Training Programme Information for Posts in Cardiothoracic Surgery at ST1 Level

Recruitment 2016

This document has details of all of the training programmes in the UK.

Entry requirements for all placements are in line with the Modernising Medical Careers Person specification which can be found on the Specialty Training website: [http://specialtytraining.hee.nhs.uk/](http://specialtytraining.hee.nhs.uk/) and the Applicant Guide.

Details of the full curriculum for Cardiothoracic Surgery ST1 can be found on the Intercollegiate Surgical Curriculum Programme (ISCP) website: [https://www.iscp.ac.uk/Default.aspx](https://www.iscp.ac.uk/Default.aspx)

Further details will be available from your new employing organisation once you have accepted an offer of a post.

Below are the LETB’s/Deaneries which have indicated they will be recruiting an ST1 in Cardiothoracic Surgery. Any changes to posts will be updated on the Health Education Wessex website and in this document.

<table>
<thead>
<tr>
<th>North East</th>
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<tr>
<td>South West</td>
<td>Wales</td>
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<tr>
<td>West Midlands</td>
<td>Yorkshire and Humber</td>
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<td>Scotland</td>
<td>East of England</td>
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<td>Wessex</td>
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Any information not included in this document should be available from specific deanery websites.
Health Education North East

LETB Rotation Base(s)

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<tr>
<th>HOSPITAL</th>
<th>LOCATION</th>
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<tbody>
<tr>
<td>Freeman Hospital</td>
<td>Newcastle</td>
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<tr>
<td>James Cook University Hospital</td>
<td>Middlesbrough</td>
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Health Education North East

Health Education North East operates across a wide and geographically varied area covering Northumberland, Tyne and Wear, North Cumbria, County Durham and Tees Valley. We work with 11 acute trusts (which includes two specialist trusts providing mental health and learning disabilities services), 13 primary care trusts, 196 general practice training practices and 60 general dental training practices.

In the recent GMC 2014 National Trainee Survey, Health Education North East have been ranked number one for a fourth year running in the following:

- Overall trainee satisfaction
- Clinical supervision
- Educational supervision
- Supportive feedback

For other areas where Health Education North East have been ranked highest in the country, please visit our website [http://ne.hee.nhs.uk/2014/06/26/gmc-survey-results-2014](http://ne.hee.nhs.uk/2014/06/26/gmc-survey-results-2014)

Because we know that the quality of education and training is of paramount importance to you, our investment in our trainers and their training is essential to our success. It is also important to have wide and varied experiences in different fields and environments. You will gain a breadth of experience in selected and supervised hospital posts throughout the area in large university acute hospitals, community hospitals and district general hospitals to ensure you get the training you need to give you a rewarding future career. Within these areas you will have the opportunity to work with nationally and internationally recognised clinicians and leaders.

To find out more information about what it is like to ‘Live and Train’ within Health Education North East you can visit our website [www.ne.hee.nhs.uk/recruitment](http://www.ne.hee.nhs.uk/recruitment)

The School was launched in 2006 and is part of Health Education North East, which manages postgraduate medical and dental education across the North East and Cumbria. Overall, the School is responsible for 314 core and specialty surgical trainees across the region, which extends from the Scottish borders in the north, across to Cumbria in the west and as far south as north Yorkshire.

The School oversees all aspects of training in the ten recognised surgical specialties and its core function is to manage the quality of training, ensuring that trainees have access to the highest standards of teaching at all stages of their training programme.
The School also has a lead role in trainee recruitment, assessments and appraisals, preparation for examinations, practical skills training and the development of non-technical skills. The School has close links to the Newcastle University Medical School and other Universities in the region which provide health related education and research. The North East has an excellent reputation in surgical research and trainees are encouraged to become involved in the academic aspects of surgery. In addition, there are opportunities to gain specific training in Medical Education and Medical Leadership. Training has to comply with the requirements of the surgical curriculum so the School works with the Royal Colleges and Specialty Advisory Committees at all levels.

The aims of the School are:

- To prepare and equip surgeons to meet the challenges of surgical practice and deliver the highest standard of care for patients
- To deliver surgical education programmes within Health Education North East that meet GMC quality standards and embrace College guidelines and ethos
- To recognise and respond to the needs of our trainees, trainers and their employers

For further information, please visit:

Health Education North East
http://ne.hee.nhs.uk/

Health Education North East encompasses training in Cardiothoracic Surgery in two regions – Newcastle and Middlesbrough. The ST1 will be managed in Newcastle and on successful run-through, will rotate to Middlesbrough. All sub-specialty components of Cardiothoracic Surgery are offered within this rotation, with an international Transplantation and congenital cardiac surgery reputation.

**Rotation Information**

Expected rotation arrangements for this programme are:

- We have successfully managed Core Trainees who have expressed a wish to do Cardiothoracic Surgery Higher Surgical Training. We have given them an exposure in their CT1 time and after successful MRCS have given them a second diet of the Specialty at CT2 to ready them for ST3 application. Two years running we have had our own highly successful candidates choosing the Northern Deanery for their ST3 training.
- As a result we feel ably placed to offer the same to ST1 candidates. Under the dual supervision of Core and Specialist Program Directors, we can offer 16 months of Cardiothoracic Surgery Training in two diets, with a directed rotation of relevant postings preparing them for MRCS. The candidate will be supported with ATLS, BSS, CCrISP and Specialty Skills in Cardiothoracic Surgery courses.
Trust Generic/Specialty Information

- Each Trust has established cardiothoracic training: – 2 cardiothoracic and 5 cardiac surgeons in Middlesbrough - specialist interest in minimally invasive mitral surgery; 1 cardiothoracic, 3 thoracic, and 2 congenital surgeons in Newcastle –specialist interest in advanced heart and lung failure, and minimally invasive thoracic surgery. Within the 19 surgeons, there is an ex-president of SCTS, present SAC dean, and national lead for transplantation, so there is plenty of resource for career advice and steering. Newcastle Upon Tyne Hospitals NHS Trust offers relevant postings in non-cardiothoracic surgery to allow successful preparation for MRCS and the ST3 post –it is envisaged that this will include plastic surgery and general surgery.

- The ST1, when in cardiothoracic surgery, will spend a supernumerary month in cardiothoracic intensive care, time on the ward and in pre-assessment clinic to ensure thorough knowledge is gained of the ward patient, and time in theatre and clinic to hone surgical and management skills.

- There are 9 Nurse practitioners who manage the patients in pre-assessment clinic and on the ward freeing up the ST1 to immerse themselves in their surgical training. There are 3 surgical nurse practitioners to allow surgical training in cardiac and thoracic theatre.

Teaching

Formal teaching comprises weekly departmental and monthly regional training. There is the availability of simulation laboratories and cadaver rooms as well as established wetlabs. There are business cases to establish High-definition VATS equipment to allow trainees to review their operating in a critical way under supervision. A recent well-attended successful faculty meeting ensured that all trainers are working as one, in relation to current educational standards, and this will be repeated each year. The deanery has accepted cardiothoracic trainees from other regions for independent validation, and for left-handed training. In addition, Newcastle University offers a Post-graduate Certificate in Clinical Medical Research that can be taken part-time over the course of 12 months, and the Faculty will offer the opportunity to take this course to any new Cardiothoracic trainee.

- There is a regular weekly teaching which the ST1 will contribute to, and monthly regional training – there is a planned continuum of revascularisation wet and dry labs training, and after this a planned simulation, wet-lab and cadaveric dissection for minimally invasive thoracic surgery. In addition to this there is a program of simulation of cardiac surgery emergencies.

- All minimally invasive thoracic surgery procedures will be recorded to allow personal assessment of surgical progression and comparison to consultant procedures.

- One consultant in the rotation has won the Silver Scalpel award 2012, for excellence in cardiothoracic training.
Surgical Training Centre fully accredited by Royal College of Surgeons
Newcastle is first centre in England to receive full accreditation from RCS
Posted: 11 July 2012

CORE SESSIONS
CT1 & CT2

• Surgical Instruments / Laparoscopic Stack
• Virtual Reality Simulation:
  Lap Mentor / Simendo Training
• Position & Draping of Patients
• Wound Closure Principles & Advanced Techniques
• Suturing Techniques
• Decision Making
• Case Based Discussion & Diagnostic Dilemmas

Healthcare at its very best - with a personal touch
CORE TRAINEES

Healthcare at its very best - with a personal touch


**Health Education North West**

ST1 and ST2 Cardiothoracic Surgery Training Locations:

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Location</th>
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<tbody>
<tr>
<td>Wythenshawe Hospital, University Hospital</td>
<td>Wythenshawe, Manchester</td>
</tr>
<tr>
<td>of South Manchester NHS Foundation Trust</td>
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</table>

The School of Surgery was established within the North Western Deanery in December 2007 following the appointment of Professor Phil Turner as the Head of School.

The School oversees training in all of the recognized surgical specialties. The aim is to provide both core and specialist training to ensure new consultants are appointed with the knowledge and skills required for a lifetime of professional practice. The School is responsible for more than 300 surgical trainees across the Region which extends from Barrow-in-Furness in the north to Stockport in the south and from the Pennine moors in the East to the West coast. The population served is over 5 million and there are approximately 500 surgical consultants providing clinical services and training across the Deanery at 19 centres.

The core function of the School is to manage the quality of training, ensuring that trainees have access to the highest standards of teaching at all stages of their careers. The School has a lead role in trainee recruitment, assessments and appraisals, preparation for examinations, practical skills training and the development of non-technical skills. The School has close links to the Manchester Medical School and other Universities in the region who provide health related education and facilities for research. The Region has an excellent reputation in surgical research and trainees are encouraged to become involved in the academic aspects of surgery. In addition, there are opportunities to gain specific training in Medical Education and Medical Leadership.

Training has to comply with the requirements of the surgical curriculum so the School works closely with the Royal Colleges and Specialty Advisory Committees at all levels.

Professor Phil Turner is a consultant orthopaedic surgeon based at Stepping Hill Hospital, Stockport. Before being appointed as Head of School, he was Regional Advisor and then Programme Director in Trauma and Orthopaedics in the North Western Deanery. He has a specialised practice in knee surgery and remains active in teaching and training at local, national and international levels. He is an elected member of BOA Council and sits on the Training Standards Committee. In addition he is an examiner and assessor for the FRCS (Orth) and is Chairman of the Confederation of Postgraduate Schools of Surgery (CoPSS).

The Associate Dean leading for the North Western Deanery and responsible for the School is Professor Pramod Luthra.
ST1 & ST2 Cardiothoracic Surgery

Introduction / Overview of the programme:

Cardiothoracic surgery at ST1 and ST2 is delivered in line with the Intercollegiate Surgical Curriculum Project [www.iscp.ac.uk](http://www.iscp.ac.uk). Trainees will be allocated to Health Education North West (North West) or Health Education North West (Mersey) and will spend their time working in either Manchester or Liverpool.

General description of rotation:

The ST1 and ST2 years will consist of 18 months in Cardiothoracic Surgery plus 6 months General Surgery.

For North West trainees the ST1 rotation will involve 6 months in General Surgery at Wythenshawe Hospital and 6 months in Cardiothoracic Surgery at Wythenshawe Hospital. The ST2 rotation will be 12 months of Cardiothoracic Surgery at Wythenshawe Hospital.

For Mersey trainees the ST1 rotation will involve 6 months in General Surgery at one of the central-based hospitals in Liverpool and 6 months in Cardiothoracic Surgery at Liverpool Heart and Chest Hospital. The ST2 rotation will be 12 months of Cardiothoracic Surgery at Liverpool Heart and Chest Hospital.

Educational opportunities:

Trainees in ST1 and ST2 will be expected to attend local educational programmes which are held within the hospital they are working in. There is a comprehensive core teaching programme which takes place on at Wythenshawe and Liverpool Heart and Chest Hospitals, attendance is mandatory and an attendance register is kept and monitored. The timetable for teaching can be viewed at [www.surgicalcourses.com](http://www.surgicalcourses.com)

Research / audit / teaching:

Opportunities for clinical research exist within all departments involved in the programme and trainees are expected to take advantage of this. All trainees should be actively involved in audit on an ongoing basis and be in a position to demonstrate this at annual appraisal and ARCP interviews. Teaching of less experienced medical colleagues, medical students, nurses and other paramedical staff is an integral part of the post and all trainees are expected to be involved in this.

ST3 to ST9 Rotation In North West Consortium (Higher Surgical Training) will be in Northwest Consortium

North West Cardiothoracic Consortium – Health Education North West

The North West Consortium will provide one of the most comprehensive training programmes for Cardiothoracic Surgery in the UK, with opportunities to develop subspecialty interest in all areas of cardiac and thoracic surgery including transplantation surgery, oesophageal surgery, congenital surgery, specialised aortic
surgery, and mitral valve repair. Close links with Liverpool and Manchester Universities and the Paterson’s Institute of research (Christie Hospital) along with the excellent transplant research lab offer excellent opportunities to pursue academic aspirations. The program will offer opportunities to actively participate in the Northwest Cardiac / Thoracic surgery audit, North West Quality improvement program, North West Thoracic Society meetings and North West regional teaching sessions. The Northwest consortium will also offer excellent high quality educational resource which is highlighted below.

The North West and Mersey LETBs are geographically adjacent to each other and have formally collaborated for Cardiothoracic Surgical training since August 2009 to form the North West Cardiothoracic Consortium. Applications are directed to the Consortium rather than to the individual LETBs. After appointment trainees are allocated to either the Mersey or the North West Deanery for overall supervision of their training.

The specific program for any individual trainee will be developed to reflect his/her specific training aspirations, commensurate with the overall requirements of the curriculum and the availability of specific training opportunities. Trainees can expect to spend the majority of their training time within the LETB to which they are appointed.

Given the size of the consortium and the sub specialty strengths of the consortium, it is possible for trainees to specify from the outset their preferred training program to include either general cardiac surgery, mixed practice cardiothoracic surgery or general thoracic surgery.

**The program involves the following centers:**

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<thead>
<tr>
<th>HOSPITAL</th>
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<tbody>
<tr>
<td>Liverpool Heart And Chest Hospital (LHCH)</td>
<td>Liverpool</td>
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<tr>
<td>Alder Hey Children’s Hospital</td>
<td>Liverpool</td>
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<tr>
<td>University Hospital South Manchester (UHSM)</td>
<td>Wythenshawe, Manchester</td>
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<tr>
<td>Manchester Royal Infirmary (MRI)</td>
<td>Manchester</td>
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<tr>
<td>Lancashire Heart Centre, Victoria Hospital</td>
<td>Blackpool</td>
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The South West regional training scheme in cardiothoracic surgery is shared between University Hospitals Bristol (Severn Deanery) and Derriford Hospital in Plymouth (Peninsula Deanery). Supervision of the programme is led through the Severn Deanery, however the TPD rotates between the two centres. Trainees rotate between the two centres with approximately half their training at either centre. Appointment to the rotation at ST1/ST3 level is through national recruitment.

There are 4 deanery approved training posts in Bristol with one Academic Clinical Fellow (ACF) post. Plymouth has 5 deanery approved training posts.

ST1 Rotation
The ST1 post is based in Plymouth and comprises 2 years at Core Trainee level with 6 months General Surgery, 6 months Vascular Surgery and 12 months Cardiothoracic Surgery before progressing through to the South West ST3 rotation. Trainees will attend the Cardiothoracic ARCP during their ST1-2 training.

ST3 Rotation
Expected rotation arrangements for this programme are:

- Nationally selected trainees will rotate between Bristol and Plymouth spending 2-4 years in either post
- In both centres trainees will spend 6 months in a firm based (consultant clinical supervisor) arrangement under a single educational supervisor
- ACFs will be based in Bristol for the first 3 years of their training
- Paediatric cardiac surgery is based in Bristol. Trainees will spend at least 6 months in the unit

Registrar rotas at both units are compliant with the EWTD. Features include:

- Non-resident on call registrar
- Day off post on-call (Bristol cardiothoracic trainee workload ranks in the best 5% of UK programs in the GMC survey)
- Firm based training at core training level and beyond
- Structured training for core trainees by SCPs in theatre
Nurse Practitioner support in ward areas

Trust Generic/Specialty Information:

Training in Bristol takes place on three sites within the University Hospitals Bristol campus. The purpose-built Bristol Heart Institute opened in 2009 and houses adult heart surgery (1700 cases annually). Thoracic surgery undertakes 900 cases annually and is based in the new surgical block at Bristol Royal Infirmary, opened in 2014. The Bristol Royal Hospital for Children houses congenital cardiac surgery (400 cases annually). There are 15 Consultant Surgeons including 2 Professors.

Particular strengths include a strong tradition of training in cardiac surgery (more than 50% of cardiac cases performed by trainees), including excellent experience in OPCAB. There are research opportunities with the renowned Academic Surgical Unit.

Courses in aortic surgery and minimal access surgery, weekly postgraduate seminars and regional study days are available. There is an active TAVI programme and a dedicated hybrid theatre.

The thoracic unit has a particular interest in minimal access surgery. It one of only two European centers to host Clinical Immersion Courses in VATS lobectomy with Covidien, and is hosting an ESTS Itinerant Expert Course in 2015. In 2013, 60% of all lobectomies were performed thoracoscopically. There is also an active endobronchial and surgical lung volume reduction programme, supported by a severe COPD MDT.
Training in Bristol will comprise time spent in adult & paediatric cardiac and general thoracic surgery, depending upon the trainee’s career intentions. There will be excellent training in all aspects including OPCAB/minimal-access surgery & VATS resections.

**Academic**

The academic component is based at the Bristol Heart Institute, linked with the University of Bristol. Bristol is a Russell Group University, ranked within the top 30 Universities in the world (QS world rankings 2014). The medical academic staff includes:

- 1 British Heart Foundation Professor of Cardiac Surgery
- 1 Bristol University Professor of Cardiac Surgery
- 2 Bristol University Readers of Cardiac Surgery
- 2 ACFs
- 1 Research Fellow

There are a large number of high impact papers published by our trainees each year.

**The Plymouth component** of the training programme is based at Derriford Hospital, Plymouth which has, in the last two years relocated to the £40 million Sir Terence Lewis Building - The South West Cardiothoracic Centre, performing 1300 adult cardiac and 600 general thoracic procedures annually.

There are 6 full time cardiac consultants and 2 full time thoracic consultants. Minimally invasive oesophageal surgery (MIO) has now relocated from Exeter to Derriford. The South West is one of very few UK cardiothoracic programmes able to offer training in oesophageal surgery.

Particular areas of specialisation include minimal access mitral and aortic valve surgery, TAVI, AF surgery, minimally invasive valve surgery and aortic surgery

Training has been particularly strong in this region, with skilled trainees performing up to 50% of the cases. There has been excellent progression of trainees from ST3 level to completion with 100% of recent graduates taking up consultant posts.

Both Bristol and Plymouth are designated Adult Major Trauma Centers (MTC). BRCH is a designated paediatric MTC.

![Scan here to visit the Plymouth cardiothoracic site](image-url)

**Teaching**

There are a number of regular teaching sessions and formal study days arranged throughout the year:

1. Weekly departmental teaching for trainees in Plymouth and Bristol
2. Monthly regional Core Trainee Meetings (Peninsula)
3. Regional study days held 3-4 times per year between Severn and Peninsula Deaneries
4. Aortic Valve Study Day – March 2011 (Peninsula)
5. Aortic Surgical Study Day (Bristol) – Nov 2011 (Severn, Peninsula, Cardiff and Wessex Deaneries)
7. Mitral Study Day and Wetlab teaching – March 2012 – (Peninsula)
8. Cardiopulmonary Bypass Study Day – March 2013
10. Modern Management of Lung Cancer Symposium Bristol 2014

Our faculty are actively involved with national educational events including;

1. Specialty Skills Course in Cardiothoracic Surgery
2. Intermediate Skills Course
3. Professional Development Course
4. Birmingham Review Course
5. RCSEng Training the Trainer Course
6. SCTS University
7. Cardiothoracic Trainees National “Boot Camp”

Trainees and faculty at our lung resection wetlab, School of Anatomy, Bristol.
Wales

Deanery Rotation Base for ST1-2 Cardiothoracic Surgery:

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<th>HOSPITAL</th>
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<tr>
<td>University Hospital of Wales</td>
<td>Cardiff</td>
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The strategic aim of the Wales Deanery is to commission, quality assure and support the education and training of trainees, hospital doctors, GPs, dentists and DCPs in Wales. This includes the development of innovative models of education and training delivery, building training capacity and leading on postgraduate medical and educational research. Further information at [http://www.walesdeanery.org](http://www.walesdeanery.org).

There are currently 630 established training grade posts Cardiff and Vale UHB working across 6 hospitals: University Hospital of Wales (UHW), University Hospital Llandough (UHL), Cardiff Royal Infirmary (CRI), Whitchurch, Barry, St Davids and Rookwood. The majority of trainees are based on the two main hospital sites, UHW and UHL. Cardiff and Vale UHB has a well earned reputation as a centre of excellence for clinical care, medical education and research. Established in 2009, following the reorganisation of health services within Wales the UHB is one of the largest and most diverse healthcare providers in the UK.

There are strong links with the Wales College of Medicine, Cardiff University and this partnership places us at the leading edge of training and education of healthcare professionals as well as research and development into new approaches for healthcare. Cardiff and Vale UHB is unique in Wales in its role as a teaching centre for new doctors, nurses and therapists working under the supervision of some of the best clinicians in their field. This association is a vital part of the UHB’s ability to provide its specialist services.

The University Hospital of Wales is a large teaching hospital situated within the city of Cardiff. Working here will enable you to learn from some of the foremost clinicians in their fields within a culture of innovation, education and research. The hospital provides secondary care to the population of north and east Cardiff and tertiary level care in nephrology, neurosciences, haematology, paediatrics and neonatology, cardiothoracic and critical care.

The Wales School for Surgery is responsible for core training in Wales and higher surgical training across ten specialties. In addition to traditional training in medical diagnostic, therapeutic and communication skills, as a craft specialty we need to ensure that generic and specialist skills are acquired. Training progresses from the acquisition of basic generic surgical skills in core years to specialty specific skills learned during subsequent dedicated training periods. The final stage of training needs to prepare the young surgeon for the rigors of clinical practice at consultant level. For more information on training in Wales, visit [http://www.doctorstrainingwales.tv](http://www.doctorstrainingwales.tv).
ST1/ST2 Cardiothoracic Surgery

Overview of programme:

The new programme at ST 1 & 2 extends the already established Welsh specialty training programme in Cardiothoracic Surgery to offer seamless training over an 8 year period, from post-registration through to completion of CCT. Trainees appointed to the new ST1 programme will spend their first two years at the University Hospital of Wales in Cardiff, followed by entry into the Consortium Training programme at ST3, offering training opportunities at both the Welsh Cardiothoracic Centres in Cardiff and Swansea, and subspecialty exposure to paediatric cardiac surgery and transplantation in the West Midlands Deanery.

The ST1 year will involve 6 months of General Surgery and 6 months of Cardiothoracic Surgery (Cardiff). ST2 will offer 12 months of cardiothoracic surgery at Cardiff, including a dedicated period in cardiac intensive care. During this time, trainees will be expected to participate in educational activities including the core surgical teaching programme, local specialty teaching sessions / wetlabs, regional training days, and national training courses and meetings.

The University Hospital of Wales, Cardiff

The University Hospital of Wales is a University Teaching Hospital affiliated with Cardiff University and its School of Medicine. The Cardiothoracic Unit serves a population of 1.4 million around Southeast Wales, and undertakes up to 1000 adult cardiac procedures per year, through 3 dedicated cardiothoracic theatres, 8 Intensive care beds, 5 High Dependency beds, and 37 ward beds. The unit undertakes all types of adult cardiac surgery including off-pump coronary surgery, complex mitral valve surgery, minimally invasive cardiac surgery & major surgery on the thoracic aorta including endovascular procedures and surgery for some adults with congenital heart disease. There is no transplantation service. The Unit also undertakes over 400 major thoracic surgical procedures per year, including a major proportion of VATS procedures (lobectomies etc), lung volume reduction surgery, endobronchial stenting and minimally invasive surgery for chest wall deformities.

4 NTNs – 1xST1, 1xST2, 2 x ST3-8

  - **Cardiac** – One training post at ST3-8; no formal out-of-hours on-call
  - **Thoracic** – One training post at ST3-8; no formal out-of-hours on-call

Middle grade: 4 SAS, 6 CF/LAS; Full shift rota
4 Nurse Practitioners/Case Managers
2 Surgeons’ Assistants, 1 Trainee Surgeons’ Assistant

Core training grades: 1 FP2, 2 CT1/2, ST1 & 2 - Partial shift (participate in H@N)

**Job Plan**

In line with revised curriculum requirements, trainees will attend weekly: one outpatient clinic, at least three theatre sessions, MDTs, consultant ward rounds, and core teaching activity. Ample exposure will be available for perioperative management of acute and elective cardiothoracic surgical patients within critical care
and ward environments. Supervised operative exposure to conduit harvest, sternotomy, thoracotomy, VATS procedures, etc, supported by a full portfolio of ISCP based assessments. Trainees will be expected to undertake regular audits, participate in departmental research activities and teaching of other medical and allied healthcare staff/students.

The Welsh Cardiothoracic Surgical Training programme

The Joint Wales and West Midlands Training Consortium offers a modern, comprehensive, fit-for-purpose training programme for Cardiothoracic Surgery, drawing upon the strengths of both Welsh centres, and a number of centres from the West Midlands Deanery. In particular, the consortium offers the full spectrum of broad general as well as specialist cardiothoracic training that can be tailored to an individual's training requirements, whilst maintaining a geographic base.

The Welsh centres offer comprehensive exposure to adult cardiac surgery including a substantial (25%) OPCAB component, valve replacement & repair, arrhythmia surgery, minimal access aortic valve surgery, aortic root (including homograft & valve-sparing surgery), arch, thoraco-abdominal, and endovascular thoracic aortic intervention. Exposure to trans-arterial and trans-aortic aortic valve therapies is available at both Welsh centres, and opportunities for trainees to acquire catheter skills are being developed. Insight into specialties allied to cardiothoracic surgery is encouraged through structured placements in areas including interventional cardiology, electrophysiology, heart failure therapies, echocardiology and cardiac imaging, perfusion sciences, respiratory medicine and upper GI surgery. A good range of general adult and paediatric thoracic surgery ensures a strong foundation in this specialty, which can be developed to an advanced level through the consortium training programme as required. Sub-specialty training in Transplantation, paediatric cardiac, advanced aortic, and ventricular support therapy is also provided through the consortium.

Combined with a pioneering training infrastructure that capitalises on training opportunities, and supported by a robust mechanism for assessment and feedback through the ISCP, trainees on the Welsh Cardiothoracic Rotation have the opportunity to experience training fit for the 21st Century. More specifically, this includes:

- European Working Time Directive compliance, with NTNs functioning ‘outside’ non-training, service-orientated rotas and shifts. NTNs are therefore supernumerary to service requirements and can take full benefit of training opportunities.
- Full engagement with the Integrated Surgical Curriculum Programme (ISCP) providing a framework for structured training, assessment, and supervision.
- Access to Wet-lab training, regional training days, and journal clubs. This includes mandatory attendance at the Royal Society of Medicine Cardiothoracic Section, and the Annual SCTS Meeting.
o Attendance at Royal College of Surgeons’ Cardiothoracic Training Courses incorporated into educational agreements and resourced through study leave budget.

o Integrated training exposure to allied specialties including anaesthesia, critical care, respiratory medicine, oncology, interventional cardiology, echocardiography, electrophysiology, heart failure therapies, device therapies, cardiac imaging, and endovascular therapy.

o Exposure to advance thoracic surgery, Paediatric/congenital surgery, and transplantation via OOPE with the West Midlands Rotation.

**All Wales & West Midlands Cardiothoracic Training Programme (ST3-8)**

**ST3:**
- Cardiac Surgery - Morriston (4 months)
- Integrated Specialties – UHW (4 months)
- Thoracic Surgery – UHW (4 months)

**ST4:**
- Thoracic surgery - UHW

**ST5 or ST6**
- Cardiac Surgery – Morriston

**ST6 or ST5**
- Paediatric cardiac surgery (6 Mo) - BCH
- Transplantation & thoracic aortic surgery (6 Mo) – QEH

**ST7 & 8**
- Bespoke training. Options might include:
  1. **Paediatric / Congenital surgery** – supported application for GOSH/BCH programme
  2. **Adult Cardiac surgery** – UHW/Morriston with options to develop experience in OPCAB & mitral repair.
  3. **Adult Cardiothoracic Surgery** - Morriston/UHW
  4. **Adult Thoracic Surgery** – currently OOPE at HoEH, then UHW

Further information is available from Mr Dheeraj Mehta, Training Programme Director, at dheeraj.mehta@wales.nhs.uk.
Health Education West Midlands

Rotation Base(s)

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<thead>
<tr>
<th>HOSPITAL</th>
<th>LOCATION</th>
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<tbody>
<tr>
<td>Heart of England NHS Foundation Trust (Heartlands Hospital)</td>
<td>Birmingham</td>
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<tr>
<td>University Hospital Birmingham NHS FoundationTrust (QE Hospital)</td>
<td>Birmingham</td>
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Deanery information

The West Midlands has a population of 5.3 million, with a rich mix of cultures and an ethnically diverse population. The population spans the high number of young people in the city of Birmingham to the older population in the more rural parts of the region such as Herefordshire.

Birmingham is a progressive, multi cultural modern city benefiting from an ambitious city centre redevelopment plan. There are excellent transport links, being 1½ hours by train to London, 1 hour to Manchester and 1½ hours to Bristol. Birmingham International Airport flies to over 100 destinations and is 15 min drive from the city centre. The city offers a wide range of social, cultural and entertainment facilities including a vibrant city centre, the Symphony Hall, home of the Birmingham Symphony Orchestra, the Birmingham Royal Ballet and the International Convention Centre. It boasts the largest cinema complex in the UK and the Bullring shopping centre has recently been redeveloped into the largest shopping complex in Europe. Birmingham is also home to the National Exhibition Centre, three premiership football clubs and the Edgbaston Test Cricket Ground. There are three universities, excellent schools and a number of other institutions offering further education and vocational training.

The West Midlands Workforce Deanery is the second largest deanery in the country with a wide range of specialty and training posts offered. The foundation programme in the West Midlands was one of the first to be established in the UK and has maintained its strong drive of innovation and excellence.

Rotation Information

ST1 / ST2

The aim of these 2 years is to give the trainee the basic skills, knowledge and clinical experience required for a surgical career with specific emphasis on cardiothoracic training.

The first year (ST1) will be based at Heartlands Hospital and includes 3 four month attachments. The second year (ST2) will be spent at University Hospital Birmingham again rotating thro 3 four month training posts.
<table>
<thead>
<tr>
<th>Specialty</th>
<th>Location</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST1</td>
<td>General Surgery</td>
<td>Heartlands Hospital</td>
</tr>
<tr>
<td>ST1</td>
<td>General Surgery</td>
<td>Heartlands Hospital</td>
</tr>
<tr>
<td>ST1</td>
<td>Thoracic Surgery</td>
<td>Heartlands Hospital</td>
</tr>
<tr>
<td>ST2</td>
<td>Intensive care medicine</td>
<td>University Hospital Birmingham</td>
</tr>
<tr>
<td>ST2</td>
<td>Trauma &amp; Orthopaedics</td>
<td>University Hospital Birmingham</td>
</tr>
<tr>
<td>ST2</td>
<td>Cardiothoracic Surgery</td>
<td>University Hospital Birmingham</td>
</tr>
</tbody>
</table>

Trainees will be expected to participate in local educational programmes. In addition there are regional core surgical training educational programmes as well as a regular regional cardiothoracic educational programme. The educational programmes provide anatomy, surgical skills, wet lab, clinical case based and didactic teaching. All trainees will be expected and supported to participate in ongoing audit within their department. Within each department and hospital and in association with the Birmingham universities there are extensive research opportunities available and all trainees will be encouraged and supported to take advantage of these opportunities.

Training will be delivered according to the Intercollegiate Surgical Curriculum Project [www.iscp.ac.uk](http://www.iscp.ac.uk). All trainees will have an assigned educational supervisor as well as a mentor for pastoral advice and support. Assessment will be competency based and all trainees will have an Annual Review of Competence Progression (ARCP).

**ST3 – ST 8**

The West Midlands Cardiothoracic Training Programme offers comprehensive training thro 16 Deanery funded and educationally approved cardiothoracic training posts across 6 hospitals:

- **University Hospital Birmingham**: academic adult cardiac surgery programme including intrathoracic transplantation, complex aortic surgery and ventricular assist devices as well as a very active civilian and military trauma practice.
- **Heart of England Hospital**: dedicated adult thoracic unit practicing all aspects thoracic surgery including complex thorascoscopic, tracheal and chest wall surgery.
- **Birmingham Children’s Hospital**: largest neonatal and infant paediatric cardiac surgical programme in UK. Tertiary referral centre for all aspects of paediatric
cardiac surgery including ECMO. The unit also undertakes regular adult congenital heart surgery at UHB.

- **University Hospital of Coventry and Warwick**: combined adult cardiac and thoracic programme undertaking all aspects of cardiothoracic surgery including complex mitral and aortic surgery as well as all aspects of thoracic surgery
- **New Cross Hospital, Wolverhampton**: combined adult cardiac and thoracic programme including aortic, mitral and minimally invasive and robotic surgery
- **University Hospital of North Staffordshire**: combined adult cardiac and thoracic programme.

The programme is administered by a regional Training Committee that has been established for over a decade and has a reputation for robust training assessments and commitment to the quality of training. Training within departments is also supported by the monthly teaching programme overseen by the Training Director. The commitment to training goes beyond the region. A number of national teaching courses were established by and are run by faculties that include a strong West Midlands presence (The Birmingham Review Course, The DSTS, The RCS Cardiac Skills Courses, The Birmingham Professional Development Course).

The training programme is individualised for each trainee and does not follow a fixed pattern. During the first 4 years of the programme generic training is offered, this includes at least 1 year of thoracic surgery and 6 months of paediatric surgery. In the final 2 years trainees are helped to pursue training in areas of specialisation or specific interest either within the region or as OOPE (this has included Hong Kong, USA, Edinburgh, Newcastle, Papworth, and Middlesborough).

The strength of clinical training is mirrored by that of academic training. In 2007 2 Walport Lecturers were appointed following a successful application by the cardiac surgical departments at the Queen Elizabeth and Birmingham Children’s Hospitals in conjunction with The University of Birmingham to the Department of Health. In addition there are 2 trainees who are clinical lecturers at the University of Birmingham. There are 4 further research fellows at QEH, BCH and Heartlands Hospitals.

Over the past 16 years 30 national trainees have completed the training programme, 29 have achieved consultant posts in the United Kingdom (incl. adult cardiac, cardiopulmonary transplantation, thoracic, cardiothoracic and paediatric cardiac surgery) and 1 in Canada. In the last 3 years the McCormack medal for the best performance at the FRCS Part 3 examination has been awarded twice to West Midland trainees.

The West Midlands has also contributed significantly to collaborative training. The Birmingham Children’s Hospital shares the National Paediatric Training post for senior trainees with Great Ormond Street Hospital. In addition the Children’s Hospital has helped to train surgeons from Australia, New Zealand, South Africa, Germany, Canada and the United States and continues to do this. More recently the Surgical Department at QEH and the Heartlands Hospitals have established an international link with Prince of Wales Hospital, Hong Kong involving the rotation of trainees.

For further information please contact Tim Jones, Regional Training Programme Director [tim.jones@bch.nhs.uk](mailto:tim.jones@bch.nhs.uk)
Health Education Yorkshire and the Humber

Deanery Rotation Base(s)

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castle Hill Hospital</td>
<td>Hull</td>
</tr>
<tr>
<td>Leeds General Infirmary</td>
<td>Leeds</td>
</tr>
<tr>
<td>Northern General Hospital</td>
<td>Sheffield</td>
</tr>
<tr>
<td>St James University Hospital</td>
<td>Leeds</td>
</tr>
</tbody>
</table>

The Yorkshire and Humber Deanery
The Yorkshire and the Humber Postgraduate Deanery is keen to attract high calibre candidates from across the UK to practice within the region. Yorkshire and the Humber offers a wide range of locations and trusts for trainees to work within, and looks to continuously support a family friendly approach to training. With locations ranging from the diverse cities of Hull, Leeds and Sheffield; all of which offer vibrant night life and city living, to the beautiful rural areas of North Yorkshire and North East Lincolnshire, Yorkshire and the Humber has something for everyone. First rate training is delivered on all sites, and coupled with a robust Quality Assurance process; this ensures that trainees gain the most experience possible from the exciting opportunities available for training and career progression.

Health Education, Yorkshire and the Humber is responsible for postgraduate training in Medicine and Dentistry across the region.

The school of surgery was launched in 2008 and oversees the training for more than 500 surgical trainees in both core and higher speciality training. The school of surgery is led by Professor Michael Gough. The School Management Committee embraces both the LETB and College with trainee and academic representation, but is mainly populated by the Training Programme Directors for core surgery and the nine specialties. Because of its large size it meets relatively infrequently but has key strategic and planning functions.

The Yorkshire School of Surgery strives to maintain an easy and fluid channel of communication with its trainees – a number of routes are made available to trainees in order to facilitate contact with the School. Training Programme Directors and Programme Support Officers can all be reached via this website.

All Specialist Training Committees within the Yorkshire School of Surgery invite representation from trainees by means of a trainee representative. Representatives’ details are not always available through this site but can be found via programme support officers. It is understood that surgical education is a constantly evolving field and the school relies on trainees’ views and expressed needs in order to tailor its aims and objectives for curriculum delivery.

Since May 2010, following the Deanery changes resulting from the new Strategic Health Authority Configurations in 2006, the Yorkshire and Humberside Training program has included four training centres. The addition of an established University Hospital has significantly increased the strength of an already successful program. The Deanery now offers a comprehensive training program. In addition to the broad speciality there will be training opportunities to gain experience in aortic surgery,
mitral valve repair, AF ablation surgery, oesophageal resections, mesothelioma surgery and major chest wall resections. The Deanery has funded and appointed an assistant Training Program Director, Mr Mahmoud Loubani, to oversee regional teaching program for the trainees.

**Rotation Information**
Cardiothoracic training at ST1 and ST2 will be delivered in line with the Intercollegiate Surgical Curriculum Project.

The ST1 and ST2 will be based at the Hull and East Yorkshire Hospitals Trust. The program will consist of 12 months cardiothoracic surgery, 6 months vascular surgery and 6 months upper GI surgery based on 4 six monthly posts. During the cardiothoracic placements, on call commitments will be with the cardiothoracic on call rota.

ST3 to ST8 rotation will be in the Yorkshire and Humber Deanery. The training program rotates between the four training centres. Trainees would spend one year at each of the training centres during the first four years. Rotating between posts every 6 months, In April and October. Each of the training centres can offer significant training opportunities to at least two higher trainees and for the final two years trainees would elect where they wish to continue their training in the program. The aim is that senior trainees would be supernumerary. Any trainee wishing to specialize in thoracic surgery should be able to gain as wide an exposure as possible in all three thoracic surgical centres.

Transplant surgery is optional and could be arranged as a period of Out of Program Training (OOPT)

**Trust Generic/Specialty Information**

**Leeds General Infirmary**

The cardiac Unit was created in 1997 following the centralisation all of cardiac surgery in Leeds to the Leeds General Infirmary.

The Cardiac Surgery service operates from ward and theatre facilities in the Jubilee Wing of the LGI with Theatres and all critical care facilities collocated and the ward beds on the cardiovascular floor of the facility

Therein an outpatient department, 16 inpatient beds, 2 theatres and 14 critical care beds that are co-located level 2 & level 3 to enable flexible use of this capacity to meet service needs.

The unit performs approximately 1000 cardiac cases per year, with up to 200 operations for congenital heart disease. Middle grade surgeons contribute to over 90% of PBA cases and perform over 15% of cases.

Surgical staff includes

- 8 Consultant Adult Cardiac Surgeons
- 4 Consultant Paediatric Cardiac Surgeons
- 3 Higher Trainees
- 7 Clinical Fellows at Registrar level
Surgical Care Practitioners

Services to patients include
  Mitral Valve Surgery
  Off-pump coronary artery bypass grafting
  Aortic surgery with access to TAVI

**St James University Hospital**

The largest teaching hospital in Europe with an extensive MRC cancer centre the thoracic surgical centre at St James is now one of the largest thoracic centres in the country. Without patient facilities a 25 bedded ward, hob facilities two theatres plus extra theatre sessions and access to the large ITU.

The unit performs over 1000 cases per year with over 300 major resection cases a year. With a large number of endoscopic procedures both major and minor. Trainees, depending on experience are involved in all PBA cases performing all or part of the case.

Surgical staff includes
  6 Consultant Surgeons
  2 Higher Trainees
  6 Clinical Fellows at Registrar level

Services to patients include
  Endobronchial Laser and photodynamic therapy (PDT)
  VATS Lung Resections
  Major chest wall resections

**Northern General Hospital**

Cardiothoracic surgery services for the North Trent population of 1.8 million are located within the South Yorkshire Cardiothoracic Centre, Chesterman wing, Northern General Hospital. With 5 dedicated cardiothoracic theatres, 28 cardiac surgery beds and 20 thoracic beds, 24 theatre recovery beds, progressive care beds and cardiac Intensive Care unit beds.

The unit performs approximately 1000 cardiac cases per year with middle grade surgeons contributing to over 90% of PBA cases and performing 23% of cases.

Surgical staff includes
  9 Consultant Surgeons
  3 Higher trainees
  6 Clinical Fellows at Registrar level
  Surgical Care Practitioners

Services to patients include
  Mitral Valve Surgery
  Minimally invasive Mitral Valve Surgery
  AF Ablation surgery
  Aortic surgery
  VATs lung resections and lobectomy
Castle Hill Hospital

Newly built, opening in 2010, the cardiothoracic centre at castle hill hospital has excellent facilities with two cardiothoracic wards, 35 ward beds, 12 Hob beds, and dedicated ITU beds there are three theatres, endoscopy suite and outpatient facilities. The unit performs over 800 cardiac procedures, middle grade surgeons contributing to over 90% of PBA cases and performing 27% of cases.

Over 250 major and advanced thoracic cases each year and over 1000 endoscopic and minor cases. Middle grade surgeons contribute to over 80% of all PBA cases and over 60% of minor and major procedures are performed under supervision by trainee surgeons.

Surgical staff includes
- 6 Consultant Surgeons
- 3 Higher trainees
- 7 Clinical Fellows at Registrar level
- 3 Surgical Care Practitioners

Services to patients include
- Mitral Valve Surgery
- AF Ablation surgery
- Aortic surgery
- Minimal access aortic valve surgery
- VATs lung resections and lobectomy
- Mesothelioma surgery
- Endoscopic laser
- Oesophageal surgery

Teaching

Hospital based teaching programs

Each unit provides adult cardiothoracic training with paediatric surgery at the LGI.

Local MDTs are run in cardiac surgery, lung cancer and upper GI cancers.

Each unit has monthly Audit meetings with Mortality and Morbidity meetings.

There are weekly teaching sessions at each hospital covering the syllabus and including journal clubs.

Wet lab facilities are available in Leeds, Sheffield and Hull.

The deanery has funded and established simulation facilities in each teaching centre.
Regional teaching program

The deanery has funded and appointed an assistant Training Program Director, Mr Mahmoud Loubani, to oversee regional training. At present there is a 6 monthly training day hosted between the 4 base hospitals. A curriculum based monthly regional training program is in place, all trainees are expected to attend at least 70% of the sessions to satisfy requirements for their ARCP. Time table for the teaching can be viewed on the deanery web site. The Deanery will oversee progress of the trainee on ISCP with all trainees expected to complete a minimum of 40 per year WPBAs for their ARCP.
Scotland Deanery

The Scotland Deanery is managed across four regions in five offices, and provides the quality management of training to ensure GMC standards are met.

Regional information:

- East
- North
- South-East
- West

The Deanery is structured through work streams, ensuring there is national leadership across policy areas delivered in a regional setting, supporting training in Health Boards across Scotland

http://www.scotmt.scot.nhs.uk/


Cardiothoracic Training Programme

GMC Reference: SES/SRT/460

Deanery sponsoring programme: South-East of Scotland
Postgraduate Dean: Professor William Reid
Responsible Associate - Dean: Ms Lorna Mason
Programme Type: Deanery based or National: National
Specialty or Sub-specialty: Specialty
Date of GMC recent approval: November 2014
Associated Royal College - Faculty: Joint Committee on Surgical Training (web site)
Curriculum and Associated Assessment System: Scottish Deanery-revised.doc

Deanery Administrative Contacts
Name: Stephen Gitsham
Address: Deanery Office NHS Education for Scotland Wesport102 Westport Edinburgh EH3 9DN
Tel: 0131 656 3497
Email: stephen.gitsham@nes.scot.nhs.uk

Programme Director
Training Programme:

Cardiothoracic Surgical training is provided as a Scottish wide programme. Placements across Scotland are managed by the South East of Scotland Deanery. Training is delivered in the following Deaneries: South East Scotland, North of Scotland and West of Scotland.

The Training Programme offers excellent training in all aspects of adult Cardiac & Thoracic surgery with a view to the award of CCT in Cardiothoracic Surgery. In addition there is exposure to Paediatric Cardiac Surgery & Cardiac transplantation. Despite the recent loss of a Chair in Cardiac Surgery, there is excellent collaboration with academic establishments in the Universities in Edinburgh, Glasgow and Aberdeen. The Scottish Programme has a long history of training Consultants who work in the Scottish units as well as being a net exporter of Consultants to prestigious units elsewhere in the UK and the world.

The training programme in Cardiothoracic Surgery is nominally 6 years long, progress to subsequent years being dependent upon satisfactory attainment of curricular competencies. Like other surgical specialties, these competencies are defined within the Intercollegiate Surgical Curriculum Programme. Entry to training is at ST1 & ST3 level.

Trainees for the Scottish Programme are selected and recruited by a single UK National process involving Scotland, England, Northern Ireland & Wales. Applicants are ranked by the selection centre (organised by the West Midlands Deanery with full involvement from all UK training programmes). Allocations of successful candidates will be made on the basis of the candidate’s ranked preferences.

Placements within the Scottish Programme are at the discretion of the Programme Director with the support of the Scottish Training Committee. All trainees will be expected to rotate to every training centre at some time in their training. In practice, trainees will be broadly based in either GJNH or RIE with one year in ARI. Additional experience in Congenital, advanced Thoracic Surgery and transplantation & heart failure surgery will be by arrangement. Subspecialty experience elsewhere in the UK or the world will be actively supported in senior years, usually by the OOPE route.

Manpower planning for Cardiothoracic Surgery in Scotland and the UK has indicated that the steady state for Cardiothoracic NTNs in Scotland will be 6-8 for the foreseeable future. In practice there will be 3-4 in the West, 2-3 in the south-East and 1 in the North.

Further information on the specialty in Scotland can be found on the Programme website:
http://www.stracts.co.uk/

Other useful links are:

http://www.scts.org/

BMJ careers

Quality of Training:

Assessments by ARCP process undertaken once yearly by Cardio-thoracic Specialty Training Committee along with support from Scottish Deanery and representation from East or West of Scotland Core Surgical Training Programme. WBA’s, Log book of procedures with levels of competence, courses attended, Audit, Publications and presentations are assessed. Support and advice is offered to individual trainee to improve training opportunities.

The candidate will be supported with:

- ATLS, BSS, CCrISP, Generic Deanery based courses
- Highland surgical Boot camp – Clinical, Scenario based, Technical and non-technical skills course
- Simulation based training – Wet lab, Dry lab, High and low Fidelity simulator based courses
- MRCS and relevant Basic Specialty Skills in Cardiothoracic Surgery courses.

Education & Training: All Scottish centres are equipped with excellent Skill centres and support staff to facilitate out of operating room training.

- Local – Individual hospital based MDT, Educational, M & M and Audit meetings
- Regional – East and West of Scotland Curriculum based Core surgical training meetings
- Supervised Wet lab and Dry lab simulation based training using VATS and Lap simulators, pig hearts and lungs.

Clinical & Academic Research: ECAT

Edinburgh Clinical and Academic Research centre (ECAT) In Edinburgh offers excellent Support to your career in research:
The South East PG Deanery

NHS Education for Scotland (SE Region) funds and oversees the management of all of the clinical training within the ECAT scheme (including the ECAT Lectureships). We place great emphasis on the joint management of the careers of our aspiring academics and our Postgraduate Dean for South East Scotland, Professor Bill Reid, is a key member of the team together with the Directors and the Administrator. Regular meetings are held with the Postgraduate Dean to discuss any academic issues and their impact on clinical training to ensure that the clinical and academic career of individuals is delivered in as seamless and effective a manner as possible, accommodating the particular needs of individuals where agreed. To prosecute a successful academic career it is important that you achieve curricular clinical milestones and competencies in addition to developing an academic portfolio.

Training Programme Directors

The Postgraduate Deanery is an essential ally in the process of developing a successful academic career. It is essential that you enter a dialogue with the Deanery team as your research ideas firm up. The individual specialties are led by Training Programme Directors, with whom you should have close contact to make sure your aspirations are deliverable. Associate Postgraduate Deans also support specialty groups, & Dr Donald Farquhar, APD for medical specialties, attends the academic meetings with Prof Reid to ensure continuity.

Out of Programme for Research (OOPR)

Normally speaking the Postgraduate Dean requires at least 3 months of warning before you take an out of programme experience in order to undertake a PhD. Even this length of time can place a significant strain on the regional clinical services with respect to ensuring that services are covered and a full quota of junior staff are present, so the more advanced your warning can be the better. Most OOPR can be accommodated with good notice.
Cancer Research UK offers a number of funding opportunities at different levels.

**Chief Scientist Office Clinical Academic Training Fellowships**
This scheme has been developed to help address longstanding concerns about clinical academic careers. The scheme will be subject to competitive entry and will nurture a cadre of research-led clinical academics capable of going on to lead development in their discipline by providing the opportunity to undertake a PhD. The scheme is open to individuals training in, or seeking to train in, all disciplines in medicine (including surgical disciplines, general practice, public health medicine etc) or dentistry, whether in primary or secondary care, however we are particularly keen to receive applications in the following areas where there is an identified national shortage of clinical academic expertise:
- surgery
- anaesthesia
- radiology
- psychiatry
- obstetrics and gynaecology
- lab based pathology specialties

**Heart Research UK Research Training Fellowships for Clinicians**
This grant gives high-calibre and talented clinicians the opportunity to undertake research training in the area of cardiovascular disease, learning new techniques and acquiring invaluable research skills. These grants differ from project grants in that emphasis is placed on the qualities of the applicant as well as the merits of the research proposed. The Research Training Fellowship scheme reflects HRUK’s commitment to ensuring that first-class research into heart disease and related conditions continues in the future.

Useful Links: [http://www.ecat.ed.ac.uk](http://www.ecat.ed.ac.uk)
[http://www.ed.ac.uk/schools-departments/surgery/research](http://www.ed.ac.uk/schools-departments/surgery/research)
[http://www.gla.ac.uk/schools/medicine/medicine/surgery/](http://www.gla.ac.uk/schools/medicine/medicine/surgery/)

**Deanery Rotation Base(s)**

<table>
<thead>
<tr>
<th>HOSPITAL</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Infirmary of Edinburgh</td>
<td>Edinburgh</td>
</tr>
<tr>
<td>Aberdeen Royal Infirmary</td>
<td>Aberdeen</td>
</tr>
<tr>
<td>Golden Jubilee National Hospital</td>
<td>Clydebank, Glasgow</td>
</tr>
<tr>
<td>Royal Sick Childrens Hospital</td>
<td>York hill, Glasgow</td>
</tr>
</tbody>
</table>

Deanery information: South-East Scotland
NHS Education for Scotland
South East Deanery
102 Westport
Edinburgh
EH3 9DN
0131 656 3497.
**Rotation Information**

Expected rotation arrangements for this programme include Core surgery training and Cardiothoracic surgery and Critical care placements based in West of Scotland:

<table>
<thead>
<tr>
<th>ST</th>
<th>Months</th>
<th>Department</th>
<th>Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST1</td>
<td>12</td>
<td>Cardio-thoracic surgery &amp; Intensive Care Unit</td>
<td>Golden Jubilee National Hospital</td>
</tr>
<tr>
<td>ST2</td>
<td>6</td>
<td>General Surgery</td>
<td>Royal Alexandra Hospital, Paisley, West of Scotland</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Cardio-thoracic surgery</td>
<td>Golden Jubilee National Hospital</td>
</tr>
</tbody>
</table>

- ST3 - Either at Royal Infirmary of Edinburgh or Aberdeen Royal Infirmary
- ST4 – Paediatric Surgery: 6 months - Royal Sick Children’s Hospital, Glasgow
- ST4 – Thoracic Surgery: 6 months post – Golden Jubilee National Hospital, Glasgow
- ST5 – Adult Cardiac Surgery – 12 months post - Golden Jubilee National Hospital, Glasgow
- ST6 – Adult Cardiac Surgery – 12 months post - Golden Jubilee National Hospital, Glasgow
- ST7 & ST8 – Adult Cardiac / Thoracic surgery – Royal Infirmary of Edinburgh
- Exceptions to rotation arrangements: Paediatric Surgery can be optional and Thoracic surgery block could be offered for 12 months.

**Trust Generic/Specialty Information**

Royal Infirmary of Edinburgh:

**About the unit**

The cardiothoracic unit at the Royal Infirmary of Edinburgh is a specialised supra-regional service, which moved to its current, state of the art facility in 2003. It is a tertiary referral centre, dealing with patients from all over Scotland. The Royal infirmary of Edinburgh is nationally and internationally well renowned for offering excellent training in cardio-thoracic surgery.

The Edinburgh Cardio-Thoracic Unit provides a regional service for approximately 1.5 million populations in Lothian, Fife and Border Areas. The work of the unit is carried out at the Royal Infirmary Cardiothoracic Unit, which deals with all open-heart surgery, surgery of the great vessels, trauma and thoracic surgery including pulmonary and some oesophageal surgery.

The Royal Infirmary (RIE) is a major teaching hospital on a green field site in the South East of the city of Edinburgh built in 2003. It comprises 25 wards, 869 beds, and 24 operating theatres, and is equipped with modern theatre and critical care equipment and monitoring. Within the main building is a dedicated, multidisciplinary,
5 theatre day surgery complex. The hospital provides for most specialities and is the centre for:

- General surgery with a focus on the upper GI tract
- Vascular surgery
- Hepato-biliary and Transplant medicine and surgery
- Cardiac and Thoracic surgery
- Elective and trauma Orthopaedics surgery
- Neonatology
- Obstetrics & Gynaecology
- Cardiology
- Renal Medicine
- Sleep Medicine
- Regional major Accident and Emergency centre.

There is a Combined Assessment Unit which takes unselected GP or direct emergency referrals, and from A&E. CAU includes the Dept of Liaison Psychiatry and the Scottish Poisons Bureau and Treatment Centre. There are full supporting Laboratory and Diagnostic Radiology Services (including CT, MR, Ultrasound and NM and PET scanning will be available in 2008). There is a full range of lecture theatres, a library and AV facilities.

University of Edinburgh:

The University of Edinburgh was established in 1582 and is one of the largest in the United Kingdom located on a number of prominent sites in Scotland’s capital city. It is Scotland’s premier research university, graded within the top six multi-faculty British Universities in the last national research assessment exercise (90 percent of its academic staff were in units rated 4, 5 or 5*). It has 3,000 academic staff, over 16,000 undergraduate and over 4,000 postgraduate students and an annual expenditure of over £261M for teaching and research. The University is organised into 3 Colleges: Humanities and Social Science, Medicine and Veterinary Medicine, Science and Engineering. Edinburgh University School of Medicine is located within the premises of Royal Infirmary.

Services provided

Adult Cardiac Surgery
Thoracic Surgery

No. Surgeons who undertake adult heart surgery: 6

Departmental Staff: Current

Training Grade surgeons (middle grade): 2
Career Grade surgeons (middle grade): 10
Advanced training VATS Fellow: 1
Foundation Year 1 – Thoracic surgery: 3
Foundation Year 2 – Cardiac surgery: 6
Clinical nurse practitioners – 4
Surgical Care practitioners – 4
Bed capacity:
ITU/ HDU beds: 22, Wards: 24
Consultant Anaesthetists: 11

Service Provision: Outcomes: 2009 – 2010

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Number</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>CABG</td>
<td>507</td>
<td>1.7%</td>
</tr>
<tr>
<td>CABG &amp; VALVE</td>
<td>113</td>
<td>3.01%</td>
</tr>
<tr>
<td>Valve replacement</td>
<td>258</td>
<td>2.3%</td>
</tr>
<tr>
<td>*Others</td>
<td>62</td>
<td>10.1%</td>
</tr>
<tr>
<td>Total</td>
<td>940</td>
<td>2.67%</td>
</tr>
</tbody>
</table>

*Complex, high risk and emergency procedures

**Rates of survival after all cardiac surgery:** Extracted from: Heart surgery in the United Kingdom, Care Quality commission: http://heartsurgery.cqc.org.uk/

Operations for 3 years ending March 2009: 2794 operations performed: Actual survival rate 96.7%

2008/09 alone: Actual survival rate 97.3% as expected (1050 operations, with expected survival rate range 94.7 - 98.1%)

Rates of survival after aortic valve replacement operations

Operations for 3 years ending March 2009: 438 operations performed: Actual survival rate 98.2%

2008/09 alone: Actual survival rate 98.9% as expected (184 operations, with expected survival rate range 92.7 - 100.0%)

Rates of survival after heart bypass (CABG) operations

Operations for 3 years ending March 2009: 1598 operations performed: Actual survival rate 98.0%

2008/09 alone: Actual survival rate 98.1% as expected (588 operations, with expected survival rate range 96.0 - 99.5%)

Out of 1598 coronary bypass surgery cases carried out at Royal Infirmary of Edinburgh, 94.12% used the left internal mammary.

Post-operative length of stay

Out of 1598 patients admitted to Royal Infirmary of Edinburgh, 9.39% stayed longer than 14 days.
Thoracic surgery: 2011-2012

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Count</th>
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<tbody>
<tr>
<td>Lung Resections</td>
<td>230</td>
</tr>
<tr>
<td>Video Assisted Major lung resections</td>
<td>84</td>
</tr>
<tr>
<td>Other procedures</td>
<td>850</td>
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</tbody>
</table>

A total number of 1144 thoracic surgical procedures were performed. Of these 200 were Lung resections. During this period, 70 video assisted major lung resections were performed. Since the commencement of programme, 600 major lung resections were performed using video as an assist.

Cardiac Surgery: Procedures performed by Trainees: 2011-2012

Thoracic surgery: Trainee Procedures: 2011-12
2. West of Scotland Regional Heart and Lung Centre, Golden Jubilee National Hospital:

Location:
Department of Cardiothoracic Surgery,
Beardmore Street,
Clydebank,
West Dunbartonshire,
G81 4HX

No. Surgeons who undertake adult heart surgery: 11

Departmental Staff:

Training Grade surgeons (middle grade): 3(ST6 & SpR’s – Yrs 7&8), 4 – LAT ST1,
LAT ST2 posts
Career Grade surgeons (middle grade): 12
Foundation Year 2: 2
Clinical nurse practitioners: 6
Surgical Care practitioners: 3
ITU’s x 2: 2 Short stay – 11 beds, long stay-11 beds
HDU beds: 22
Consultant Anaesthetists: 11

About the unit

The West of Scotland Regional Heart and Lung Centre, based in Clydebank, is a dedicated unit for planned and urgent operations and procedures. One of the largest heart and lung centres in the UK, it combines existing heart services at the Golden Jubilee with cardiothoracic (heart and lung) services previously provided by Glasgow’s Western and Royal Infirmaries and thoracic (lung) services from Hairmyres Hospital in Lanarkshire. Spread over three floors of the Golden Jubilee National Hospital, facilities at the centre all include seven theatres and four cardiac catheterisation (cath) labs - special x-ray rooms for the diagnosis and treatment of blood vessel blockages around the heart. The new centre is also home to three of our national services - the Scottish Advanced Heart Failure Service (including the heart transplant unit), the Scottish Pulmonary Vascular Unit and the Scottish Adult Congenital Cardiac Service.

Services provided

Adult Cardiac Surgery
Thoracic Surgery
Adult Congenital Cardiac Surgery
Adult Cardiac Surgery:  
- CABG: 702  
- CABG + Valve: 192  
- CABG + Valve + Other: 72  
- Valve: 340  
- Valve + Others: 40  
- **Total: 1349**

Thoracic Surgery: Major Procedures including Lung Resections: 479 cases  
- Total Numbers including the staging procedures: 1500 cases

VAD programme: 6 VADS in last calendar year  
- Transplant Programme: 5 Transplants in last calendar year

**Operations for 3 years ending March 2009:** Extracted from: Heart surgery in the United Kingdom, Care Quality commission: http://heartsurgery.cqc.org.uk/

Out of 2978 coronary bypass surgery cases carried out at Golden Jubilee, 72.2% used the left internal mammary.

Post-operative length of stay: Out of 2978 patients admitted to Golden Jubilee, 8.53% stayed longer than 14 days.

Procedures performed by trainees: 2011-12

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Total</th>
<th>Trainee 1st Operator</th>
<th>% (Trainee performed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sternotomy</td>
<td>504</td>
<td>448</td>
<td>88.8</td>
</tr>
<tr>
<td>IMA harvest</td>
<td>358</td>
<td>278</td>
<td>77.6</td>
</tr>
<tr>
<td>Cannulation</td>
<td>476</td>
<td>318</td>
<td>66.8</td>
</tr>
<tr>
<td>CABG (on-pump)</td>
<td>279</td>
<td>170</td>
<td>60.9</td>
</tr>
<tr>
<td>CABG (off-pump)</td>
<td>28</td>
<td>12</td>
<td>42.9</td>
</tr>
<tr>
<td>AVR</td>
<td>101</td>
<td>58</td>
<td>57.4</td>
</tr>
<tr>
<td>AVR + CABG</td>
<td>55</td>
<td>29</td>
<td>52.7</td>
</tr>
<tr>
<td>Mitral valve surgery</td>
<td>41</td>
<td>10</td>
<td>24.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Total</th>
<th>Trainee 1st Operator</th>
<th>% (Trainee performed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thoracotomy</td>
<td>107</td>
<td>94</td>
<td>87.9</td>
</tr>
<tr>
<td>Lung resection (Non-anatomical)</td>
<td>23</td>
<td>18</td>
<td>78.3</td>
</tr>
<tr>
<td>VATS (Minor)</td>
<td>75</td>
<td>56</td>
<td>74.7</td>
</tr>
<tr>
<td>Lung resection (Anatomical)</td>
<td>82</td>
<td>51</td>
<td>62.2</td>
</tr>
</tbody>
</table>

3. Royal Hospital for Sick Children:

Dalnair Street  
Yorkhill  
Glasgow  
G3 8SJ

The Royal Hospital for Sick Children has 266 inpatient beds, 12 daycase beds, and handles approximately 90,000 out-patients, 15,000 in-patients, 7,300 daycases and
35,000 A&E attendances every year. The hospital provides care for newborn babies right up to children around 13 years of age.

Within the community Yorkhill Division provides a wide range of services from four Child Development Centres at - Bridgeton Health Centre, Possilpark Health Centre, Drumchapel Health Centre and the new Southbank Centre in the Gorbals. These centres run various clinics dealing with speech, hearing, emotional or behavioural problems, as well as organising immunisation programmes in local schools. A wide range of staff provide these services, including consultant community Paediatricians, psychologists, occupational therapists, speech & language therapists and school nurses amongst others.

In its role as a major academic institution, the Division is home to a number of University departments as well as internationally acclaimed research groups. The Division's significant commitment to the teaching and training of new doctors, nurses, midwives and other health professionals, ensures that highly trained NHS staff are ready to care for the mothers and children of tomorrow.

Consultant Surgeons: 4

Service Provision:

<table>
<thead>
<tr>
<th>Service Provision</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congenital Cardiac Surgery</td>
<td>320 Cardiac Cases including closed and Open heart procedures</td>
</tr>
<tr>
<td>ECMO Service</td>
<td>15-20 cases per year with 2 LVADs done during last year</td>
</tr>
</tbody>
</table>

3. North of Scotland Cardiothoracic Surgery Unit, Aberdeen Royal Infirmary

Provides adult cardiac and thoracic surgical services in the north of Scotland including Orkney and Shetland. Located at the Aberdeen Royal Infirmary Foresterhill site, the unit also has satellite outpatient facilities at Ninewells Hospital, Dundee and Raigmore Hospital, Inverness.

Services provided
Adult Cardiac Surgery
Thoracic Surgery

Location:
North of Scotland Cardiothoracic Surgery Unit (NOS-CTS),
Aberdeen Royal Infirmary,
Foresterhill,
Aberdeen,
AB25 2ZN

No. Surgeons who undertake adult heart surgery: 4

Departmental Staff:

Training Grade surgeons (middle grade): 1(ST3), 3 – LAT ST2, LAT ST1 posts
Career Grade surgeons (middle grade): 3
Foundation Year-2: 2
Clinical nurse practitioners: 3  
Surgical Care practitioners: 3  
ITU/ HDU : 11 beds  

Rates of survival after all cardiac surgery: Extracted from: Heart surgery in the United Kingdom, Care Quality commission: http://heartsurgery.cqc.org.uk/  

Operations for 3 years ending March 2009: 1766 operations performed  
2008/09 alone: Actual survival rate 97.9% as expected (613 operations, with expected survival rate range 94.6 - 98.8%)  

Rates of survival after heart bypass (CABG) operations:  
Operations for 3 years ending March 2009: 1118 operations performed: Actual survival rate 98.3%  
2008/09 alone: Actual survival rate 98.6% as expected (366 operations, with expected survival rate range 95.2 - 99.8%)  
Out of 1118 coronary bypass surgery cases carried out at Aberdeen Royal Infirmary, 93.11% used the left internal mammary.  
Out of 1118 patients admitted to Aberdeen Royal Infirmary, 9.57% stayed longer than 14 days.  

Rates of survival after aortic valve replacement operations:  
Operations for 3 years ending March 2009: 228 operations performed  
2008/09 alone: Actual survival rate 96.4% as expected (84 operations, with expected survival rate range 89.6 - 100.0%)  

Teaching  

Royal Infirmary of Edinburgh: Co-ordinator: Mr S Prasad  
1. MDT meetings – Cardiac & Thoracic surgery – Every Friday  
2. Educational Meetings: Friday 2pm  
3. Mortality & Morbidity meetings: 2nd Friday  
4. Grand Rounds – Wednesday  
5. Honeyman- Gillespie lectures – Once a month  

West of Scotland Regional Heart and Lung Centre, Golden Jubilee National Hospital: Co-ordinator: Mr Alan Kirk  
1. Educational Meetings: Friday: 1:30pm  
2. Mortality & Morbidity meetings:  
3. MDT meetings: Adult Cardiac – Valvular Heart Disease, Coronary Heart Disease & Thoracic surgery. Heart Failure and Transplantation meetings  
4. WET LAB: Facilities exists at Golden Jubilee National hospital for a one to one and independent sessions
Royal Sick Children’s Hospital, York Hill, Glasgow: Co-ordinator: Mr K MacArthur
MDT meetings

Regional Teaching: Faculty for cardio-thoracic Education & Training

WET Lab: 1) Hands on sessions with a dedicated faculty of Consultant surgeons – 4 monthly intervals
   2) Facilities exists at Golden Jubilee National hospital for a one to one and independent sessions
Future Goals: Establishment of all day reaching programme once every 3 months, Mock VIVA’s for Exams
Supra regional: Additional Training opportunities: Surgical simulation, Paris and Hamburg Thoracic surgical courses

Success denominators:

Strengths:

1. Achievements:
   • 5 trainees have been appointed as consultants within the last 3 years
   • 1 trainee has successfully completed training – RITA-G and awaiting award of CCT and entry in to specialist register.
   • 1 trainee received CESR- Article 14- entry in to Specialist register
2. Success of these trainees is primarily due to consultant educational supervisors who are known to be excellent trainers.
3. Regular teaching and academic sessions are available at all centres inclusive of wet labs for hands on experience and video conferencing between all centres.

Rotation of trainees between centres and placements to achieve training in specific competencies set out in curriculum

Support to courses and funding by the Deanery and programme:

Cardiac Surgery:
1. Birmingham Review course
2. Coronary artery anastomosis workshop - Liverpool
3. Covedien course – Off Pump/ Mitral valve
4. CALS
5. Sorin- Wet Lab – AVR/MVR & CABG
4. Learning through Experience – STR/ SPR training days- Scottish Training programme – Wet Labs & Presentations- 3 monthly
5. Royal College courses – Basic, intermediate & Advanced
6. Care of Critically Ill
7. South East Deanery Lead Generic skills courses

Thoracic surgery:

VATS ENDO SURGERY- Ethicon – Hamburg

Advanced VATS course – Paris
Health Education East of England

Come to the East of England for what we hope you will find to be a rewarding, exciting and enriching training in cardiothoracic surgery. We want your cardiothoracic surgery training to be built on a broad surgical base. The first year will include 3 months each of cardiac and thoracic surgery at Papworth Hospital and 6 months of plastic surgery at Addenbrooke’s Hospital. The second year will consist of 6 months each of general surgery and trauma/orthopaedics at Peterborough Hospital. There may be the opportunity to make some changes but cardiothoracic and general surgery are essential posts.

Subject to satisfactory progression, this will become continuous with ST3+ in cardiothoracic surgery training at Papworth Hospital and Norwich & Norwich University Hospital, leading to a Certificate of Completion of Training (CCT). Many of our trainees go on to undertake further training in the form of clinical fellowships and we have an excellent record of producing talented consultant cardiothoracic surgeons.

The ST1 year will introduce you and equip you with key knowledge and skills in cardiothoracic surgery and another important surgical specialty. This will be built on and consolidated in your ST2 year. We want you to be sure you are fully committed to cardiothoracic surgery, have seen something of other specialties and are armed with useful future skills. We place the highest emphasis on acquiring technical skills, education and general career development. During ST1-2 at Papworth Hospital, on top of a busy service workload (which is highly educational) there is mandatory time for theatre and plenty of protected time to pursue your education. You will be supported in and are expected to be involved in audit, research and teaching. Plastic surgery will teach you about complex wound management and you will also acquire new surgical skills. Surgery of the abdomen and general surgery emergencies are an important part of all surgeon’s training. Orthopaedics & Trauma are also very important and thoracic surgeons are closely involved in the management of thoracic trauma including rib fixation.

For enquiries:

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- steven.tsui@nhs.net (Chairman of Specialty training Committee Cardiothoracic Surgery EofE)
- y.abuomar@nhs.net (Training Programme Director)