



SCTS

**Society for Cardiothoracic Surgery
in Great Britain and Ireland**

Annual Report

2018-19

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SCTS Administrative Office

Isabelle Ferner	Society Administrator & Conference Organiser
Tilly Mitchell	Finance & Exhibition Coordinator
Letty Mitchell	Senior Education Administrator
Emma Ferris	Education Administrator

SCTS Executive Committee

Committee Members	
President	Richard Page, Liverpool Heart & Chest Hospital
President Elect	Simon Kendall, James Cook Hospital, Middlesbrough
Honorary Secretary	Narain Moorjani, Royal Papworth Hospital, Cambridge
Treasurer	Kulvinder Lall, Barts Heart Centre, London
Meeting Secretary	Clinton Lloyd, Derriford Hospital, Plymouth
Elected Trustee	Shyam Kolvekar, Barts Heart Centre, London
Elected Trustee	Prakash Punjabi, Hammersmith Hospital, London
Elected Trustee	Stephen Clark, Freeman Hospital, Newcastle
Elected Trustee	Marjan Jahangiri, St George's Hospital, London
Elected Trustee	Mahmoud Loubani, Castle Hill Hospital, Hull
Lay Representative	Sarah Murray, Dorset Healthcare University NHSFT
Education Secretary	Sri Rathinam, Glenfield Hospital, Leicester
Senior Trainee Representative	Ahmed Al-Adhami, Royal Infirmary of Edinburgh
Junior Trainee Representative	Jacob Chacko, King's College Hospital, London
Nursing & AHP Representative	Helen Munday, Barts Health NHS Trust, London
Perfusion Representative	Amal Bose, Victoria Hospital, Blackpool
Perfusion Representative	Phil Botha, Birmingham Children's Hospital
Co-opted Members:	
Thoracic Sub-Committee	Juliet King, Guy's Hospital, London
Congenital Sub-Committee	Carin Van Doorn, Leeds Teaching Hospitals
Audit Sub-Committee	David Jenkins, Royal Papworth Hospital, Cambridge
Research Sub-Committee	Gavin Murphy, Glenfield Hospital, Leicester
SAC Chair	Rajesh Shah, Wythenshawe Hospital, Manchester

Executive Summary 2018-19

- **Annual meeting and SCTS-Ionescu University.** The 2018 meeting was held in Glasgow and had over 1100 attendees with a very successful scientific, education and research programme.
- **SCTS Education programme of cardiothoracic surgical training courses.** This continues to expand, including a wide range of courses for Consultants, NTN trainees, non-NTN fellows, nurses and allied health professionals, core surgical trainees, foundation year doctors and medical students interested in a career in cardiothoracic surgery (see Appendix 2). This year marked the introduction of the first multi-disciplinary cardiothoracic surgery non-technical skills training course and Consultant Masterclass.
- **Portfolio of educational fellowships.** These have increased this year due to significantly increased support from Mr Marian Ionescu, as well as continued industry partnership (see Appendix 3).
- **Restructuring of the SCTS Sub-Committees.** All sub-committees have been restructured with a significant overhaul of the membership and updated terms of references produced.
- **Cardiothoracic Surgery Getting It Right First Time (GIRFT) document.** This GIRFT report was published by NHS England in March 2018, with significant input from the SCTS. It details the variation in the delivery of cardiothoracic surgery nationally and gives recommendations for best practice (see Appendix 1).
- **Board of Representatives (BORs) meeting.** This was held at the Royal College of Surgeons, London in September 2018 and focussed on the challenges in implementing the recommendations of the GIRFT report, as well as providing an opportunity for unit representatives to share and discuss best practice and quality improvement initiatives. There has been a significant overhaul of the BORs membership and an updated terms of reference produced.
- **Support for cardiothoracic surgical trainees encountering bullying.** Following collaboration between the SCTS and Cardiothoracic Surgery Specialty Advisory Committee (SAC), a support network has been developed to aid cardiothoracic surgical trainees encountering bullying, led by the SCTS Lay Representative, Sarah Murray.
- **SCTS / SAC Workforce Report.** This was published in early 2019 and details the current status of practitioners caring for patients undergoing cardiothoracic surgery to assist planning for the future (see Appendix 1). As well changes in personnel, the report documents the recent technological developments introduced into cardiothoracic surgical practice.

- **Regulation of Surgical Care Practitioners (SCPs).** The SCTS has been working with the Royal College of Surgeons, Association of Cardiothoracic Surgical Assistants (ACSA) and Federation of Specialty Surgical Associations (FSSA) in supporting the development of a regulatory infrastructure for Surgical Care Practitioners (SCPs). The government response to the public consultation on the regulation of SCPs was published in February 2019.
- **Publication of validated cardiothoracic surgery outcome data on the SCTS website.** Current adult cardiac surgery and congenital cardiac surgery outcome data from National Institute for Cardiovascular Outcomes Research (NICOR) and thoracic surgery data from the Lung Cancer Clinical Outcomes Publication (LCCOP) team have been published on the SCTS website (see Appendix 1).
- **3rd Thoracic Surgery Blue Book.** This has recently been published and represents the longest running project detailing outcomes in thoracic surgery worldwide. It demonstrates improving quality of surgery and a trend towards more minimal access surgery.
- **New cardiothoracic surgical curriculum.** In conjunction with the Cardiothoracic Surgery Speciality Advisory Committee (SAC), a new cardiothoracic surgical curriculum has been developed. It has recently been submitted to the General Medical Council (GMC) and is likely to reach maturity for doctors entering cardiothoracic surgical training in August 2020.

SCTS Executive Plans for 2019-20

- Expansion of the SCTS Education programme of training courses and portfolio of travelling fellowships.
- Re-design of the SCTS website to increase communication with SCTS members.
- Publication of the next Cardiac Surgery Blue Book.
- Support for team working in all aspects of Cardiothoracic Surgery.
- Develop formal mentorship programmes for members on behalf of the SCTS.
- Work with Surgical Care Practitioners to ensure appropriate professional regulation.
- Production of an SCTS position paper on the arrangements for specialist input for patients sustaining cardiothoracic trauma.

Adult Cardiac Surgery Sub-Committee

Committee Members	
Co-chair	Marjan Jahangiri, St George's Hospital, London
Executive co-chair	Simon Kendall, James Cook Hospital, Middlesbrough
Appointed Member	Chris Satur, Royal Stoke University Hospital
Appointed Member	Steven Billing, New Cross Hospital, Wolverhampton
Appointed Member	Shakil Farid, John Radcliffe Hospital, Oxford
Audit Lead	David Jenkins, Royal Papworth Hospital, Cambridge
Education Lead	Sunil Bhudia, Harefield Hospital, London
Nursing & AHP Representative	Helen Munday, Barts Health NHS Trust, London
Trainee Representative	Jacob Chacko, King's College Hospital, London
Co-opted Members:	
NICOR Audit Lead	Andrew Goodwin, James Cook Hospital, Middlesbrough
UK Aortic Surgery	Geoff Tsang, University Hospital Southampton

Adult Cardiac Surgery Sub-Committee Summary for 2018-19

- Review of Cardiothoracic GIRFT recommendations (2018).** There was general consensus in support of the majority of recommendations that aimed to streamline patient pathways to reduce hospital length of stay, including making day of surgery admission routine, ring-fencing beds on wards and ICU for elective cardiac surgery, establishing regional work-up protocols for non-elective referrals, pooling of non-elective cases, review of patients by a consultant pre- and post-operatively (7 days a week) and infection prevention strategies (see Appendix 1). Recommendations suggesting that all acute aortic syndrome patients are only operated on by acute aortic syndrome specialist teams, patients with degenerative mitral valve disease are only operated on by a specialist mitral valve surgeon and that separate rotas are required for cardiac and thoracic trauma, require further consideration as regards to the challenges with implementation at a local level due to geographical variations, including increasing travelling time for patients, size and staffing of individual units, and current outcomes.

- **Publication of NICOR adult cardiac surgery outcome data.** The 2014-17 data has now been published on the SCTS website. The 2015-2018 data is currently being analysed, with all units having submitted their data.
- **Trans-catheter aortic valve implantation (TAVI) registry.** Currently NICOR are not able to support the TAVI registry due to funding. In view of this, the SCTS is working with the British Cardiovascular Society (BCS) to support the registry to help inform commissioners regarding current practice and to develop a consensus for the management of patients with aortic valve disease.
- **Long-term left ventricular assist device (LVAD) therapy.** A response to the NHS England consultation on the use of long-term LVADs for patients with advanced heart failure was submitted on behalf of the SCTS. The paper was authored by Pedro Catarino (Royal Papworth Hospital, Cambridge) with full support from all UK transplant units.
- **Enhanced Recovery After Cardiac Surgery.** The Adult Cardiac Surgery Sub-Committee is supportive of the development of a robust enhanced recovery programme, with the aim to facilitate optimisation of the perioperative care of cardiac surgical patients, to help improve short and long-term outcomes, and a more efficient utilisation of health care resources. A session is devoted to enhanced recovery at the SCTS Annual Meeting in collaboration with the Association for Cardiothoracic Anaesthesia and Critical Care (ACTACC) and allied health professionals.
- **Consultation and review of national guidelines.** The SCTS has given a stakeholder response to the recent National Institute for Health and Care Excellence (NICE) guidance on heart valve disease and the Joint Standards Committee of the Faculty of Intensive Care Medicine and Intensive Care Society guidance on the management of gas embolism.
- **Adult Cardiac Surgery Sub-Committee restructuring.** The sub-committee membership was revised in 2018, with new co-chairs and appointed members. The terms of reference were also updated, in line with the other SCTS sub-committees. Outgoing members (Andrew Chukwuemeka, Mark Jones and Uday Trevedi) were thanked for their contributions.

Adult Cardiac Surgery Sub-Committee Plans for 2019-20

- **Changes to presentation of adult cardiac surgery outcome data.** NICOR are considering changing the methodology and format of presentation of the adult cardiac surgical outcomes for the 2015-18 data, potentially using Forrest plots rather than the traditional Funnel plots. A final decision will be made following a stakeholder meeting later this year, where the SCTS and British Cardiovascular Society will be represented. It

is not anticipated that these changes will make any difference to the number of statistical outliers identified for adult cardiac surgery. The morbidity and complications (bleeding, deep sternal wound infection, stroke and renal failure) for first time isolated coronary artery bypass grafting are also being analysed from the 2015-2018 data at a unit level.

- **Consultation and review of national guidelines.** The SCTS is currently writing a response to the National Institute for Health and Care Excellence (NICE) consultation document on valve-in-valve TAVI for aortic bioprosthetic valve dysfunction. Stakeholder response will also be provided for other NICE and national guidelines and recommendations, as appropriate.
- **Updating the Adult Cardiac Surgery section of the SCTS website.** Over the next 12 months, the SCTS website will be re-designed with an Adult Cardiac Surgery section to the website, which will include examples of how to introduce best practice and quality improvement initiatives, as well as contemporary international guidelines and recommendations for practice.

Thoracic Surgery Sub-Committee

Committee Members	
Co-chair	Juliet King, Guy's Hospital, London
Executive co-chair	Narain Moorjani, Royal Papworth Hospital, Cambridge
Appointed Member	Steve Woolley, Liverpool Heart & Chest Hospital
Appointed Member	Kandadai Rammohan, Wythenshawe Hosp., Manchester
Appointed Member	Babu Naidu, Heartlands Hospital, Birmingham
Audit Lead	Doug West, Bristol Royal Infirmary
Education Lead	Sri Rathinam, Glenfield Hospital, Leicester
Nursing & AHP Representative	Amanda Walthew, Liverpool Heart & Chest Hospital
Trainee Representative	Thomas Tsitsias, St George's Hospital, London
Co-opted Members	
British Thoracic Society	David Baldwin, Nottingham City Hospital
Commissioning Lead	John Duffy, Nottingham City Hospital
Trauma Representative	Richard Steyn, Heartlands Hospital, Birmingham

Thoracic Surgery Sub-Committee Summary for 2018-19

- National thoracic audit activity.** The 3rd Thoracic Surgery Blue Book has been published, which details the SCTS returns between 1980 – 2015 and charts changing activity and procedures over time. It is the longest established thoracic surgery database in the world. The Lung Cancer Clinical Outcomes Publication (LCCOP) 2018 (from 2016 data) has been released, with all units having validated their results. Negative alert and alarm units have been contacted and asked to review outcomes. The LCCOP 2019 (from 2017 data) will be sent out in late spring 2019, with a new methodology to determine MDT resection rates also being introduced.
- Cardiothoracic GIRFT report.** The cardiothoracic GIRFT report was published in March 2018, with recommendations made on every aspect of the patient pathway, including promoting day of surgery admission, pooling waiting lists to minimise wait timing and daily consultant review (see Appendix 1). The importance of clinical risk management, team-working and use of specialist multi-disciplinary team (MDT) meetings to assist decision making in complex or high risk cases were also encouraged. For thoracic surgery specifically, clinical recommendations support the use of minimal access surgery

for early stage cancer, the restructuring of MDT meetings nationally to facilitate consistent surgeon attendance, and the early (and preferably VATS) management of empyema. The promotion of VATS or robotic surgery for early stage lung cancer remains a topic of debate whilst the outcome of the VIOLET study is still awaited.

- **British Lung Foundation (BLF) Taskforce.** The BLF Taskforce was set up in early 2017 and published its report in December 2018. The Taskforce objective was to raise awareness of the financial burden and impact of respiratory disease in the United Kingdom, in order to obtain the level of Government support previously seen for cancer and mental health services. The Taskforce included representation from the SCTS (Juliet King and Babu Naidu), on behalf of the Royal College of Surgeons.
- **Thoracic Forum 2019.** The Thoracic Forum was held in Windsor in February 2019 as joint venture between Guy's Hospital (Juliet King) and St George's Hospital (Carol Tan and Mel Jenkins). Richard Page attended and updated the audience on the SCTS activity for the last year. In addition, the programme included presentations on SCTS education, an overview of the 3rd Thoracic Surgery Blue Book and LCCOP 2016 outcomes, sessions on robotic thoracic surgery, current thoracic surgery UK research trials, an update on PULMICC from Professor Tom Treasure, and a session on thoracic trauma. Professor Treasure also presented an overview of his recent book 'The Heart Club'.
- **SCTS Workforce Report.** The SCTS Workforce Report was published in early 2019 (see Appendix 1). The thoracic surgery chapter included details on the increasing numbers of pure thoracic surgeons, separation of the specialty from cardiac surgery, increased surgical activity and lung cancer resections, emerging dominance of VATS surgery, introduction of robotic surgery and other novel therapies, and the contribution of thoracic surgery trials to patient management.

Thoracic Surgery Sub-Committee Plans for 2019-20

- **Thoracic Surgery Sub-Committee restructuring.** The SCTS Thoracic Surgery Sub-Committee membership was revised in 2018, with renewed terms of reference. As no thoracic surgeons were elected in the most recent round of trustee elections, Steve Woolley has been co-opted to replace Juliet King as the co-chair of the Thoracic Surgery Sub-Committee. Updating the SCTS website thoracic surgery content will be a priority for the sub-committee going forward.
- **Clinical Guidelines and Commissioning update.** The pectus surgery commissioning proposal is still under review. A second stakeholder response supporting the continued commissioning of pectus surgery was submitted by the SCTS Thoracic Surgery Sub-Committee. Stakeholder responses were also submitted for the clinical commissioning policy proposition on the management of severe emphysema by lung volume reduction

surgery (LVRS) or endobronchial valve therapy, and on the updated National Institute for Health and Care Excellence (NICE) guidance on lung cancer diagnosis and management (due for publication in March 2019). New guidance on the use of stereotactic ablative radiotherapy (SABR) for the management of lung cancer was published in 2018. The thoracic surgery clinical reference group is also in the process of deciding whether mesothelioma surgery requires a separate service specification or can be included within the thoracic surgery service specification. It is likely a small working party will be set up to explore this. The stage III lung cancer national survey has been distributed to members.

- **Cardiothoracic Trauma.** A blunt trauma management and audit standards document has been produced and co-badged with the British Orthopaedic Association. There have been no updates on the status of the MTC22 penetrating trauma guidelines in the last 12 months. The continuing issues of non co-location of cardiothoracic units and trauma centres, and the potential impact of the future separation of thoracic and cardiac surgery on the provision of chest trauma remains an area of concern. Trauma provision was the topic of a session at the recent thoracic forum and remains high on the agenda for the SCTS Executive. The Thoracic Surgery Sub-Committee will be leading on producing a position paper on the provision of care for patients sustaining cardiothoracic trauma in the UK.

Congenital Cardiac Surgery Sub-Committee

Committee Members	
Co-chair	Carin Van Doorn, Leeds Teaching Hospitals
Executive co-chair	Richard Page, Liverpool Heart & Chest Hospital
Appointed Member	Rafael Guerrero, Alder Hey Hospital, Liverpool
Appointed Member	Chuck McLean, Royal Hospital for Children, Glasgow
Appointed Member	Andrew Parry, Bristol Children's Hospital
Audit Lead	David Barron, Birmingham Children's Hospital
Education Lead	Attilio Lotto, Alder Hey Hospital, Liverpool
Nursing & AHP Representative	Karen Byrne, Birmingham Children's Hospital
Trainee Representative	TBC
Co-opted Members	
Freeman Hospital, Newcastle	Mohammed Nasser
Glenfield Hospital, Leicester	TBC
Royal Brompton Hospital, London	Andreas Hoschtitzky
Great Ormond Street Hospital	Ben Davies
Birmingham Children's Hospital	Natasha Khan
Evelina Hospital, London	Conal Austin
University Hospital Southampton	TBC
Ireland	Mark Redmond

Congenital Cardiac Surgery Sub-Committee Summary for 2018-19

- National review of congenital cardiac services.** Following NHS England's outline on congenital cardiac services, a number of standards for the delivery of care for children and adults with congenital heart disease were set out. It was agreed that all paediatric cardiac units would remain open for the time being, even though some had not yet achieved the necessary standards. Full compliance is required by 2021 and the last 12 months has seen continued work towards this. In particular, this has involved the setting up of regional Operational Delivery Networks based around congenital cardiac surgical centres, to facilitate the delivery of healthcare to congenital cardiac patients throughout their life. In the North East, where there had been a temporary suspension of the adult congenital cardiac surgical service, the Liverpool Heart and Chest Unit has now commenced surgical services. The review of congenital cardiac services in London is underway, with the aim to achieve co-location for the Brompton service in progress.

- **Shortage of paediatric intensive care unit (PICU) beds.** Surgical activity throughout the country is increasingly hampered by the availability of PICU beds. Although initially only a problem during the bronchiolitis season in winter, there now is a lack of beds all year around. For the delivery of paediatric cardiac surgery, access to a PICU bed is mandatory and the speciality accounts for approximately 50% of PICU occupancy. Under the new standards, each unit is required to have a minimum of 4 surgeons delivering at least 125 operations each per year (averaged over 3 years) by 2021.
- **National review of paediatric critical care and specialised surgery.** Although this review commenced 2 years ago, there has been slow progress. It has become clear that there will be no increase in beds but those with less dependency (such as patients on long-term ventilation) will be moved to less high-tech environments. Regional delivery networks are being developed, with strengthening of high dependency units (HDU) in selected district hospitals to help unburden the general surgical workload and PICU in the specialist centres. In contrast to the congenital cardiac review, there will be no standards but the model of care will vary across the country guided by regionally available skills and geography. Two test sites (South East and Yorkshire & Humber regions) became operational in November 2018, with the aim to learn from practice developed on these sites.
- **National Congenital Heart Disease Audit.** The 2014-17 audit was published in November 2018 in a new format to align it with the other 5 cardiovascular audits provided by NICOR. Outcomes remain published by centre (rather than surgeon-specific) and there were no statistical outliers. There was much less unit-specific detail than previously (although still available on the website) but still included 30-day national survival (stratified by PRAiS modelling) and antenatal diagnosis rates. The congenital cardiac audit is the only NICOR audit with external data validation. After significant discussion, this has been maintained but with a 25% increase in costs for the units and remote support via Skype from NICOR.
- **Congenital Cardiac Surgery training and workforce.** The recently published SCTS / SAC workforce document (2019) identified that over the next decade potentially between 15-20 new congenital cardiac surgeons will be required (see Appendix 1). Although the number of nationally-appointed congenital cardiac surgery training posts has been increased from 1 to 3, this has not been matched by interest from UK cardiothoracic surgical trainees. Traditionally, many congenital cardiac surgeons have come from abroad, either as trained congenital surgeons or obtained consultant positions after a fellowship in the UK. It is hoped that with larger congenital cardiac units and increased collaborative working, more UK trainees will be attracted to the speciality in the future. A peri-CCT fellowship is also being developed to help overseas candidates prepare for a position as congenital cardiac surgeon in the UK.

- **Congenital Cardiac Surgery Sub-Committee restructuring.** Membership of the SCTS Congenital Cardiac Surgery Sub-Committee was revised in 2018, with renewed terms of reference. Attilio Lotto was appointed as the new Congenital Cardiac Surgery Education Lead. Interviews will take place at the 2019 Annual Meeting to replace David Barron as the Congenital Cardiac Surgery Audit Lead.

Congenital Cardiac Surgery Sub-Committee Plans for 2019-20

- **Congenital Cardiac Surgery research.** With political pressures settling, there has been a more collaborative approach between units and an increasing interest in research. Plans for a national controlled clinical randomised trial on cardioplegia are at an advanced stage of preparation. Multidisciplinary work based on the national congenital cardiac audit and other national databases is underway to develop and refine risk stratification models, including for adult congenital cardiac surgery. There is, however, frustration that the large amount of validated data in the national congenital cardiac database is increasingly difficult to access for further analysis by interested researchers.
- **National Congenital Heart Disease Audit.** New outcome measures for future audits are being discussed and will include number of operations (by unit and surgeon) and further development of the risk stratification. The management of the outliers and the role of the professional societies in this is also under discussion.

Audit Sub-Committee

Committee Members	
Co-chair	David Jenkins, Royal Papworth Hospital, Cambridge
Executive co-chair	Simon Kendall, James Cook Hospital, Middlesbrough
Cardiac Lead	David Jenkins, Royal Papworth Hospital, Cambridge
Thoracic Lead	Doug West, Bristol Royal Infirmary
Congenital Lead	David Barron, Birmingham Children's Hospital
Nursing & AHP Representative	Julie Sanders, Barts Health NHS Trust, London
SCTS Executive Member	Shyam Kolvekar, Barts Heart Centre, London
SCTS Executive Member	Juliet King, Guy's Hospital, London
Appointed member	Mark Jones, Royal Victoria Hospital, Belfast
Co-opted Members	
NICOR Representative	Andrew Goodwin, James Cook Hospital, Middlesbrough

Audit Sub-Committee Summary for 2018-19

- New National Institute for Cardiovascular Outcomes Research (NICOR) report format.** The combined NICOR national cardiac audit programme (NCAP) report was published in November 2018 and contains information on the 6 sub-specialty audits, including adult and congenital cardiac surgery (see Appendix 1). For the first time, it includes some process and morbidity data for adult cardiac surgery but only for isolated coronary artery bypass grafting surgery and only at unit level. Future reports will include more information, concentrating on morbidity at unit level and can be seen on the NICOR website (<https://www.nicor.org.uk/national-cardiac-audit-programme/>). Following a problem with one of the cardiology audits, publication of the NICOR audit reports was delayed this year pending a statistical review, despite all the analysis having been completed on schedule. This was led by the academic statistical unit from University College London (UCL). The SCTS supports this external assessment that should improve future analysis.
- Audit reports.** The SCTS website is now updated with the latest thoracic LCCOP 2018 report (from 2016 data) and the adult cardiac NICOR data for 2014-17. There were technical problems with these updates and the patience of membership was appreciated. Further information for adult cardiac and congenital outcomes is contained

in the combined NICOR NCAP report (see Appendix 1). In addition, the latest Lung Cancer Clinical Outcomes Publication (LCCOP) report and NHS Blood and Transplant (NHSBT) cardiothoracic transplantation and mechanical circulatory support reports (2018 and 2019) have also been published (see Appendix 1).

- **Cardiothoracic Surgery Getting It Right First Time (GIRFT) report.** The cardiothoracic GIRFT report was published in March 2018 (see Appendix 1) and used a mix of process and outcome data from the last 3-4 years, gathered from individual units and national audits, such as NICOR, LCCOP and Hospital Episode Statistics (HES). Twenty formal recommendations were made, with support from regional GIRFT teams to implement. The SCTS response and toolkit for members have been published on the SCTS website (see Appendix 1). The report is positive and in general good news for our specialty and future patients. It is important to understand, however, that not all units will be able to implement every recommendation. Further useful discussion of some of the more contentious aspects took place at the 2018 SCTS BORs meeting.
- **National Clinical Improvement Project (NCIP).** The NCIP launched with backing of the previous health secretary to allow consultants to review their individual patient activity and outcome data from HES via a secure portal. The aim is to support professional development and appraisal but not for publication. It has been developed by the GIRFT team with support from the Federation of Specialty Surgical Associations (FSSA) and is led by Gareth Jones (NHS Improvement). This project has highlighted issues of information governance preventing data flow and poor access for clinicians. In the short term, they want to try and validate HES data with local databases at a few units and then test a new portal for clinicians using the HES data. Pilot analysis would then be shared with SCTS for us to decide how useful it is.
- **Blue books.** The 3rd Thoracic Surgery Blue Book has been published, which details the SCTS returns between 1980 – 2015 and charts changing activity and procedures over time. It is the longest established thoracic surgery database in the world.

Audit Sub-Committee Plans for 2019-20

- **Membership of the Audit Sub-Committee.** Doug West will replace David Jenkins as the Audit Sub-Committee Co-chair following the 2019 Annual Meeting, with Uday Trevedi taking over as Adult Cardiac Surgery Audit Lead. Interviews will take place at the 2019 Annual Meeting to replace David Barron as the Congenital Cardiac Surgery Audit Lead. Andrew Goodwin will continue as NICOR Adult Cardiac Surgery Lead. New terms of reference have been introduced.
- **High risk cases to be reported at Unit level.** Agreement from NICOR and the Healthcare Quality Improvement Partnership (HQIP) has been obtained to accept 2 consultant

operating for high risk cases to be reported by unit rather than against an individual surgeon GMC number. This was highlighted as good practice for a small number of selected complex high risk patients by GIRFT. Although this change may only affect a limited number of patients, it is fundamental as this recognises team responsibility rather than the NHS England clinical outcomes publication (COP) that focuses on the individual consultant. The background of this initiative is reported in the GIRFT toolkit on the SCTS website (see Appendix 1). It is anticipated that this should be ready to go live from April 2019, with data collection pending completion of software changes and members will be updated further nearer the time.

- **Blue books.** The Adult Cardiac Surgery 15-year review Blue Book is awaiting final data checks at NICOR and analysis for the Congenital Cardiac Surgery Blue Book is currently taking place at Birmingham Children's Hospital.
- **Changes to presentation of adult cardiac surgical outcome data.** NICOR are considering changing the methodology and format of presentation of the adult cardiac surgical outcomes for the 2015-18 data, potentially using Forrest plots rather than the traditional Funnel plots. A final decision will be made following a stakeholder meeting later this year, where the SCTS and British Cardiovascular Society will be represented. It is not anticipated that these changes will make any difference to the number of statistical outliers identified for adult cardiac surgery.

Education Sub-Committee

Committee Members	
Co-chair	Sri Rathinam, Glenfield Hospital, Leicester
Executive co-chair	Narain Moorjani, Royal Papworth Hospital, Cambridge
Cardiac Tutor	Sunil Bhudia, Harefield Hospital, London
Thoracic Tutor	Carol Tan, St George's Hospital, London
Congenital Lead	Attilio Lotto, Alder Hey Hospital, Liverpool
Nursing & AHP Representative	Tara Bartley, Royal Sussex County Hospital, Brighton
Nursing & AHP Representative	Bhuvana Bibleraaj, Wythenshawe Hospital, Manchester
Trainee Representative	Sudeep Das De, Golden Jubilee National Hosp., Glasgow
Consultant Lead	Donald Whitaker, King's College Hospital, London
Non-NTN Lead	Uday Dandekar, Walsgrave Hospital, Coventry
Medical Student Lead	Aman Coonar, Royal Papworth Hospital, Cambridge
Accreditation Lead	Mahmoud Loubani, Castle Hill Hospital, Hull

Education Sub-Committee Summary for 2018-19

- Consultant Education.** The first SCTS Consultant Masterclass was held in Glasgow at the Annual Meeting as a 'Training the Trainers' course for Consultant members who had taught on the SCTS portfolio of training courses. It was very well attended and received, with excellent feedback. In addition, SCTS Education supported a very successful SCTS-Ionescu University, in conjunction with the Meeting Team.
- NTN Education.** This year represented the successful change-over of administration of the NTN portfolio of courses to be run in-house by SCTS Education Administrative staff, which welcomed Emma Ferris as a new member of the team. Financial support was obtained from additional industry partners to supplement the long-standing partnership that SCTS Education has developed with Ethicon.
- Non-NTN Education.** The non-NTN portfolio of course expanded with the introduction of the first residential course for non-NTNs and with the inclusion of a wetlab component to the clinical update course. The course was held at Ashorne Hill, Leamington Spa, with fantastic facilities at this converted Grade II listed Manor House.

- **Nursing & Allied Health Professional (AHP) Education.** The portfolio of courses for nurses and AHPs continues to expand with further plans to introduce new courses next year. The courses are run at the Abbott Training Facility, near Birmingham, with financial and logistic support from the company.
- **Medical Student Education.** The 5th SCTS National Student Engagement Day was held in Birmingham in November 2018, with 146 medical and school students welcomed. There were inspiring talks giving an insight into cardiothoracic surgical training, work-life balance and the various cardiothoracic surgical sub-specialties, followed by opportunities for the students to get practical experience during the wet-lab sessions.
- **Education Sub-Committee restructuring.** Narain Moorjani demitted his role as joint Education Secretary, as he took his post of Honorary Secretary, with Sri Rathinam remaining as the sole Education Secretary. Maninder Kalkat became the Deputy Meeting Secretary, with Uday Dandekar taking over as non-NTN Education Lead. The Sub-Committee welcomes Attilio Lotto as the new Congenital Cardiac Surgery Education Lead. The terms of reference were also updated, in line with the other SCTS sub-committees.
- **Education Travelling Fellowships.** This year saw the considerable expansion in the number of educational fellowships offered to SCTS members, for Consultants, NTN trainees, non-NTN fellows, nurses & AHPs, medical students, as well as multidisciplinary teams due to the exceptional generosity of Mr Marian Ionescu, who offered SCTS-Ionescu Exceptional Additional Fellowships for 2018. As ever, we are very grateful for the financial support from Ethicon for the NTN fellowships.
- **Collaboration with the Cardiothoracic Surgery Specialty Advisory Committee (SAC).** Over the past year, SCTS Education has been working with the SAC in a number of projects, including revision of the cardiothoracic surgery curriculum that is currently being reviewed by the General Medical Council (GMC); education chapter in the SCTS / SAC Workforce report (see Appendix 1); development of peri-CCT fellowships; and a survey of the simulation provision within cardiothoracic surgical units in the United Kingdom.
- **Journal of Thoracic and Cardiovascular Surgery (JTCVS) publication.** The second manuscript describing the educational benefits of the portfolio of cardiothoracic surgical training courses for NTN trainees in terms of learning of knowledge and skills was published again in the JTCVS, with an accompanying supportive editorial, following presentation of the work at the American Association of Thoracic Surgeons (AATS) Annual Meeting.

Education Sub-Committee Plans for 2019-20

- **SCTS & Egyptian Society of Cardiothoracic Surgeons (ESCTS) Joint Meeting.** For the first time, the SCTS will support the ESCTS Annual Meeting in Cairo, Egypt in April 2019. This will involve supporting the development of the educational programme and with speakers that will travel to the Conference to exchange knowledge and expertise.
- **SCTS Education website.** Over the next few months, the SCTS Education website will be incorporated back into the main SCTS website, which is currently being redesigned. As well as updated information and educational resources, the education section of the website will include a legacy page to Mr Marian Ionescu.
- **Assessment of education.** Over the following year, SCTS Education will undertake a number of initiatives to assess the outcome of the SCTS Education portfolio of courses, as 2019 will see the first cohort of trainees that have completed the entire structured portfolio of cardiothoracic training courses that were introduced in 2013. In addition, a second quality assurance visit and report of the courses will take place from the Royal College of Surgeons of Edinburgh and an impact of training analysis will be performed in conjunction with the SAC.
- **2nd Consultant Masterclass.** On the Saturday before the 2019 Annual Meeting, the 2nd Consultant Masterclass will be held regarding 'Introduction of Innovation in Practice' in Westminster, London.
- **SCTS-Ionescu University podcasts.**

Research Sub-Committee

Committee Members	
Co-chair	Gavin Murphy, Glenfield Hospital, Leicester
Executive co-chair	Richard Page, Liverpool Heart & Chest Hospital
Adult Cardiac Surgery Lead	Mahmoud Loubani, Castle Hill Hospital, Hull
Thoracic Surgery Lead	Eric Lim, Royal Brompton Hospital, London
Congenital Cardiac Surgery Lead	Massimo Caputo, Bristol Children's Hospital
Nursing & AHP Representative	Julie Sanders, Barts Health NHS Trust, London
Trainee Representative	Thomas Theologou, Liverpool Heart & Chest Hospital
Co-opted Members	
SAC Representative	Stephen Clark, Freeman Hospital, Newcastle
NICOR Representative	Andrew Goodwin, James Cook Hospital, Middlesbrough
ACL Representative	Marius Roman, Glenfield Hospital, Leicester
Associate Surgical Specialty Lead	Luke Rogers, University Hospital Southampton
Associate Surgical Specialty Lead	Ricky Vaja, Harefield Hospital, London

Research Sub-Committee Summary for 2018-19

- 2nd SCTS National Research Meeting.** The meeting was held in November 2018 and was a great success with increased attendance of trainees, nurses and allied health professionals, providing great opportunities to get involved in national cardiothoracic research projects. Keynote speeches were delivered by Professor Tom Treasure (MARS Trial), Enoch Akowauh (UK Mini-mitral trial), Professor Massimo Caputo and Professor Julie Sanders. The meeting culminated with presentation of prizes for the best oral research, video and poster presentations
- Priority Setting Partnership.** The Heart Research UK funded Adult Cardiac Surgery Priority Setting Partnership (PSP) launched in March 2018. The first survey has now completed with over 1000 responses. The second survey will launch in March 2019, with results expected in September 2019. Result from the PSP will be used to inform the development of the national trials portfolio. The SCTS will communicate with major the research funders to ensure that the PSP informs research commissioning.

- **RCS Surgical Specialty Leads.** The CRN Surgical Trials Steering Committee have expressed concerns as to the poor recruitment to surgical trials nationally. In an attempt to address this, two Associate Surgical Specialty Leads have been appointed (Luke Rogers and Ricky Vaja), who will be engaging in a training programme in clinical research methodology. Moving forward, the CRN Surgical Trials Steering Committee plan to implement a programme of pragmatic clinical trials in UK centres in the mid-term.
- **Cardiothoracic Interdisciplinary Research Network (CIRN).** This research network was setup in 2019 and is being led by Professor Julie Sanders (SCTS Nursing & AHP Research Lead), and Luke Rogers and Ricky Vaja (RCS Associate Surgical Specialty Leads). The CIRN aims to have a member in each cardiothoracic surgical unit in the UK, with a remit to deliver a portfolio of multi-centre clinical trials. The terms of reference have been approved by SCTS Executive. The UK mini-mitral trial and thoracic surgery AKI audit are examples of projects that the CIRN is supporting.
- **Nurse and Allied Health Professionals (AHP) Cardiovascular Research Survey.** Results were presented in March 2018 and demonstrated low numbers of nurses and AHPs in cardiovascular surgery research leadership positions. In 2018, Julie Saunders was appointed as the first Professor of Cardiovascular Nursing at Barts Heart Centre and Queen Mary University of London. The BHF has also launched an NAHP Research Fellowship Programme.
- **NIHR Academic Training.** Marius Roman (NIHR ACL East Midlands) has collated a list of all trainees on the NIHR academic training pathway. Of the 3 ACLs and 5 ACFs identified, none reported having been awarded a competitive fellowship. Moving forward, the plan is to establish a grant writing workshop, WhatsApp Group and face-to-face meeting at the Annual Meeting in March to address this shortfall in funding applications.
- **Cardiothoracic surgery training academic requirements.** In collaboration with the SAC, the requirement for increased academic outputs during the cardiothoracic surgery training programme have been agreed. Further details of how this will be assessed are being discussed with the SAC. To assist cardiothoracic surgical trainees, there are plans to establish a research methodology training day, potentially within the SCTS Education portfolio of training courses.
- **Other research developments.** The VIOLET Trial completed recruitment ahead of schedule, which is a major accomplishment for UK Thoracic Surgeons. The multicentre BRICCS trial, which will assess the beneficial effects of remote ischaemic preconditioning during paediatric cardiac surgery, has begun recruiting in 2 UK Units (Birmingham & Leeds) and is being led by Nigel Drury. The British Heart Foundation has appointed Massimo Caputo (Bristol Children's Hospital) as a new Professor of Congenital Cardiac Surgery.

Research Sub-Committee Plans for 2019-20

- **Access to routinely collected audit data.** Applications have been made to NICOR for access to the audit data that they collect to be used for research purposes but there have been obstacles due to limited numbers of NICOR staff. There is an ongoing BHF initiative, in conjunction with the Turing Institute, to establish standardised reporting outcomes for research studies using routinely collected data.
- **Reduction of surgical site infection (SSI) in cardiac surgery.** The CIRN is leading a collaborative research programme, including the National Cardiac Benchmarking Collaborative (NCBC) and Public Health England (PHE), to develop and evaluate a new SSI care bundle in cardiac surgery. A protocol for a Cochrane review of SSI prevention has also been submitted. The CIRN is planning to submit a funding application for a definitive trial of an SSI Care Bundle in Autumn 2019.
- **British Heart Foundation Cardiovascular Research Collaborative (BHF CRC).** The SCTS will have representation on the strategy board of the BHF CRC, which is funded from 2019-22 to support national research activities and deliver a portfolio of trials.
- **3rd SCTS National Research Meeting (November 2019).**

Nursing & Allied Health Professionals Sub-Committee

Committee Members	
Chair	Helen Munday, Barts Health NHS Trust, London
Meeting Lead	Daisy Sandeman, Royal Infirmary of Edinburgh
Cardiac Lead	Helen Munday, Barts Health NHS Trust, London
Thoracic Lead	Amanda Walthew, Liverpool Heart & Chest Hospital
Congenital Lead	Karen Byrne, Birmingham Children's Hospital
Audit Lead	Julie Sanders, Barts Health NHS Trust, London
Education Lead	Tara Bartley, Royal Sussex County Hospital, Brighton
Education Lead (SCPs)	Bhuvana Bibleraaj, Wythenshawe Hospital, Manchester
Research Lead	Julie Sanders, Barts Health NHS Trust, London
Patient Liaison	Chrissie Bannister, University Hospital Southampton

Nursing & Allied Health Professionals Sub-Committee Summary for 2018-19

- SCTS Annual Meeting CT Forum.** A record number of nurses and AHPs attended the CT Forum and SCTS-Ionescu University Day at the 2018 Annual Meeting in Glasgow, with an accompanying increase in SCTS Associate Membership. There are plans to continue to evolve the CT Forum programme in response to delegate feedback.
- Cardiothoracic surgical training courses.** The nursing & AHP education team have delivered a variety of courses throughout the year, which continue to receive high praise and positive feedback (see Appendix 2). The courses are exceptional value thanks to the much-appreciated sponsorship from Abbott and Cardio Solutions. The Abbott facility, where most of the courses are held, is a superb venue and easily accessible. The SCTS educational team also had input at the European Association for Cardio-Thoracic Surgery Annual Meeting (Milan, October 2018) and Society of Thoracic Surgeons Annual Meeting (San Diego, January 2019) nursing & AHP educational programmes.
- Fellowships.** The nursing & AHP team are very grateful to Mr Marian Ionescu for his most generous donation for the SCTS-Ionescu Travelling Fellowship awards (see Appendix 3). The recipient of the 2018 Nursing and AHP award will be presenting details

of their educational experience at the forthcoming Annual Meeting in London. This year, 4 additional exceptional SCTS-Ionescu Fellowship awards were also offered to nurses and AHPs in January, and applications have recently closed for the regular SCTS-Ionescu Fellowship award.

- **Nursing and Allied Health Professional Research Group (NARG).** All Associate Members of the SCTS are invited to join the NARG, following its launch at the Annual Meeting in 2018. Its purpose is to support the development of nursing and AHP-led research, share expertise and highlight research and funding opportunities. There is a dedicated webpage (<https://scts.org.narg/>) for SCTS members to access a research support directory and an emerging resource library.
- **Cardiothoracic Interdisciplinary Research Network (CIRN).** This research network was setup in 2019 by the SCTS Research Sub-Committee and is led by Professor Julie Sanders (Nursing & AHP Research Lead), and Luke Rogers and Ricky Vaja (RCS Associate Surgical Specialty Leads). The CIRN aims to have a member in each cardiothoracic surgical unit in the UK, with a remit is to deliver a portfolio of multi-centre clinical trials, the first of which is to focus on surgical site infections. Work is on-going with the West Midlands Research Collaborative to finalise Associate PI status for nurses and AHPs (and junior doctors) on CIRN trials.
- **2nd SCTS National Research Meeting (November 2018).** This meeting was held at Glenfield Hospital, Leicester, where there was an increased presence of nurses and AHPs, as compared to the first meeting in 2017. Not only did the meeting open with a presentation from an AHP (Zoe Barrett-Brown, Physiotherapist at Royal Papworth Hospital, Cambridge) but Zoe was awarded the Thoracic oral presentation prize.
- **Patient Liaison.** SCTS representatives support the work of Heart Valve Voice (HVV), a charity dedicated to raising awareness of the symptoms, early detection and treatment of heart valve disease, through various means, including being on the selection panel for the first HVV photography competition, cycling to the European Association for Percutaneous Cardiovascular Interventions Conference in Paris (EuroPCR) or presenting at the European Heart Valve Disease Awareness Day. This is a collaboration that continues to develop for the benefit of patients. In addition, the SCTS patient liaison representative has been closely involved with the “Think Aorta” campaign that was launched this year and is led by the ‘Aortic Dissection Awareness’ patient association.
- **SCTS / SAC Cardiothoracic Surgery Workforce Report.** This report was published in 2019 and acknowledges the integral role that non-medically qualified health professionals have in providing safe and effective care for cardiothoracic surgical patients. The report mainly focussed on advanced nurse practitioner and surgical care practitioner roles (see Appendix 1).

Nursing & Allied Health Professionals Sub-Committee Plans for 2019-20

- **Increase the profile of the SCTS to nursing and AHP professionals.** Plans to raise awareness about the benefits of the SCTS to nurses and AHPs in cardiothoracic centres in the UK and Ireland. In addition, plans to identify a nurse or AHP in every cardiothoracic centre in the UK and Ireland as an SCTS representative within their Trust.
- **Updating the nursing & AHP section of the SCTS website.** Over the next 12 months, the SCTS website will be re-designed with a dedicated nursing & AHP section to the website, which will include contemporary information on courses, fellowships, research opportunities and educational resources.
- **Patient Liaison.** The annual HVV London – EuroPCR Paris cycle ride will take place from 20th – 23rd May 2019 and will bring together healthcare professionals, patients, industry and charity to raise awareness of heart valve disease, culminating with a presentation at the EuroPCR annual meeting. The Aortic Dissection Awareness Day 2019 will be held on the 19th September at the University of Leicester.
- **Thoracic Surgery initiatives.** Plans are being made to identify and disseminate best nursing practice and innovation to help achieve the best outcomes in lung cancer care, in line with the recently published LCCOP data. In addition, there will be support for centres to establish more nurse-led chest drain services to reduce the hospital length of stay.

Meeting Team Sub-Committee

Committee Members	
Meeting Secretary	Clinton Lloyd, Derriford Hospital, Plymouth
Deputy Meeting Secretary	Maninder Kalkat, Heartlands Hospital, Birmingham
Associate Meeting Secretary	Cha Rajakaruna, Bristol Royal Infirmary
Nursing & AHP Representative	Helen Munday, Barts Health NHS Trust, London
Nursing & AHP Representative	Daisy Sandeman, Royal Infirmary of Edinburgh
Conference Organiser	Isabelle Ferner, Society Administrator
Exhibition Organiser	Tilly Mitchell, Society Finance Administrator

Meeting Team Sub-Committee Summary for 2018-19

- 82nd Annual Meeting and SCTS-Ionescu University.** The 2018 Annual Meeting was held in Glasgow on 18th – 20th March. It was well received despite the weather issues affecting the SCTS-Ionescu University on the Sunday. There was excellent attendance with over 1100 delegates, especially for the CT Forum, and from trainees and students. The plenary session focussed on team dynamics and the evolution of the modern workforce within the current NHS, and incorporated the Presidential Address delivered by Graham Cooper.

Attendance:

Medically qualified SCTS members	179
Medically qualified non-members	66
CT Forum SCTS members	75
CT Forum non-members	158
CT Trainee/SAS Doctors Non-Member	49
CT Trainee/SAS Doctors SCTS Member	102
Student	106
FY1/FY2/CT1/CT2 Category	49
Senior and Retired	6
Database Managers	7
Dinner Only Ticket	38
Exhibitor Staff	267
Total	1102

- **Annual Feedback.** Responses were obtained from 423 delegates, who were generally happy with content and delivery. Improvements suggested related to registration, the mobile app and overall IT structure.
- **Finances.** The meeting made a surplus, which was higher than previous years due to a number of factors, including low venue cost, additional industry income initiatives and increased delegate numbers. We anticipate that the 2019 meeting in London will have significantly increased costs and therefore make either no, or only, marginal surplus and therefore no increase in meeting fees was implemented for 2019.
- **Sub-committee membership.** Membership of Meeting Team was updated, with Cha Rajakaruna who was appointed as Deputy elect and Daisy Sandeman who was appointed as CT Forum Lead elect. Thank you to Enoch Akowuah who left the Meeting Team after 4 years and was Secretary for Belfast meeting in 2017.

Meeting Team Sub-Committee Plans for 2019-20

- **83rd Annual Meeting and SCTS-Ionescu University.** This year's Annual Meeting will be held on 10th- 12th March 2019 in London at the Queen Elizabeth II Conference Centre, Westminster. The plenary session will have a congenital cardiac surgery theme to commemorate the 20th anniversary of the Bristol inquiry, with Professor Marc De Leval receiving a lifetime achievement award. The annual dinner will be held at the Underglobe, in the grounds of the Shakespearian Globe theatre. In response to feedback, there will be a change in the software company to Shocklogic, which although more expensive will hopefully provide better IT support and improved mobile app functionality.
- **84th Annual Meeting and SCTS-Ionescu University.** The 2020 Annual Meeting will be held in Cardiff at Celtic Manor, which is a purpose built venue with excellent facilities and good location. It has given competitive pricing for the venue and offers an opportunity to visit to Wales for first time in many years.
- **85th and 86th Annual Meetings and SCTS-Ionescu University.** The venues for the 2021 and 2022 Annual Meetings are being explored to assess the benefits of accessibility and cost. The 2022 meeting will potentially be the next joint meeting with the Association for Cardiothoracic Anaesthesia and Critical care (ACTACC).

Contributors

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Sub-committee reports

Executive summary

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Mrs Helen Munday

SCTS Nursing & Allied Health Professionals Sub-Committee Co-chair

Matron - CT Surgery & Respiratory Medicine, Barts Health NHS Trust, London

Annual Meeting

Mr Clinton Lloyd

SCTS Meeting Secretary

Consultant Cardiac Surgeon, Derriford Hospital, Plymouth

Appendix 1

- **Cardiothoracic Surgery Getting It Right First Time (GIRFT) Report 2018**

<https://gettingitrightfirsttime.co.uk/wp-content/uploads/2018/04/GIRFT-Cardiothoracic-Report-1.pdf>

- **SCTS GIRFT toolkit 2018**

<https://scts.org/wp-content/uploads/2018/04/GIRFT-A4-landscape-full-v1.pdf>

- **Combined National Institute for Cardiovascular Outcomes Research (NICOR) National Cardiac Audit Programme (NCAP) report 2018**

<https://www.nicor.org.uk/wp-content/uploads/2018/11/NCAP-Annual-Report-2018.pdf>

- **Lung Cancer Clinical Outcomes Publication (LCCOP) report 2018**

<https://www.rcplondon.ac.uk/projects/outputs/lung-cancer-clinical-outcomes-publication-2018-audit-period-2016>

- **NHS Blood and Transplant (NHSBT) Cardiothoracic Transplantation Report 2018**

<https://nhsbt-dbe.blob.core.windows.net/umbraco-assets-corp/12252/nhsbt-cardiothoracic-transplantation-annual-report-2017-2018.pdf>

- **NHS Blood and Transplant (NHSBT) Mechanical Circulatory Support Report 2019**

<https://nhsbt-dbe.blob.core.windows.net/umbraco-assets-corp/15421/nhsbt-mcs-annual-report-2017-2018.pdf>

- **SCTS / Specialty Advisory Committee (SAC) Workforce Report 2019**

<https://scts.org/wp-content/uploads/2019/01/SCTS-workforce-report-2019.pdf>

Appendix 2

SCTS Education Programme of Cardiothoracic Surgery Training Courses 2018

Consultant

- Consultant Masterclass 'Training the Trainers' Course
- SCTS-Ionescu University
- Cardiothoracic Surgery Multidisciplinary Non-Operative Technical Skills Course

NTN

- ST3A Introduction to Specialty Training in Cardiothoracic Surgery Course
- ST3B Operative Cardiothoracic Surgery Course
- ST4A Core Cardiac Surgery Course
- ST4B Core Thoracic Surgery Course
- ST5A Intermediate Revision and Viva Course
- ST5B Non-Operative Technical Skills for Surgeons (NOTSS) Course
- ST6A and ST6B Cardiothoracic Surgery Sub-Specialty Course
- ST7A Revision and Viva Course for FRCS (C-Th)
- ST7B Clinical examination course for FRCS (C-Th)
- ST8A Cardiothoracic Surgery Pre-Consultant Course
- ST8B Professional Development Course

Non-NTN

- Cardiothoracic Surgery Update and Wet-lab for non-NTN Doctors
- Professional Development Course for non-NTN Doctors
- Essentials Skills in Cardiothoracic Surgery
- Introduction to Cardiothoracic Surgery

Nursing and AHP

- SCTS-Ionescu University Wet-lab
- CT Forum Skills Stations
- Non-medical Prescribing Course
- Cardiothoracic Advanced Nurse Practitioner Course
- Core Principles in Cardiothoracic Surgery Course
- Theatre Surgical Course
- Surgical Skills course
- Surgical Care Practitioner Exam Revision Course

Medical Student

- National Student Engagement Day for Cardiothoracic Surgery
- Medical Student Session at the SCTS Annual Meeting

Appendix 3

SCTS Education Portfolio of Fellowships 2018

Consultant

- Marian and Christina Ionescu Consultant Travelling Fellowship
- SCTS-Ionescu Consultant Team Fellowship
- Exceptional Additional SCTS-Ionescu Consultant Travelling Fellowship
- Exceptional Additional SCTS-Ionescu Consultant Team Fellowship

NTN

- SCTS-Ionescu NTN Trainee Travelling Fellowship
- Exceptional Additional SCTS-Ionescu NTN Trainee Travelling Fellowship
- SCTS Education Ethicon NTN Trainee Fellowships

Non-NTN

- SCTS-Ionescu Non-NTN Travelling Fellowships
- SCTS-Ionescu Non-NTN Small Travel Awards
- Exceptional Additional SCTS-Ionescu Non-NTN Travelling Fellowships

Nursing and AHP

- SCTS-Ionescu Nursing & Allied Health Professional Fellowships
- Exceptional Additional SCTS-Ionescu Nursing & Allied Health Professionals Fellowships

Medical Student

- SCTS-Ionescu Medical Student Fellowships
- Exceptional Additional SCTS-Ionescu Medical Student Fellowships

