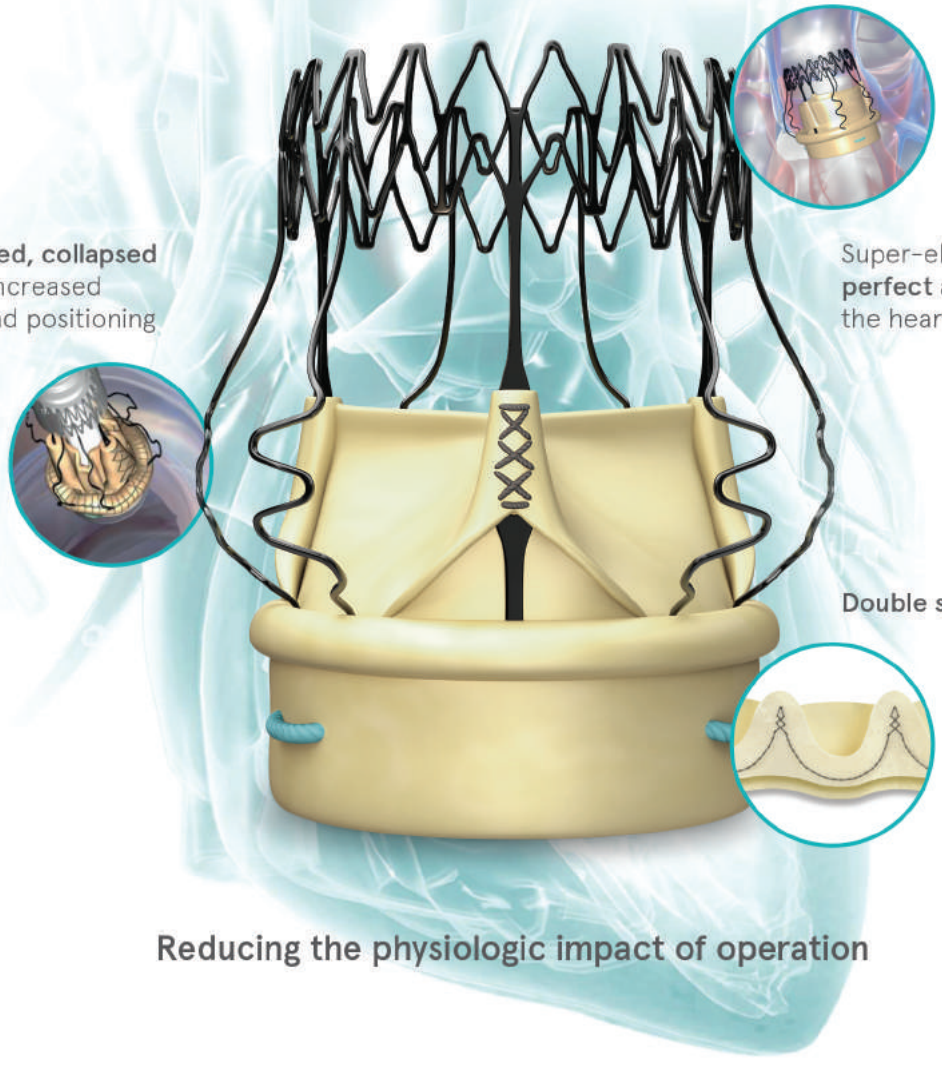

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