Training Programme Information for Posts in Cardiothoracic Surgery at ST1 Level

Recruitment 2017

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/ 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

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>East Midlands</th>
<th>North West</th>
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</thead>
<tbody>
<tr>
<td>Scotland</td>
<td>Wales</td>
</tr>
<tr>
<td>West Midlands</td>
<td>Yorkshire and Humber</td>
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<tr>
<td>Oxford</td>
<td>North East</td>
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</tbody>
</table>

Any information not included in this document should be available from specific deanery websites.
Health Education East Midlands

National Selection Information for ST1

<table>
<thead>
<tr>
<th>HOSPITAL</th>
<th>LOCATION</th>
</tr>
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<tbody>
<tr>
<td>University Hospitals of Leicester (Glenfield Hospital)</td>
<td>Leicester</td>
</tr>
<tr>
<td>Nottingham University Hospitals (City Hospital)</td>
<td>Nottingham</td>
</tr>
</tbody>
</table>

This is a relatively newly restructured programme based around the Cardiothoracic centres in Nottingham and Leicester under auspices of Health Education England working across the East Midlands (HEEM).

The East Midlands Training Programme was part of the Trent Training programme and has been a successful programme since its inception after Sheffield joined the Yorkshire programme in 2009. The ST1 programme is offered in partnership with Core Surgical Training Programme South based in Leicester.

This programme is approved for those trainees who wish to become a Specialist Thoracic surgeon, reflected in the internationally recognised higher training in thoracic oncology (lung, pleura and oesophagus) and Specialist Cardiac Surgeon offering various training opportunities in the subspecialisation of cardiac surgery. The programme also offers opportunities in pursuing an academic career in conjunction with the Academic department of Cardiac Surgery and Faculty of Thoracic Oncology in the University of Leicester.

The programme from its inception has been stronger in Thoracic training opportunities with cardiac training limited to ST6 level. The programme has undergone significant changes over recent years brought about by enthusiastic and committed trainers and supported by the School of Surgery and STC at all levels. This has resulted in a rejuvenated cardiac training base and opportunity which resulted in the programme being re accredited by the SAC for complete higher cardiac training in 2016. The programme encourages Cardiac Career oriented trainees to benefit from the training opportunities available in the region.

The programme commences with 2 years of core surgical training during which the trainee is expected to complete the MRCS exam. This is followed by 2 years in Core Cardiothoracic Surgery including exposure to Congenital surgery, adult and paediatric ECMO. In addition there is wide exposure to basic adult thoracic and cardiac surgery.

We offer the 1+5 year module advocated by the SAC to maximise training in the chosen branch of the specialty be it Cardiac or Thoracic Surgery.

We have links with the USA, Canada and China with our trainees benefitting from Out of Programme training opportunities. We have attracted trainees from other region coming to our region to gain advance skills in thoracic surgery. Our aim is to give unrivalled comprehensive preparation for the FRCS(CTh) exam and all round preparation for a Consultant Career.

The programme has been successful in previous rounds of National selection bids with successful progression of trainees.
2016: ST3
2015: ACF (East Midlands NTN),
2014: ST3
2013: ST3 and ST1
2012: ST3
We have been successful in the training and progression of the ST1 trainee who was successful in securing the ACF post in 2015.
The Programme has 8 Training post approved by the Post Graduate Dean for higher Specialist Training and 1 NIHR funded ACF.
Our program offers a broad grounding in all aspects of general thoracic, adult cardiac, congenital cardiac surgery and ECMO

Programme Information
Head of School: Mr Mark McCarthy Consultant Vascular Surgeon, University Hospitals Leicester

Training Program Director – Mr Sridhar Rathinam, Consultant Thoracic Surgeon, University Hospitals Leicester

Core Surgery Training Programme Director : Prof David Bowrey Consultant Upper GI Surgeon University Hospitals Leicester

Thoracic Training Faculty –
Nottingham: Mr John Duffy, Dr Andrzej Majewski, Mr Emmanuel Addae Botang, Mr Mohammed Hawari
Leicester: Mr Apostolos Nakas, Mr Sridhar Rathinam, Mr Keng Ang

Cardiac Training Faculty –
Nottingham: Prof David Richens, Mr Ian Mitchell, Mr Adam Szafreneck
Leicester: Prof Gavin Murphy, Mr Mark Hickey, Dr Jacek Szostek, Dr Giovanni Mariscalco, Dr Victor Zlochas, Mr Christopher Efytimiou

Congenital/ECMO Training Faculty – Dr S Speggiorine

Training Posts:
The Region has 8 posts approved by the Post Graduate Dean and One NIHR Funded ACF post. The posts are distributed two each in the participating units between the specialties taking trainees needs and training opportunities into consideration.

University Hospitals of Leicester NHS Trust -Glenfield Hospital:
Thoracic: 3 training posts, 1 in 5 non-resident rota Complete array of Thoracic practice with focus on mesothelioma, lung volume reduction, chest wall and VATS resections. (Currently 1 ST8 (OOPT from Wales till Feb 2017), 1 ST3, 1 ST4 (ACF))
Cardiac: 2 training posts, 1 in 5 non-resident rota Complete array of cardiac surgery practice with focus on mitral, aortic and OPCAB (Currently 1 ST4, 1 Clinical Fellow) Congenital: 0 training post; 1:3 non-resident rota. All aspects of congenital cardiac surgery and ECMO (Currently none)
Nottingham University Hospitals NHS Trust – Nottingham City Hospital

**Cardiac:** 2 training posts, 1 in 5 non-resident rota (Currently 2 LAS) Complete array of cardiac surgery practice with focus on mitral surgery and trauma

**Thoracic:** 2 training posts, 1 in 5 non-resident rota Complete array of Thoracic practice with focus on Oesophageal surgery chest wall and VATS resections. (Currently 1 ST7, 1 ST8 CCT May 2017)

**Expected rotation arrangements for this programme are:**
The rotation will arrange the rotation to suit individual trainee needs within the confines of the ISCP Curriculum and SAC Requirements.

**Leicester Core Surgical Programme:**

The Core Surgery programme in the East Midlands is well-established with excellent buy-in from consultants.

Over the last three years, just under half of core trainees completing two years of training in the region progressed directly into registrar (ST3) posts. The exam success rate at MRCS is in excess of 85% and in the latest quality assurance survey, 79% of East Midlands core trainees sitting the MRCS OSCE during the 12 months August 1\(^{st}\) 2013 to 31\(^{st}\) July 2014 were successful. This compares favourably to the National average of 60%.

The Core surgical programme has had a great working relationship with the Cardiothoracic training programme and has cardiothoracic themed rotations to support trainees interested in the specialty. The attachments in the first year may be based in any of three sites of the University Hospitals of Leicester.

The programme has a dedicated teaching programme and simulation based sessions.

The rotations allow the trainee to acquire basic surgical skills and knowledge in the first year and move into the basics of the specialty in the second year.

The progress is assessed by core surgical training curriculum and assessed by the core surgical ARCPs.

The exposure and training in cardiothoracic surgery has helped many of our core trainees obtain ST3 numbers in national selection.

**Proposed Rotation: ST1 (Core TPD Mr David Bowrey)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Base</th>
<th>Specialty</th>
<th>Specialty</th>
<th>Specialty</th>
<th>Exam</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST1</td>
<td>Leicester</td>
<td>General Surgery</td>
<td>Orthopaedics</td>
<td>ED/ General Surgery</td>
<td>Core ARCP</td>
<td></td>
</tr>
<tr>
<td>ST2</td>
<td>Leicester</td>
<td>Cardiac Surgery</td>
<td>Thoracic Surgery</td>
<td>Vascular Surgery</td>
<td>MRCS</td>
<td>Core ARCP</td>
</tr>
</tbody>
</table>

This merges onto the following ST3 Programme

**Proposed Rotation: ST3 Cardiac Theme** *(Subject to change due to needs of trainee and programme)*

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<table>
<thead>
<tr>
<th>Year</th>
<th>Base</th>
<th>Specialty</th>
<th>Specialty</th>
<th>Exam</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST3</td>
<td>Leicester</td>
<td>Cardiac Surgery</td>
<td>Cardiac Surgery with Congenital exposure</td>
<td></td>
<td>CTS ARCP</td>
</tr>
<tr>
<td>ST4</td>
<td>Nottingham</td>
<td>Thoracic surgery</td>
<td>Thoracic</td>
<td></td>
<td>CTS ARCP</td>
</tr>
<tr>
<td>ST5</td>
<td>Nottingham</td>
<td>Advanced Cardiac Surgery</td>
<td>Advanced Cardiac surgery</td>
<td></td>
<td>CTS ARCP</td>
</tr>
<tr>
<td>ST6</td>
<td>Leicester</td>
<td>Advanced Cardiac Surgery</td>
<td>Advanced Cardiac Surgery (Aortic)</td>
<td></td>
<td>CTS ARCP</td>
</tr>
<tr>
<td>ST7</td>
<td>Leicester</td>
<td>Advanced Cardiac Surgery (Mitral)</td>
<td>Option for OOPT</td>
<td>FRCS(CTh)</td>
<td>CTS ARCP</td>
</tr>
<tr>
<td>ST8</td>
<td>Nottingham</td>
<td>Advanced Cardiac Surgery (Mitral)</td>
<td>Advanced Cardiac Surgery (Finishing school)</td>
<td></td>
<td>CTS ARCP</td>
</tr>
</tbody>
</table>

**Proposed Rotation:** ST3 Thoracic Theme *(Subject to change due to needs of trainee and programme)*

<table>
<thead>
<tr>
<th>Year</th>
<th>Base</th>
<th>Specialty</th>
<th>Specialty</th>
<th>Exam</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST3</td>
<td>Leicester</td>
<td>Thoracic surgery</td>
<td>Thoracic</td>
<td></td>
<td>CTS ARCP</td>
</tr>
<tr>
<td>ST4</td>
<td>Leicester</td>
<td>Cardiac surgery</td>
<td>Cardiac surgery</td>
<td></td>
<td>CTS ARCP</td>
</tr>
<tr>
<td>ST5</td>
<td>Nottingham</td>
<td>Advanced Thoracic Surgery (VATS)</td>
<td>Advanced Thoracic Surgery (Oesophageal)</td>
<td></td>
<td>CTS ARCP</td>
</tr>
<tr>
<td>ST6</td>
<td>Leicester</td>
<td>Advanced Thoracic Surgery (VATS)</td>
<td>Advanced Thoracic Surgery (Mesothelioma)</td>
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<td>CTS ARCP</td>
</tr>
<tr>
<td>ST7</td>
<td>Nottingham</td>
<td>Advanced Thoracic Surgery</td>
<td>Option for OOPT</td>
<td>FRCS(CTh)</td>
<td>CTS ARCP</td>
</tr>
<tr>
<td>ST8</td>
<td>Leicester</td>
<td>Advanced Thoracic Surgery (Chest Wall Emphysema)</td>
<td>Advanced Thoracic Surgery (Finishing school)</td>
<td></td>
<td>CTS ARCP</td>
</tr>
</tbody>
</table>
The Programme offers opportunities for OOPT in Seattle, Mayo Clinic, Toronto, Hong Kong and Ghanghzou for Thoracic from previous links.

It offers OOPT options in France for Cardiac Surgery.

**The Region:**

East Midlands is one of the UK’s most popular regions centred around the towns and cities of Leicester, Nottingham, Derby, Lincoln and Northampton, the East Midlands is one of the UK’s most vibrant regions. House prices are 44% lower than the South East and 62% lower than London with hourly trains to London taking around 70 minutes.

In your spare time you can enjoy:

- The great outdoors - spend a day in the Peak District, on Rutland Water, in Sherwood Forest, at Lincoln Cathedral, or exploring Derby’s Victorian parks
- International sport - watch Premier League football, European rugby and Test cricket or get involved at the National Watersports Centre, Derby Velodrome and National Ice Centre

Great nights out - the region boasts world-class concert venues, the UK’s most established comedy festival and international dance, drama, film and music.

**Trust Generic/Specialty Information**

**Glenfield Hospital, University Hospitals of Leicester (UHL)**

The Cardiothoracic Unit is sited at the Glenfield Hospital. UHL is a university teaching hospital affiliated with Leicester University Medical School. At present the Cardiac Surgical Unit has 49 surgical beds, 23 adult intensive care beds and 10 paediatric intensive care beds. There are five operating theatres. The Cardiothoracic Unit serves the southern half of the East Midlands SHA, which comprises a population of 2.8 million people. The Unit provides a comprehensive medical and surgical service for patients with cardiac and thoracic disease, including congenital heart disease, but excluding transplantation. The annual cardiac surgical workload comprises over 1000 operations for acquired heart disease, 300 operations for congenital heart disease. 80 patients were treated at the regional unit for extra corporeal membrane oxygenation based at this hospital.

The Thoracic Surgical Unit has 24 beds including 6 integrated HDU beds. The full range of pleuropulmonary, chest wall and mediastinal surgery is performed for Leicestershire, Northamptonshire, South Staffordshire and South Derbyshire together with national referrals for mesothelioma surgery. Annual workload comprises over 1000 thoracic surgical procedures including 50 radical mesothelioma resections and 45 LVRS procedures. Over 30% of all major lung cancer resections are performed by VATS. Trainees carried out 60% of all lung cancer resections last year.

**Nottingham University Hospitals, City Hospital Campus**

Nottingham University Hospitals is a major provincial teaching hospital. There are 1207 beds on the City campus. The City Hospital provides a wide range of specialties but there is no Accident and Emergency Department on the campus. When current developments are completed, it will have over 1,400 beds, making it one of the largest hospitals in Europe. All these beds are located on one 85 acre
campus, with outpatient facilities and all support services. The hospital employs 4,500 staff, deals with 55,000 inpatients per annum, including day patients, and over 180,000 outpatients per year.

There are several regional specialties: Cardiac Surgery, Thoracic Surgery, Renal Dialysis and Transplantation, Burns and Plastics, Cytogenetics and neonatal Medicine and Surgery.

Over 750 major thoracic operations are performed each year including 60 major oesophageal resections. Over 800 cardiac cases are performed each year through a 16 bedded critical care unit which is staffed by nurse practitioners allowing the trainee surgeons to run a non-resident on-call rota.

**Teaching**

In addition to the local MDTS and weekly departmental teaching sessions the rotation has an organized, comprehensive regional teaching program including a biannual Midlands Cardiothoracic Surgical Meeting which encompasses hands-on training and abstract competition.

The programme boasts off cadaveric wet-lab facilities in Nottingham and wet and dry lab facilities in both the units. Leicester offers the TOE Course and one Lung Course.

**Teaching**

**Trainers**

**General**

All the consultants of the rotation have completed TtT, Trace and have registered with ISCP.

The chairman of the Joint College Intercollegiate Examination (JCIE), Prof David Richens is Consultant Cardiothoracic Surgeon at Nottingham University Hospital. The SCTS Thoracic Tutor, Mr Sridhar Rathinam is a Consultant Thoracic Surgeon in the Leicester who co designed and implemented the SAC SCTS Curriculum based courses.

Messrs Duffy and Rathinam are Intercollegiate Cardiothoracic Examiners.

The newly appointed Consultants in Nottingham and Leicester are all recent NTNs with an interest in training.

Our faculty are actively involved with national educational events including:

1. Essential Skills Course in Cardiothoracic Surgery
2. Core Thoracic Surgery Course
3. Professional Development Course
4. Birmingham Review Course
5. Introduction to Cardiothoracic Training
6. RCSEd Training the Trainer Course
7. EACTS Thoracic Course
8. SCTS University
9. Cardiothoracic Trainees National “Boot Camp”
Trainees:
All trainees are offered an educational contract with their AES, this is periodically reviewed by the AES as well as by the HEEM and STC at annual and interim ARCPs.

ISCP: The educational programme and assessments are carried out in keeping with the ISCP work based assessments.

The trainees are expected to attend the SCTS courses pertaining to their levels.

The deanery has mechanisms in place to support trainees in difficulty with the professional support unit.

The programme offers opportunities for flexible working and in an equal opportunities employer. We have offered maternity time off and reduced flexible working on return.

EWTD rota compliance (inc effect of EWTD on training)
These rotas have been authorised as compliant by an SHA wide group ensuring EWTD is implemented.

Appropriate and safe learning environment and procedures (facilities, handover, consent etc).
Handovers are facilitated by nerve centre, excel spread sheets passed from doctor to doctor.

Level of Deanery support and engagement in quality assurance of training
The program is integrated into the East Midlands Postgraduate School of Surgery and is therefore subject to the Quality Assurance program of the School. The Specialist Training Committee has regular representation from the School and Deanery.

Equality and diversity issues within the training programme (inc flexible training provision and uptake)
All appointments have been supported by the Deanery’s equality and diversity process. We have supported two flexible trainees in the last 7 years.

Level of trainee feedback within training programme
The RTC has co-opted a trainee rep (Mohammed F Chowdhry) who reports issues directly. Trainees complete placement assessment forms.
### Regional Monthly Teaching Programme 2015-16

| Seminar | Mediastinal disorders | Mr Emmanuel Addae-Boateng  
Nottingham City Hospital |
| Seminar | Lung Cancer surgery assessment | Mr Rathinam  
Glenfield Hospital |
| Seminar | Oncological Management of Lung Cancer | Dr Sridhar, Oncologist,  
University Hospitals Leicester |
| Wet labs, Seminars and Abstract presentation | Midlands Meeting  
High Risk Lung Cancer Resection  
VATS Lung Resection  
Tracheal Surgery  
Aortic Arch Surgery  
Transoesophageal Echocardiography | Glenfield Hospital  
Mr Rathinam, Mr Majewski, Mr S Gosh, Mr Mariscalco,  
Mr Adam Szafranek, Mr Nakas, Mr Duffy, Mr Thorpe |
| Cadaveric Wet labs | Cadaveric Wet Lab  
Axillary artery Cannulation  
Aortic Root Replacement  
Radial artery Harvest  
Saphenous Vein Harvest | Queens Medical Centre,  
Nottingham  
Mr Naik, Mr Szafranek, Mr Mariscalco |
| Cadaveric Wet labs | Thoracic Surgery wetlab/Dry Lab  
Pancoast Tumour approach  
Rib disarticulation  
First Rib resection | Mr Thorpe/Mr Duffy/Mr Majewski/ Mr Rathinam  
Clinical Skills Centre,  
Nottingham City hospital, |
| Wet labs | Cardiac Surgery Wet lab/Dry Lab  
Mitral Valve Repair/Replacement | Mr Adam Szafranek  
Clinical Skills Centre,  
Nottingham City Hospital |
| Wet labs | Thoracic surgery Wet lab/Dry lab  
Tracheal Surgery | Mr Thorpe/Mr Duffy  
Clinical Skills Centre,  
Nottingham City Hospital |
| Wet labs | Cardiac Wet Lab/Dry Lab  
Aortic valve Surgery  
Aortic Surgery | Mr Mariscalco/Mr Szafranek  
Clinical Skills Centre,  
Nottingham City Hospital |

### Trainee Success

Our Trainees have succeeded in the Intercollegiate Exam on first attempt.  
Vijay Joshi first attempt  
TM Fiyaz Chowdhry first attempt  
Mohamed Hawari first attempt  
Keng Ang, passed first attempt
Pre National selection
Kelvin Lau passed first attempt
Rajwinder Jutley passed first attempt
Antonio Ucar passed first attempt
Mohammed Asif passed first attempt
Haitham Abunasra passed fourth attempt
Anthony Walker passed first attempt
Martin Chamberlain passed first attempt

All our Trainees have successfully progressed to substantive Consultant Appointments:
Antonio Ucar Consultant Thoracic Surgeon, Leicester, Nottingham (Now Coventry)
Rajwinder Jutley Consultant Cardiac Surgeon, Nottingham (Now Nairobi)
Martin Chamberlain Consultant Thoracic Surgeon, Southampton
Mohammed Asif Consultant Thoracic Surgeon, Glasgow
Haitham Abunasra Consultant Cardiac Surgeon, Manchester
Anthony Walker Consultant Cardiac Surgeon, Blackpool
Kelvin Lau Consultant Thoracic Surgeon St Bartholomew's Hospital London
Mohamed Hawari Consultant Thoracic Surgeon, Nottingham
Keng Ang Consultant Thoracic Surgeon, Leicester

We have attracted OOPT trainees from other regions due to the rich training heritage and opportunities:
2016 Hazem Fallouch Wales ST8 Thoracic Surgery
2014 Paul Vaughan Wales ST7 Thoracic Surgery
2013 Robert Peters North West Paediatric Surgery NTN with interest in Thoracic Surgery
2012 Jane Atkins ST7 London Thoracic Surgery
2011 Naill McGonigle ST8 Northern Ireland Thoracic Surgery

Success in National selection: Our trainees and non trainees get good clinical and all round exposure which prepares them for their success in the National Selection.
2016 Ricky Vaja Leicester Core Trainee to ST3 London
2016 Yousef Salmasis Leicester Core Trainee to ST3 London
2016 Nabil Hussein Leicester Foundation Trainee ST1 Yorkshire
2013 Thomas Tsistsias Thoracic Clinical Fellow UHL to ST3 London
2012 Mehmood Jadoon LAT 12 months into ST3 East Midlands
2012 Mohammed Mydin LAT 12 months ST3 North East
2012 Vijay Joshi LAT 12 months into ST3 East Midlands
2011 Amir Khosravi LAT 18 months to ST3 Wessex
Imran Rizvi LAT 12 months to ST3 South West
Anupama Barua LAT 12 months to ST3 Yorkshire
2010 Keng Ang LAT 12 months to ST3 East Midland

GMC Survey and STAR Rating
The East Midlands programme has very positive feedback both in the GMC Survey as well as the HEEM STAR rating.
Summary

The East Midlands offers a compact, comprehensive training program by a closely co-ordinated committed faculty. We have a perfect record in our trainees passing the FRCS(CTh) exam first time and have placed 9 of our last 9 CCT holders into Consultant posts. We accept that training a general cardiothoracic surgeon is no longer feasible and will aim to train Consultant Cardiac Surgeons and Consultant Thoracic Surgeons with highly developed specialist interests.

Further information available from:

Mr Sridhar Rathinam, Training Programme Director
Mr Fiyaz Chowdhry, Trainee Representative on STC
Visit our website: https://www.eastmidlandsdeanery.nhs.uk
Health Education North West

National Selection Information for ST1 and ST2

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

<table>
<thead>
<tr>
<th>HOSPITAL</th>
<th>LOCATION</th>
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</thead>
<tbody>
<tr>
<td>Liverpool Heart And Chest Hospital (LHCH)</td>
<td>Liverpool</td>
</tr>
<tr>
<td>Alder Hey Children’s Hospital</td>
<td>Liverpool</td>
</tr>
<tr>
<td>University Hospital South Manchester (UHSM)</td>
<td>Wythenshawe, Manchester</td>
</tr>
<tr>
<td>Manchester Royal Infirmary (MRI)</td>
<td>Manchester</td>
</tr>
<tr>
<td>Lancashire Heart Centre, Victoria Hospital</td>
<td>Blackpool</td>
</tr>
</tbody>
</table>
Scotland

The Scotland Deanery Selection Information for ST1

The Scotland Deanery ([http://www.scotlanddeanery.nhs.scot](http://www.scotlanddeanery.nhs.scot)) is managed across four regions in five offices and provides the quality management of training to ensure that GMC standards are met.

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. For Scottish Medical Training Links:

[http://www.scotmt.scot.nhs.uk](http://www.scotmt.scot.nhs.uk)

Training Delivery

This programme involves placements in some or all of these Health Boards and hospitals:

Aberdeen Royal Infirmary
Golden Jubilee National Hospital, Clydebank
Royal Infirmary of Edinburgh
The Queen Elizabeth University Hospital Glasgow

Contacts and Useful Links

Deanery sponsoring programme  South-East of Scotland
Postgraduate Dean  Professor William Reid
Responsible Associate  Ms Lorna Mason
Programme Type  National
Specialty or Sub-specialty  Specialty
Date of GMC recent approval  October 2016

Associated Royal College – Faculty  Joint Committee on Surgical Training
Curriculum and Associated Assessment System

Intercollegiate Surgical Curriculum Programme

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Edinburgh EH3 9DN
Programme Director

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Programme Description

GMC Reference: SES/SRT/460

Cardiothoracic surgery in Scotland, serving a population of 5.5 million, is delivered in four major centres. These perform in total in the region of 2210 adult cardiac cases, 1200 thoracic cases and 280 congenital cardiac cases per year. Placements across Scotland are managed by the South East of Scotland Deanery. Training is delivered in the South East Scotland, North of Scotland and West of Scotland Deaneries.

Between the units, a wide exposure to cardiac, thoracic, transplant and congenital surgery is offered, with sub-specialty interests including off-pump surgery, mini-AVR, TAVI, mitral valve repair, Cardiac transplantation, mechanical circulatory support, VATS lobectomy and paediatric cardiothoracic surgery. 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.

Entry to training is usually at ST3 level with some recent appointments at ST1 level. The training programme in Cardiothoracic Surgery is nominally 6 years long from ST3, progress to subsequent years being dependent upon satisfactory attainment of certain competencies, reviewed at the Annual Review of Competence Progression (ARCP). Like other surgical specialties, these competencies are defined within the Intercollegiate Surgical Curriculum Programme (ISCP).

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 Wessex Deanery with full involvement from all UK training programmes). Allocations of successful candidates are 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 might be broadly based in either GJNH Glasgow or RIE Edinburgh, with one year in ARI Aberdeen and with additional experience in Paediatric Cardiac Surgery. Advanced Thoracic Surgery, Cardiac Transplantation and Heart Failure Surgery exposure will be by arrangement. Sub-specialty 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 7-8 for the foreseeable future. In practice there will be 5 in the West (Glasgow), 2 in the South-East (Edinburgh) and 1 in the North (Aberdeen).
Further Information

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

Other useful links

The Society for Cardiothoracic Surgery in Great Britain and Ireland: [www.scts.org](http://www.scts.org)
The British Medical Journal Careers website: [BMJ careers](http://www.bmj.com)

Quality of Training

We have had two trainees appointed at ST1 level, both of whom have progressed with satisfactory ARCPs. Both have passed the MRCS at the first attempt. Their technical skills have developed to the level of performing major cardiothoracic cases (open lobectomy, AVR, single CABG) under supervision at the end of ST1. Their competencies have advanced to allow them to join the senior on-call rota within six months of taking up the post.

Assessments are by the 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. WBAs, Logbook of procedures with levels of competence, Courses attended, Audit, Publications and Presentations are assessed. Support and advice is offered to individual trainees to optimise training opportunities.

The candidate will have the opportunity to attend:

- ATLS, BSS, CCRiSP, Generic Deanery based courses
- Highland Surgical Boot camp – clinical, scenario-based, technical and non-technical skills course
- Simulation based training – wetlab, drylab, high and low fidelity simulator based courses
- MRCS and relevant Basic Specialty Skills in Cardiothoracic Surgery courses

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 wetlab and drylab simulation-based training using VATS and laparoscopic simulators, pig hearts and lungs

Rotation Information

The expected programme is:

ST1 & 2 – linked to Core training but tailored to CT: 18 months cardiothoracic, 6 months general surgery (pre MRCS) or medical specialities (cardiology, respiratory, ITU)
ST3 & 4 – rotating, typically 1 year cardiac (usually Aberdeen), 6 months thoracic, 6 months congenital

ST5 & 6 – complete 1 year thoracic & cardiac (Glasgow or Edinburgh), choose preferences, exam preparation
(a thoracic themed post would be readily accomplished between the two large thoracic units in Edinburgh and Glasgow)

ST7 & 8 – subspecialisation, fellowship encouraged pre- or post-CCT

Trust Generic / Specialty Information

Outcome data
Unit outcome data is available on the Society for Cardiothoracic Surgery (SCTS) website: Edinburgh: http://scts.org/hospital/royal-infirmary-edinburgh/
Aberdeen: http://scts.org/hospital/aberdeen-royal-infirmary/

For the Royal Hospital for Children, outcome data is available on the NICOR website: https://nicor4.nicor.org.uk

Trainers involved in programme

Royal Infirmary Edinburgh: 2 cardiac surgeons, 4 cardiothoracic surgeons, 1 thoracic surgeon
Golden Jubilee National Hospital: 4 cardiac surgeons, 3 cardiac & transplant surgeons, 2 cardiothoracic surgeons, 3 thoracic surgeons, 4 congenital surgeons
Royal Hospital for Children: 4 congenital surgeons

Number of GMC accredited Trainers

Aberdeen Royal Infirmary    1
Royal Infirmary Edinburgh    3
Golden Jubilee National Hospital    5 (with 3 more in progress for recognition)
Congenital    2

Trainer / Trainee ratio

>1:1

Posts held

Aberdeen Royal Infirmary: 1 Scottish Training Committee member
Royal Infirmary Edinburgh: 1 Scottish Training Committee member
Golden Jubilee National Hospital: TPD for Scotland, 1 Scottish Training Committee member, 1 MRCS examiner, 3 FRCSCTh examiners
Royal Hospital for Children: 1 Scottish Training Committee member

Curriculum based teaching
Royal Infirmary Edinburgh

Teleconferenced SESATS quiz or Journal Club with Golden Jubilee weekly
- trainee attends one MDT weekly; one Outpatient Clinic weekly, minimum of 4 (2 days) theatre sessions/week

Golden Jubilee National Hospital

Every Wednesday 5-6 p.m alternating SESATS quiz or Journal Club
Every Friday afternoon two hour topic-based teaching, presented by Trainees or Fellows
Permanent accessible simulation bench – thoracoscopy (Taskit and Wii game Underground); coronary anastomosis; mitral valve, aortic valve and aortic root replacements
Cardiac MDTs every Tuesday, Wednesday, Thursday and Friday morning
Thoracic MDTs daily (internal or external)
- trainee attends at least one MDT per week, Consultant’s Outpatient Clinic weekly, minimum of four (two days) theatre sessions per week

Aberdeen Royal Infirmary

Teleconferenced SESATS quiz or Journal Club with Golden Jubilee weekly
- trainee attends one cardiac & one thoracic MDT weekly, one Outpatient Clinic weekly, minimum of 4 (2 days) theatre sessions/week

Royal Hospital for Children

Wed a.m. 1 hour didactic teaching
Friday a.m. Journal Club
Friday p.m. 4 hour MDT
Minimum of four (two days) theatre sessions per week

Regional

Wetlab (in Golden Jubilee Research Institute) four times per year – two cardiac, two thoracic
Teleconferenced Journal Club fortnightly (based in Golden Jubilee, linked to Edinburgh and Aberdeen)

In addition trainees are strongly encouraged to attend SCTS Ethicon curriculum-aligned courses, the SCTS Annual Meeting and the RSM Cardiothoracic Section.
There is Deanery funding support available.

Example trainee logbooks (ARCP June 2016)

Trainee 1 (ST7)
- First time isolated CABG: 178
- First time isolated AVR: 68
- Combined valve and graft: 15
- Mitral valve surgery: 17
- Cox Maze VI: 6
- ASD closure: 3
- Removal of atrial myxoma: 1
- Pericardectomy: 2
- Redo-valve surgery: 1
- VATS AF ablation: 1
- VATS minor procedures: 101
- Anatomical lung resection (all thoracotomy): 59
- Pneumonectomy (all thoracotomy): 5
- Empyema surgery: 14
- Oesophageal surgery (excluding resections): 8

Trainee 2 (ST7)
- First time isolated CABG: 132
- Valve surgery: 70
- Combined valve and graft: 37
- Aortic root replacement: 1
- Anatomical lung resection: 28
- Wedge resection: 6
- Mediastinal tumour resection: 12
- Pectus correction: 4
- Chest wall resection: 2

Trainee 3 (ST1)
- First time isolated CABG: 3
- First time isolated AVR: 1
- Median sternotomy: 36
- Sternotomy closure: 40
- LIMA harvest: 16
- Long saphenous vein harvest: 21
- Cannulation for cardiopulmonary bypass: 22
- Weaning and decannulation: 6
- Proximal coronary anastomosis: 25
- Lobectomy: 7
- Wedge resection: 7
- Other VATS procedures: 12
- Thymectomy: 2
- Pleurectomy: 2
- Thoracotomy: 17

Teleconference SESATS question session:
Wetlab teaching:

Drylab bench:
Wales

The Wales Deanery Selection Information for ST1

The Wales Deanery delivers excellent and innovative postgraduate medical and dental education for Wales. It provides nearly 3,000 training grade doctors and dentists across Wales with access to high quality postgraduate facilities and educational support so that they can achieve their career aspirations, whilst ensuring high quality care and patient safety in Wales.

Funded by the Welsh Government, the Wales Deanery works in partnership with local health boards and NHS trusts in Wales. Ongoing investment provides some of the most modern medical and dental educational facilities within the UK, whilst leading edge education research activity within the Wales Deanery is of national and international excellence.

Training Programme Information
Cardiothoracic Surgery
Rotational Information

<table>
<thead>
<tr>
<th>Grade</th>
<th>Location</th>
<th>Health Board</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST1</td>
<td>Morriston Hospital, Swansea</td>
<td>Abertawe Bro Morgannwg University Health Board</td>
<td>3 x 4 months Surgical slots</td>
</tr>
<tr>
<td>ST2</td>
<td>University Hospital of Wales, Cardiff</td>
<td>Cardiff and Vale University Health Board</td>
<td>12 months Cardiothoracic Surgery</td>
</tr>
<tr>
<td>ST3 – ST8</td>
<td>Morriston Hospital and University Hospital of Wales</td>
<td>Cardiff and Vale and Abertawe Bro Morgannwg University Health Boards</td>
<td>5 years as per Cardiothoracic Curriculum</td>
</tr>
</tbody>
</table>

Deanery Rotation Base

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 headed by Professor Wyn Lewis 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 www.walesdeanery.org

**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 one year in Morriston Hospital Swansea and one year in the University Hospital, 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 2 x 4 months of General Surgery and 4 months of Cardiothoracic Surgery based in Morriston Hospital Swansea and ST2 will offer 12 months of cardiothoracic surgery at the University Hospital of Wales,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 individuals 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.

- Attendance at Royal College of Surgeons’ Cardiothoracic Training Courses incorporated into educational agreements and resourced through study leave budget.

- 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.

- 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

National Selection Information for ST1

<table>
<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>
</tr>
<tr>
<td>University Hospital Birmingham NHS FoundationTrust (QE Hospital)</td>
<td>Birmingham</td>
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</table>

**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 boast 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>
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<tr>
<th>Specialty</th>
<th>Location</th>
<th>Duration</th>
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<tr>
<td>ST1 General Surgery</td>
<td>Heartlands Hospital</td>
<td>Vascular</td>
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<td>Surgery</td>
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<tr>
<td>ST1 General Surgery</td>
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<td>Colorectal</td>
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<tr>
<td></td>
<td></td>
<td>Surgery</td>
</tr>
<tr>
<td>ST1 Thoracic Surgery</td>
<td>Heartlands Hospital</td>
<td>4 months</td>
</tr>
<tr>
<td>ST2 Intensive care medicine</td>
<td>University Hospital Birmingham</td>
<td>4 months</td>
</tr>
<tr>
<td>ST2 Trauma &amp; Orthopaedics</td>
<td>University Hospital Birmingham</td>
<td>4 months</td>
</tr>
<tr>
<td>ST2 Cardiothoracic Surgery</td>
<td>University Hospital Birmingham</td>
<td>4 months</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 thoracoscopic, 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 and 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 Mr Ehab S Bishay – Consultant Cardiothoracic Surgeon ehab.bishay@heartofengland.nhs.uk.
Health Education Yorkshire and the Humber

National Selection Information for ST1

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

Health Education England - Yorkshire and the Humber

Health Education England - Yorkshire and the Humber 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 England - 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
- Mesothelioma surgery
- Chest Wall Reconstruction

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.
Health Education Thames Valley

National Selection Information for ST1

About Health Education England Thames Valley

We are the Local Education and Training Board (LETB) for Thames Valley covering Berkshire, Buckinghamshire and Oxfordshire. Our vision is to ensure the delivery of effective workforce planning and excellent education and training to develop a highly capable, flexible and motivated workforce that delivers improvements in health for the population of Thames Valley. Thames Valley LETB is responsible for the training of around 2000 Foundation and Specialty trainees.

Health Education England Thames Valley is a relatively small organisation with a defined geographical area which serves as a single unit of application. Future placements will usually be based on individual training and educational needs. Please note that applications are to the Health Education England Thames Valley as a whole. This may mean that you may be allocated to any geographic location within the deanery depending on training needs.

The Cardiothoracic Surgery Training Programme

The Cardiothoracic Surgery training programme is an eight-year training programme, starting at ST1. During this time, the trainee's work will be monitored for satisfactory progress and subject to annual reviews in the form of ARCPs and interim reviews. Progression on the programme will be dependent upon these.

All the posts on this rotation have been approved for Specialist Training by the Joint Surgical Colleges. The Postgraduate Dean has confirmed that this post has the necessary educational and staffing approvals.

The Oxford Cardiothoracic Surgery Department

The Oxford Cardiothoracic Surgery Unit offers training in the full range of adult cardiothoracic surgical procedures. Oxford undertakes >950 cardiac and > 600 thoracic cases per annum by 6 Consultant Adult Cardiac Surgeons and 3 Consultant Thoracic Surgeons.

- **Coronary artery bypass surgery**: off pump surgery, multiple arterial conduits.

- **Aortic valve surgery**: In addition to routine AVR using stented biological and mechanical prostheses, Oxford has expertise in stentless and homograft valve replacement and in aortic valve-sparing root repair/replacement. The high-risk aortic stenosis programme offers trans-catheter aortic valve implantation (TAVI, >200 cases completed in two years) or surgical aortic valve replacement if found to be unsuitable for TAVI.
• Mitral valve surgery: > 95% repair rate for degenerative mitral valve disease, concomitant tricuspid valve repair. The service offers concomitant ablation for atrial fibrillation with coronary artery or valve surgery.

• Thoracic surgery: Oxford offers training in the full complement of modern thoracic surgery including VATS lobectomy, VATS thymectomy and dedicated interventional bronchoscopy lists offering stenting and endobronchial valve experience. Oxford offers training in minimal access thoracic surgery at a high resection rate centre.

The Oxford ST1 training program will commence with two years of Core Surgical Training with options for pure cardiothoracic training for a post MRCS ST1 appointee or facilitation of 6-month rotation in T & O, General Surgery or vascular surgery for a pre-MRCS ST1 appointee. It is envisaged that the trainee would start speciality training in Thoracic Surgery to develop early competency in bronchoscopy, VATS, and thoracotomy, and thereby to build first and independent operator experience. Further ST1-2 cardiac experience will allow for training in conduit harvest, sternotomy, cannulation, and vascular anastomoses. Depending on their preference for thoracic or cardiac surgery, the trainee may personalise their ST3-8 training programme with one year spent in non-preferred specialty.

Duties of Post

The ST1 will take part in a non-resident on call rota which will require them to be available by mobile phone from home. This will ensure that Oxford’s ST1 will maximise their time in theatre and any non-theatre time’ is spent in areas of high impact non-operative training i.e. MDTs and clinics. During their ST1-ST8 training the Oxford ST trainee will be non-resident on call with the exception of ST1/2 time spent in a 6-month non-cardiothoracic post (see above). Time on the ward for Oxford ST1 is minimised by our planned recruitment of four Cardiothoracic Physicians Associates and resident FY2/fellow posts.

The ST1 will attend weekly clinic where they will alternately attend new patient reviews with the consultant and follow up reviews. This will facilitate training in the decision making of operability, informed consent process and training in running follow up programs.

Thoracic Surgical ST1 timetable

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>Monday</td>
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<td>Theatre</td>
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<td>Tuesday</td>
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<td>pm</td>
<td>Theatre</td>
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<tr>
<td>Wednesday</td>
<td>am</td>
<td>Lung MDT</td>
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<tr>
<td></td>
<td>am</td>
<td>Interventional bronchoscopy list</td>
</tr>
<tr>
<td>Thursday</td>
<td>am</td>
<td>Clinic</td>
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<td></td>
<td>pm</td>
<td>Administration</td>
</tr>
<tr>
<td>Friday</td>
<td>am</td>
<td>Theatre</td>
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<td></td>
<td>pm</td>
<td>Theatre</td>
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</table>

Oxford ST1 appointed to Oxford will be the sole departmental NTN and have priority to attend all SCTS Educational events and SAC curriculum aligned courses. Non-
resident on call does not require cross cover and as such ST can be released to attend all educational events. The departmental educational lead has received £10,000 to purchased minimal access simulator trainers to which the successful ST1 will have priority access.

Oxford ST1 will be supported in audit and QIP. Oxford /cardiothoracic /department has over 100 publications over the period August 2014-August 2016. Oxford cardiothoracic department includes one chair and one honorary senior clinical lecturer.

The duties of each post vary according to which Trust you are working in and to which specialty and post you are allocated. In general terms you will be required to contribute to clinical duties on surgical wards, in out-patient clinics and in the operating theatre. On-call duties may be limited to the specific specialty or to the “general surgical” take. You will be expected to contribute to the academic and governance activities of the unit. All trainees are expected to help with some anatomy teaching of medical students within the University of Oxford and with the clinical teaching of nurses, medical students and foundation doctors allocated to their respective departments.

Posts held by Oxford trainers include two trainers are panel members of the FRCS (CTh) Section 1 Panel of Question Writers (including its chair); two trainers are members of the FRCS (CTh) panel of examiners. One trainer is a Member of the Intercollegiate Specialty Board for CT Surgery, and a Member of the Consortium Specialty Training Committee. Oxford trainers have experience as convener of SCTS Essential Cardiothoracic Surgical Skills Course. Oxford trainers have acted as faculty for SCTS ST7 Viva Course, RCS Basic Surgical Skills Course, SCTS ST6 Hamburg Operative Skills Course, Basic Sciences Course and SCTS Birmingham University Course 2016. Oxford Trainers attend National Cardiothoracic Selection Committee and act as examiners of Oxford medical students.

In order to facilitate formal teaching, Oxford has moved to a multidisciplinary, practical based training approach in conjunction with industry – Time to Educate Training Days. The following photographs represent our formal multidisciplinary cardiothoracic training days.
Central Teaching

Deanery based teaching constantly evolves to full fill the needs of the programme. The teaching programme will be part of the Core Surgery Training Programme as well as the Cardiothoracic Surgery teaching. We are running three regular types of teaching:

- The regional monthly teaching programme. A half-day session every third Friday afternoon of the month. This includes a donut round, mock exam questions/vivas and speciality based teaching to cover the MRCS and core surgical syllabus.
- Anatomy teaching – opportunity to teach to the medical students for up to 10 sessions over the year in the dissecting room. Specimens are prepared in advance but there is ample opportunity for personal dissection by core trainees if requested. Teaching can be formalized to count towards a higher education certificate for those interested.
- Simulation training – we are trialling simulation sessions held on a weekly basis, rotating round the sim-suites in all the hospitals. The aim is for all trainees to attend 10 half days over the year to cover:
  - Simulated outpatient consultation
  - Full immersion trauma assessment simulation set in A and E.
  - Simulated post-take weekend ward round of 3 patients
  - Simulated full immersion operation with a team in a simulated theatre
- Core surgical trainees are also encouraged to attend a basic surgical and laparoscopic skills course during their rotation.
**Rotations**

Rotations may at times change in response to clinical need from the Trusts. However major changes of job descriptions within a placement have to be approved by Health Education England Thames Valley.

The successful ST1 trainee will start in Thames Valley for the first two years and will mainly be based at the Oxford University Hospitals NHS Trust although they may be required to rotate to another hospital within the Thames Valley region to gain the required competencies. The higher training programme ST3+ will be based at Oxford the Oxford University Hospitals NHS Trust.

The Cardiothoracic Surgery department is based at the John Radcliffe Hospital, Oxford. The successful ST1 trainee will mainly be based at the Oxford University Hospitals NHS Trust but may find themselves employed by any of the following Trusts and placed in any of the following hospitals to gain the required competencies on the Cardiothoracic Surgery curriculum:

<table>
<thead>
<tr>
<th>Trust</th>
<th>Hospitals and Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford University Hospitals NHS Trust</td>
<td>Churchill Hospital, Oxford (Urology, Transplantation) <a href="http://www.ouh.nhs.uk/">http://www.ouh.nhs.uk/</a></td>
</tr>
<tr>
<td></td>
<td>Horton Hospital, Banbury (General Surgery)</td>
</tr>
<tr>
<td></td>
<td>John Radcliffe Hospital, Oxford (General Surgery, Plastics Surgery, ENT, Cardiothoracic Surgery, Paediatric Surgery) <a href="http://www.ouh.nhs.uk/">http://www.ouh.nhs.uk/</a></td>
</tr>
<tr>
<td></td>
<td>Nuffield Orthopaedic Centre, Oxford (Trauma and Orthopaedics) <a href="http://www.ouh.nhs.uk/">http://www.ouh.nhs.uk/</a></td>
</tr>
<tr>
<td>Buckinghamshire Healthcare NHS Trust</td>
<td>Stoke Mandeville Hospital, Aylesbury (Emergency General Surgery / Orthopaedics and Trauma Surgery / Plastic Surgery, including the regional burns unit) <a href="http://www.buckshealthcare.nhs.uk/">http://www.buckshealthcare.nhs.uk/</a></td>
</tr>
<tr>
<td></td>
<td>Wycombe General Hospital, High Wycombe (Elective General Surgery / elective Trauma and Orthopaedics) <a href="http://www.buckshealthcare.nhs.uk/">http://www.buckshealthcare.nhs.uk/</a></td>
</tr>
<tr>
<td>Royal Berkshire NHS Foundation Trust</td>
<td>Royal Berkshire Hospital, Reading (General Surgery, Urology, Trauma and Orthopaedics) <a href="http://www.royalberkshire.nhs.uk/">http://www.royalberkshire.nhs.uk/</a></td>
</tr>
<tr>
<td>Frimley Health Foundation NHS Trust</td>
<td>Wexham Park Hospital (General Surgery, Urology, Plastic Surgery, ENT) <a href="http://www.trimleyhealth.nhs.uk/">http://www.trimleyhealth.nhs.uk/</a></td>
</tr>
<tr>
<td>Milton Keynes University Hospital NHS Trust</td>
<td>Milton Keynes General Hospital (General Surgery, Trauma and Orthopaedics, ENT) <a href="http://www.mkhospital.nhs.uk/">http://www.mkhospital.nhs.uk/</a></td>
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</tbody>
</table>
The Hospitals

Oxford University Hospitals NHS Trust

OUH is one of the largest NHS teaching trusts in the UK and provides a wide range of clinical services and medical education, training and research. The Trust provides high quality general hospital services for the local population in Oxfordshire and neighbouring counties, and more specialist services for patients from a wide geographic area. The Trust is also involved in a wide variety of research programmes, in collaboration with the University of Oxford and many other research bodies. The trust is made up of four hospitals - the John Radcliffe Hospital (which also includes the Children's Hospital and West Wing), Churchill Hospital and the Nuffield Orthopaedic Centre, all located in Oxford and the Horton General Hospital in the north of Oxfordshire.

- **The John Radcliffe Hospital**

  The JR was opened in the 1970s and is Oxfordshire's main accident and emergency site. It is situated in Headington, about three miles east of Oxford city centre. It is the largest of the Trust's hospitals, covering around 66 acres. It houses the Children's Hospital and West Wing and the John Radcliffe Women's Centre. It also provides acute medical and surgical services, trauma, intensive care and cardiothoracic services. It also houses many departments of Oxford University Medical School, is home to the George Pickering Education Centre and base for most medical students who are trained throughout the Trust. The new emergency department at the John Radcliffe, opened in 2004, was judged the best designed hospital building in the country, in the Department of Health's national Annual Building Better Healthcare Awards 2004. In October 2009 the new Oxford Heart Centre opened at the John Radcliffe Hospital.

  It has core surgical trainee placements in Paediatric Surgery / Cardiothoracic Surgery / Neuro Surgery / Plastic Surgery / ENT and General Surgery. The last of these are mainly based in the emergency Surgical Admissions Unit although there are elective opportunities in The Churchill Hospital.

- **The Churchill Hospital**

  The Churchill is a centre for cancer services and other specialties, including renal services and transplant, clinical and medical oncology, dermatology, haemophilia, infectious diseases, chest medicine, medical genetics and palliative care. The hospital, together with the nearby John Radcliffe Hospital, is a major centre for healthcare research, housing departments of Oxford University Medical School and Oxford Brookes University’s School of Healthcare Studies. Developments in recent years include the opening of the Oxford Centre for Diabetes, Endocrinology and Metabolism (OCDEM), which is a collaboration between the University of Oxford, the NHS and three partner companies, to create a world-class centre for clinical research on diabetes, endocrine and metabolic disorders, along with clinical treatment and education.

  It has core surgical trainee placements in transplant and urology although there are frequently opportunities to attend elective general surgical lists.

- **The Horton General Hospital**
The Horton in Banbury serves the growing population in the north of Oxfordshire and surrounding areas. It has over 220 inpatient beds and over 20 day-case beds, and is an acute general hospital providing a wide range of services. The majority of these services have inpatient beds and outpatient clinics, with the outpatient department running clinics with visiting consultants from Oxford in dermatology, neurology, physical medicine, rheumatology, ophthalmology, radiotherapy, oral surgery and paediatric cardiology. The radiology service includes a managed mobile MRI and a breast cancer screening unit. Currently, there are also four main operating theatres and a large day-case unit. General surgery placements include acute and elective commitments led by local consultants and only a single registrar.

- The Nuffield Orthopaedic Centre

The NOC is an elective orthopaedic hospital, providing routine and specialist orthopaedic and rheumatological services to the people of Oxfordshire. Specialist services, such as the treatment of bone infection and bone tumours, and the rehabilitation of those with limb amputation or congenital deficiency, and those with neurological disabilities are provided for patients from across the UK and abroad. Core trainee placements are, unsurprisingly, in orthopaedic surgery. (All Information taken from Oxford University Hospitals NHS Trust website http://www.ouh.nhs.uk/)

Buckinghamshire Healthcare NHS Trust

Bucks provides a wide range of high quality acute and community services from three acute hospital sites in Amersham, Stoke Mandeville and Wycombe, five community hospitals at Thame, Marlow, Buckingham, Chalfonts and Gerrards Cross and Waterside, and a number of community sites across the county. Specialist services include our regional dermatology, allergy and skin cancer centre, burns care and plastics sub-regional centre, cardiac services and the National Spinal Injuries Centre.

More than 6,000 staff serve residents across Buckinghamshire, Thame (Oxfordshire), Tring (Hertfordshire) and Leighton Buzzard (Bedfordshire) - a combined population of 500,000. It serves a much larger population, 1.5m for burns and plastic services and 14m for spinal injuries.

Stoke Mandeville Hospital

Stoke Mandeville is an acute hospital located on the edge of the market town of Aylesbury. It provides a range of hospital services including 24 hour accident and emergency, maternity, cancer care and a range of outpatient services. The hospital is the base for eye care for the area. The regional burns and plastics unit provides specialist services to patients from Buckinghamshire, and as far away as Reading and Northampton. Stoke Mandeville Hospital is also home to the world renowned national spinal injuries centre.

Wycombe General Hospital

Wycombe General is situated in the centre of the historic town of High Wycombe, and offers a full range of planned surgical services, as well as 24 hour emergency medical care (including minor injuries) and specialist medical care, including stroke
and heart conditions. The hospital also offers specialist cancer and urological services.

General Surgical and T&O placements spend time in both the elective and emergency units within each 6 month attachment. Plastic surgery attachments only work at the Stoke Mandeville site.

(All Information taken from Buckinghamshire Healthcare NHS Trust website http://www.buckshealthcare.nhs.uk/)

Royal Berkshire NHS Foundation Trust

RBH is one of the largest general hospital trusts in the country, providing acute medical and surgical services to Reading, Wokingham and West Berkshire and specialist services to a wider population across Berkshire and its borders. The Royal Berkshire Hospital is based on a single site near the centre of Reading. The hospital is the main base for the Trust and provides a wide range of services. Full information on the Wards and Services available at the Royal Berkshire Hospital can be found by visiting the Trust website www.royalberkshire.nhs.uk

The trust has over 4,800 staff, 607 acute, 44 paediatrics and 57 maternity post natal beds and 204 day beds and spaces.

There are core surgical placements in urology, trauma and orthopaedics and general surgery all based at the single site.

Frimley Health NHS Foundation Trust

Heatherwood and Wexham became a Foundation Trust in 2007. The Trust employs over 3,700 permanent staff delivering quality healthcare 24 hours a day 365 days a year. Frimley Health NHS Foundation Trust provides hospital services to a large and diverse population of over 400,000 which includes Ascot, Bracknell, Maidenhead, Slough, south Buckinghamshire and Windsor. Heatherwood has been a hospital since the 1920s and Wexham Park Hospital since 1968.

Wexham Park Hospital

Wexham Park has 521 beds with a full range of services including general medicine and its sub-specialties, paediatrics, general surgery, urology, orthopaedics, obstetrics and gynaecology, otolaryngology, oral surgery and a sub-regional plastic surgery unit.

There are core surgical placements in general surgery, urology, plastics and ENT.

(All Information taken from Frimley Health NHS Foundation Trust. www.frimleyhealth.nhs.uk)

Milton University Hospital NHS Foundation Trust

MK is a medium size hospital serving the people living in Milton Keynes and the surrounding areas.

The hospital has approximately 500 inpatient beds and provides a broad range of general medical and surgical services, including A&E, for over 300,000 people every year. The hospital provides services for all medical, surgical and child health emergency admissions.
In addition to providing general acute services Milton Keynes Hospital increasingly provides more specialist services, including cancer, cardiology and oral surgery and has the responsibility for treating premature babies born locally and in the surrounding areas. The Trust employs around 3000 staff. There are core surgical placements in general surgery and trauma and orthopaedics. (All Information taken from Milton Keynes Hospital NHS Foundation Trust website http://www.mkhospital.nhs.uk/)
Health Education North East

National Selection Information for ST1

<table>
<thead>
<tr>
<th>HOSPITAL</th>
<th>LOCATION</th>
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<tbody>
<tr>
<td>Freeman Hospital</td>
<td>Newcastle</td>
</tr>
<tr>
<td>James Cook University Hospital</td>
<td>Middlesbrough</td>
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</tbody>
</table>

Health Education England – North East

The north east and north Cumbria is a beautiful and vibrant place to live with outstanding training opportunities. From world-class NHS facilities and clinicians to stunning landscapes, towns and cities, our region has got it all.

The NHS in the north east is one of the highest performing NHS regions in the country.

Across the region we have a clear vision for healthcare:

‘The NHS in the north of England will be the leader in excellence in health improvement and healthcare services’.

We have ten NHS hospital trusts, two mental health trusts and one ambulance trust. With around 100,000 staff, serving a diverse population of three million people in completely contrasting environments, our NHS covers some of the most interesting places to work in the country.

Waiting times for hospital treatment have fallen dramatically.

Likewise, developments in drugs and technologies have created exciting new opportunities to save lives and cure disease - as well as heightened expectations - for people in the North East. We are seeing significant reductions in deaths from the big killers.

Across the north east, there are many excellent examples of integrated services provided and, in many cases, jointly funded by the NHS and local authority partners and involving the third sector.

Health Education England – working across the North East and North Cumbria (HEENE)

HEENE operates across a wide and geographically varied area covering Northumberland, Tyne and Wear, North Cumbria, County Durham and Tees Valley. We work with 12 hospital trusts (which includes two specialist trusts providing mental health and learning disabilities services), 198 general practice training practices and 60 general dental training practices.
In the recent GMC 2016 National Trainee Survey, HEENE have been ranked number one for nine out of 15 of the indicators including clinical and educational supervision, supportive environment, handover, and reporting systems and we are ranked top five for the other six indicators.

For more information, including five year trend analysis please visit our national site.

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 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 the north east and north Cumbria you can visit the following websites

www.ne.hee.nhs.uk/recruitment
http://www.nhsfindyourplace.co.uk/
https://madeinheene.hee.nhs.uk/

The School oversees all aspects of training in the eleven 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:

http://madeinheene.hee.nhs.uk/surgery

**Rotation Information**

Trainees appointed to ST1 in Cardiothoracic Surgery will spend 1 year on the core surgery rotation completing 3 four month placements in Cardiothoracic Surgery, General Surgery and Plastic Surgery.

Years 2-8 will be in the specialty of Cardiothoracic Surgery any of 2 sites:

Freeman Hospital, Newcastle upon Tyne
James Cook University Hospital, Middlesbrough

For the ST3-8 trainees around 4 years are spent at the Freeman and 2 years at James Cook – although this is flexible to suit trainees’ needs (but all trainees spend time at both hospitals).

Training Programme Director – Mr Andrew Goodwin – andrew.goodwin1@nhs.net

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.

In 2012 one of the surgeons at James Cook was awarded the prestigious EACTS award of European Cardiothoracic Trainer of the Year.

The training in both cardiac and thoracic surgery is excellent in the region, with struggling trainees from other regions asking to come to the North East for help. A particular strength has been the nurturing of left handed trainees at James Cook.

The Freeman hospital is unique in the UK in offering the complete range of subspecialties - cardiac, thoracic, transplant and congenital surgery. This allows trainees to experience a taste of everything before making a final career choice.

The region is deservedly proud of the innovations and development of the latest techniques. These include highly successful minimally invasive surgery programs –
both in cardiac and thoracic surgery. Training in minimal access valve replacement is given at James Cook, and both centres have active VATS lobectomy training. Recently robotic thoracic surgery has been introduced at both the Freeman and James Cook. Percutaneous valve insertion (TAVI) and sutureless valve replacement are practised on both sites. The Freeman is widely known for its transplant program over the past 25 years and more recently for the use of VADs (ventricular assist devices).

There are a wide range of research activities at both hospitals. The North East is one of 2 regions in the UK to take Academic Clinical fellows in cardiothoracic surgery, with 2 in post currently. James Cook is currently running a large randomised trial of minimally invasive valve replacement. The trainees regularly attend and present at national and international meetings. A high number of higher degrees and peer reviewed publications are produced.

Freeman Hospital

1 in 8 on call (resident – EWTD compliant)
MTC – currently 6 NTNs (although this may flex with JCUH)
1 ST1 and 1 ST2 – on separate CT on call rota (17 shifts in 4 months)

Cardiac surgery – (7.5 wte consultants) including OPCAB, Minimally Invasive Valve Surgery, Sutureless AVR and TAVI

Thoracic surgery – (4.5 wte) Open and VATS thoracic resections, Robotic lung resection, Nuss, Chest wall reconstruction, Mesothelioma surgery

Congenital – (3 wte) adult and paediatric, including transplant/VADs

Transplant – including VADS, ECMO. Peri-CCT national NTN post for specialist transplant training.

Trauma – major trauma centre

James Cook University Hospital

1 in 9 on call (resident – EWTD compliant)
MTC – currently 3 NTNs (although this may flex with FRH)

Cardiac surgery – (6 wte consultants) including OPCAB, Minimally Invasive Valve and MIDCAB, Sutureless AVR and TAVI, Mitral repair, Thoracic Aortic surgery. Peri/Post CCT minimally invasive clinical fellow

Thoracic surgery – (3 wte) Open and VATS thoracic resections, Robotic Lung Resection, Nuss, Uniportal VATS, rib plating

Trauma – major trauma centre (including air ambulance)

MDTs in thoracic/cardiac/congenital/transplant/VAD surgery with attendance by all trainees appropriate to each subspecialty.

Weekly teaching in both centres
Monthly regional training half days – alternates between centres, with compulsory trainee attendance. These usually coincide with a half day of scheduled operating (to allow anaesthetic audit/training) – which greatly facilitates trainee attendance.

National teaching courses – James Cook runs 3-4 training courses per year for consultants/teams from other units on Minimally Invasive AVR. Trainees are invited to present cases and participate in the teaching sessions.

Annual transplant and circulatory support conferences – Freeman. Free to attend for regional trainees

State of the art Wetlab facilities in Newcastle (full mock theatre set-up and cryo-preserved cadavers). There are also more routine wetlab facilities at JCUH.

Study leave and financial support is given to all trainees to attend SCTS every year, Birmingham review course (in the run up to the exam), as well as to international meetings (if presenting).

All trainees are encouraged to attend the SCTS/Ethicon courses – and nearly all have taken advantage of this – with excellent feedback from the participants.

There is a strong link to the Universities in the North East. At FRH there is a Professor of Cardiac Surgery with a Chair at the University of Newcastle-upon-Tyne, and a research interest in Cardiothoracic Transplantation, especially transplantation immune biology.

At JCUH there is a Professor of Cardiac Surgery, linked to Newcastle University, performing research and 2 Honorary Clinical Lecturers with the University of Durham, and 1 Honorary Senior Lecturer at UCL London. Grants have allowed research fellows to be appointed to continue this research.

There are 2 Academic Clinical Fellows (ACFs) in the region. Both are currently OOPR pursuing 3 year PhDs.

The current trainees have produced 56 peer reviewed publications since 2014. Both centres are actively involved in NIHR sponsored clinical trials. At FRH this has included TiTRE2, MARS2 and PULMiCC. At JCUH it has included TiTRE2, ERRICA, UKTAVI and VIOLET. JCUH has just finished recruiting to an NIHR-funded trial of minimally invasive AVR – the MAVRIC trial and is currently leading the largest ever randomised trial of minimally invasive cardiac surgery – the UK Mini Mitral trial – a UK-wide multi-centre study with £1.5m NIHR funding.

There are links with St Vincent’s Hospital in Sydney, Australia, with three past trainees having spent profitable years in research leading to the publication of their work as a PhD thesis.

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.

http://www.ncl.ac.uk/biomedicine/study/postgraduate/taught/pgclinres/