Training Programme Information for Posts in Cardiothoracic Surgery at ST1 Level

Recruitment 2014

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.

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

Deanery Rotation Base(s)

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<tbody>
<tr>
<td>Glenfield Hospital</td>
<td>Leicester</td>
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<tr>
<td>City Hospital</td>
<td>Nottingham</td>
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East Midlands Healthcare Workforce Deanery (EMHWD) is an integral part of NHS Midlands and East, and the East Midlands Local Education and Training Board (LETB). The Deanery teams work closely with the Education Commissioning and Workforce teams in East Midlands to ensure that together we deliver a fit for purpose healthcare workforce dedicated to providing high quality safe healthcare for the population of the East Midlands.

The area in which our educators work is geographically large and serves a population of 4.3 million, and a healthcare workforce in excess of 80,000. This provides a breadth of learning and working environments including some of the largest teaching hospitals nationally and some of the smallest rural Primary Care Trusts.

The Deanery is led by Dr Sheona MacLeod as Postgraduate Dean

Rotation Information

Expected rotation arrangements for this programme are:

**ST1**: 12months in Glenfield Hospital : 4 months Thoracic Surgery (Mr Nakas, Mr Waller); 4 months Cardiac Surgery (Prof Murphy), 4 months General Surgery (LRI)

**ST2**: 12 months in Nottingham City Hospital : 4 months Emergency Surgery (Mr Brooks, QMC Nottingham), 4months Thoracic Surgery (Mr Duffy); 4 months Cardiac Surgery (Mr Richens)

**ST3**: 3 months ITU module (Intensive Care Society approved) in Leicester (supernumerary, supervised by Intensivist Dr Allsager, surgical on-call) ; 9 months basic cardiac surgery in Leicester (Prof Murphy)

**ST4**: Basic pleuropulmonary surgery in Nottingham (Mr Majewski)

**ST5**: 6 months intermediate adult cardiac surgery in Nottingham [Mr Richens, Mr Mitchell] ; 6 months Congenital cardiothoracic surgery/ECMO in Leicester [Mr Peek].

**ST6**: Intermediate pleuropulmonary surgery in Leicester [Mr Waller, Mr Nakas]

These placements are discretionary based upon competency attainment and career progression. The program is seeking SAC recognition for ST7/8 training in advanced Cardiac Surgery from 2013.

**ST7**: Advanced oesophageal surgery in Nottingham [Mr Duffy]. Advanced cardiac surgery in Nottingham (Mr Mitchell, Mr Richens).

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 22 beds including 5 integrated HDU beds. The full range of pleuropulmonary surgery is performed for Leicestershire, Northamptonshire, South Staffordshire and South Derbyshire together with national referrals for mesothelioma surgery. Annual workload comprises: over 800 thoracic surgical procedures including 35 radical mesothelioma resections and 30 LVRS procedures. Over 15% of all major lung cancer resections are performed by VATS. Trainees carried out 60% of all lung cancer resections last year.

University Hospitals of Leicester NHS Trust - Glenfield Hospital:

Cardiac: 2 training posts, 1 in 5 non-resident rota (currently 1 LAT)
Congenital: 1 training post; supernumerary (currently 1 ST)
Thoracic: 2 training posts, 1 in 5 non-resident rota (currently 1 ST, 1 OOPT)

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.
Nottingham University Hospitals NHS Trust – Nottingham City Hospital

Cardiac: 2 training posts, 1 in 5 rota. (currently 2 LATs)
Thoracic: 2 training posts, 1 in 5 non-resident rota (currently 1 ST3, 1 LAT)

Jobplan
The trainee will attend at least 3 operating sessions and one outpatient clinic per week. In addition they will attend at least one Consultant ward round per week. It is hoped that the trainee will be on a 1 in 8 on-call rota in Leicester at ST1 and in Nottingham for Emergency Surgery but from ST2 Cardiothoracic onward on a 1 in 4 or 1 in 5 non-resident on-call rota. They will have the opportunity to participate in the postoperative care on HDU and wards and the assessment of cardiothoracic trauma. In ST1 in the operating theatre the trainees will be supervised in the opening and closing of the chest; the harvesting of conduits for revascularization; diagnostic videoassisted thoracoscopy and mediastinoscopy and airway management (bronchoscopy/tracheostomy).

Teaching
In addition to the local MDTS and weekly departmental teaching sessions the rotation has an organized, comprehensive monthly regional teaching program including a biannual Midlands Cardiothoracic Surgical Meeting which encompasses hands-on training and abstract competitions. Attendance at the Society for Cardiothoracic Surgery Annual Meeting and Royal College Courses in Cardiothoracic Surgery will be expected. The trainee will be expected and encouraged to complete and present (preferably at a national meeting) one audit or research project for each 6 month attachment.

Mr Waller as TPD will supervise the completion of a minimum of 40 WPBAs per year including 1 MSF per attachment.

Summary
The East Midlands offers a compact, comprehensive training program by a closely co-ordinated committed faculty.

We have an excellent record in placing our Core trainees into ST3 posts. In each of the last 3 years 4 of our CTs have been either shortlisted or appointed at National selection. All but one of our trainees have passed the FRCS(CTh) exam first time and we have placed 9 of our last 10 CCT holders into Consultant posts.

We accept that training a general cardiothoracic surgeon is no longer feasible and will therefore aim to train Consultants with highly developed specialist interests in either Thoracic or Adult Cardiac surgery.

Further information available from:

Mr David Waller, TPD david.waller@uhl-tr.nhs.uk
Or
Mr Keng Ang, Trainee Rep on RTC klmailbox@aol.com
Northern Deanery (ACF post)

Deanery Rotation Base(s)

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<th>HOSPITAL</th>
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<td>Newcastle</td>
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<tr>
<td>James Cook University Hospital</td>
<td>Middlesbrough</td>
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The Northern Deanery

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

In the recent GMC 2012 National Trainee Survey, the Northern Deanery scored top in the following:

- Overall trainee satisfaction - highest scoring deanery in England, Wales & Northern Ireland for the second year running
- Clinical supervision - highest score in the whole of the UK
- Educational supervision - highest score in the whole of the UK
- Induction - highest score in the whole of the UK
- Feedback - highest score in the whole of the UK
- Adequate experience - highest in England, Wales & Northern Ireland

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

To find out more information about what it is like to ‘Live and Train’ in the Northern Deanery you can visit our website www.liveandtrain.nhs.uk

The Northern School of Surgery was established in September 2006 as the first new wave “speciality postgraduate school” in the Northern Deanery to deliver the modernizing medical career agenda across the previously separate nine surgical specialties.

At the same time each medical specialty was required to submit for approval “a curriculum” which for the first time represented an explicit statement of the syllabus, mode of assessment, way-points and endpoint of specialty education.

The School of Surgery was charged with reorganising surgical education and training within the Deanery so as to deliver the newly approved surgical curricula to the required standards.
At its heart the School of Surgery is accountable to its Board on which sits the Postgraduate Dean, a lay representative and a representative of the Strategic Health Authority (usually a Chief Executive of an Acute Trust).

This Board is the meeting point where alongside the members above, each individual specialty training committee, including the Core Surgical Training committee, agree strategies and policy relating to the delivery, conduct and quality assurance of postgraduate surgical training in the Northern Deanery.

Each Specialty Training Committee is, of course, responsible for the regulation and training of that specialty and for educational well being of all trainees committed to that specialist surgical career.

One of the GMC standards defines the Deanery responsibility for quality assurance and quality monitoring as part and parcel of the ongoing educational process. This responsibility is cascaded to individual schools and thence to individual STCs. This annual process leads to a continuously evolving evaluation that generates an action plan addressing quality issues relating to specialty surgical education and training in the Deanery.

A further committee, The Education Committee, is responsible for organising courses and educational events, not only for trainees but as part of a programme of Faculty Development which aims to prepare “surgical educators” who are able to deliver surgical education and training in line with the new curricula and but additionally able to provide trainees with support, guidance and constructive feedback.

Finally, the School of Surgery is able to communicate issues relating to manpower and consultant job planning where this affects education and training to Trusts through a Forum involving Directors of Postgraduate Education and in collaboration with the Forum involving other heads of school.

Further information can be found at:-
http://www.northerndeanery.nhs.uk/NorthernDeanery/specialty-training

The Deanery encompasses training in Cardiothoracic Surgery in two regions – Newcastle and Middlesbrough. The ST1 will be managed in Newcastle and on successful run-through, will rotate to Middlesbrough.

All sub-specialty components of Cardiothoracic Surgery are offered within this rotation, with an international Transplantation and congenital cardiac surgery reputation.

**Rotation Information**

Expected rotation arrangements for this programme are:

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

**Trust Generic/Specialty Information**

- Each Trust has established cardiothoracic training: – 2 cardiothoracic and 5 cardiac surgeons in Middlesbrough - specialist interest in minimally invasive mitral surgery; 1 cardiothoracic, 3 thoracic, and 2 congenital surgeons in Newcastle –specialist interest in advanced heart and lung failure, and minimally invasive thoracic surgery. Within the 19 surgeons, there is an ex-president of SCTS, present SAC dean, and national lead for transplantation, so there is plenty of resource for career advice and steering. Newcastle Upon Tyne Hospitals NHS Trust offers relevant postings in non-cardiothoracic surgery to allow successful preparation for MRCS and the ST3 post –it is envisaged that this will include plastic surgery and general surgery.
- The ST1, when in cardiothoracic surgery, will spend a supernumerary month in cardiothoracic intensive care, time on the ward and in pre-assessment clinic to ensure thorough knowledge is gained of the ward patient, and time in theatre and clinic to hone surgical and management skills.
- There are 9 Nurse practitioners who manage the patients in pre-assessment clinic and on the ward freeing up the ST1 to immerse themselves in their surgical training. There are 3 surgical nurse practitioners to allow surgical training in cardiac and thoracic theatre.

**Teaching**

- There is a regular weekly teaching which the ST1 will contribute to, and monthly regional training – there is a planned continuum of revascularisation wet and dry labs training Jan to June 2013, and after this a planned simulation, wet-lab and cadaveric dissection for minimally invasive thoracic surgery. In addition to this there is a program of simulation of cardiac surgery emergencies.
- All minimally invasive thoracic surgery procedures will be recorded to allow personal assessment of surgical progression and comparison to consultant procedures.
- One consultant in the rotation has won the Silver Scalpel award 2012, for excellence in cardiothoracic training.
Surgical Training Centre fully accredited by Royal College of Surgeons
Newcastle is first centre in England to receive full accreditation from RCS
Posted: 11 July 2012

CORE SESSIONS
CT1 & CT2

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

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

Healthcare at its very best - with a personal touch
North West Deanery

ST1 and ST2 Cardiothoracic Surgery Training Locations:

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

General description of rotation:

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

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 Wednesday afternoons at Wythenshawe Hospital, 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.

ST4 to ST9 Rotation In North West Consortium (Higher Surgical Training) will be in Northwest Consortium

**North West Cardiothoracic Consortium**

**North West and Mersey Deaneries**

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 Deaneries 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 Deaneries. 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 Deanery to which they are appointed.

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

The program involves the following centers:

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<td>Liverpool</td>
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<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>
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<tr>
<td>Lancashire Heart Centre, Victoria Hospital</td>
<td>Blackpool</td>
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**Mersey Deanery**

**Liverpool Heart and Chest Hospital NHS Foundation Trust**

The Liverpool Heart and Chest Hospital (LHCH) is one of the largest single centre cardiothoracic units in the United Kingdom and is an autonomous single specialty Foundation Trust on the site of Broadgreen Hospital. It provides tertiary services in Cardiothoracic Surgery, Cardiology and Chest Medicine to a population of 2.8 million in Merseyside, North Wales and the Isle of Man as well as parts of Lancashire and Cheshire. All types of cardiothoracic surgery are carried out with the exception of transplantation. The hospital carries out over 3000 cardiothoracic operations every year. Consultant staffing comprises 10 cardiac surgeons, 4 thoracic surgeons and 2 cardiothoracic surgeons.
The service has a number of particular strengths:-

- The largest aortic surgical service in the UK including complex thoracoabdominal procedures and a significant amount of endovascular procedures. There is a separate consultant on-call rota for emergency aortic surgery
- Off-pump coronary artery bypass surgery – one of the largest experiences in the UK and Europe
- A comprehensive mitral repair program including radiofrequency ablation
- Minimal access aortic valve and coronary artery surgery
- A transcatheter aortic valve implantation (TAVI) program with both transfemoral and transapical approaches.
- Epicardial pacing

- All aspects of minimally invasive thoracic surgery including a mature VATS lobectomy service
- Complex oesophagogastric surgery especially for OG cancers. Close cooperation with upper GI surgery. OG cancer MDT based at LHCH
- Lung volume reduction surgery, endobronchial valve implantation
- Chest wall and mesothelioma surgery
- Comprehensive cover of lung cancer MDT’s with outreach clinics in all regional hospitals
- Advanced colorectal cancer MDT for management of pulmonary metastases
- Links with regional sarcoma MDT

**Alder Hey Childrens NHS Foundation Trust, Liverpool**

This hospital, which is one of the largest children’s hospitals in Europe, serves a population of 6 million, covering the North West of England, North Wales and the Isle of Man. All aspects of paediatric heart disease are managed with the exception of paediatric transplantation. Over 450 paediatric cardiac operations are carried out every year. There are well-established transitional arrangements in place for adult patients with congenital heart disease, with seamless transfer of care to Manchester Royal Infirmary.

Trainees in Alder Hey are exposed to all aspects of congenital heart disease. They are actively involved in pre-operative evaluation, intra operative surgical strategies, and immediate post-operative critical care management of the children. Opportunities are provided to perform paediatric cases as first operators and to be involved in more complex neonatal procedures as first assistant. There is an active interdepartmental teaching and research program with paediatric cardiology and intensive care.

**North West Deanery**

**University Hospital South Manchester NHS Foundation Trust (UHSM)**

The hospital is a tertiary referral center and provides a comprehensive service in cardiac and thoracic surgery, cardiopulmonary transplantation, ECMO and ventricular assist therapy. The hospital has a catchment population of 3.2 million for specialist services. Consultant staffing includes 7 cardiac surgeons, 1 cardiothoracic surgeon and 4 thoracic surgeons including one locum thoracic surgeon. The majority
of the cardiac and thoracic surgeons are involved in the transplant program. The service performs 900 cardiac, 1500 thoracic and about 45 heart / lung transplants per year.

Strengths of the service include the following:

- Heart and Lung Transplantation
- Mitral valve repair
- Aortic surgery including TAVI
- Heart assist device
- ECMO
- The entire spectrum of general thoracic surgery including VATS lobectomy, 24/7 airway intervention service, joint operating with spinal surgeons, LVRS, enobronchial valve implantation and pulmonary metastatectomy.

Central Manchester University Hospitals NHS Foundation Trust
Located on the site of Manchester Royal Infirmary (MRI), the Manchester Heart Centre offers tertiary cardiac and adult congenital cardiac service to a wide population. Consultant staffing include 6 cardiac surgeons including one locum. Two of the adult cardiac surgeon offer adult congenital cardiac surgery. The service performs 800-900 cardiac surgical operations. Strengths of the service include:

- Off Pump surgery
- Mitral valve repair service
- Redo cardiac surgery
- Adult congenital cardiac surgery program

Victoria Hospital NHS Trust, Blackpool
The Lancashire Cardiac Centre provides adult cardiac and thoracic surgery for the people of Lancashire, Cumbria and beyond. The unit is planning to do 1200 adult cardiac, 200 major lung resections and around 400 other thoracic procedures this year.

The trainee will be exposed to a full spectrum of adult cardiac and thoracic surgery.

- Port access cardiac surgery program. This is the 2nd largest in the country with 1 to 2 cases a week, mainly for mitral valve repair.
- Off pump CABG
- Endoscopic Saphenous Vein Harvesting
- TAVI program
- Suturless Aortic Valve program
- VATS Lobectomy
- Atrial Fibrillation Surgery and Epicardial pacing
- Weekly Thursday Cardiology/Cardiac Surgery MDT meeting for difficult cases
- Weekly Lung cancer MDTs at Blackpool, Preston, Blackburn and Lancaster
- Weekly educational meeting
North West Consortium Educational Resources

- Weekly teaching meetings at all hospitals
- Monthly North West Regional Teaching Program
- Wet lab sessions covering CABG, MVR, AVR, Mitral valve repair, Aortic root replacement and VATS surgery
- Mitral Valve Symposium
- National TOE Course
- Terms and techniques for aortic surgery for trainees
- Imaging in cardiothoracic / oesophageal surgery
- Perfusion in cardiac surgery
- Difficult Scenarios in cardiac, thoracic and oesophageal surgery
- North West FRCS(CTh) preparation course
- Viva practice for FRCS(CTh)
- FRCS(CTh) Examiners

Strengths of North West Consortium include the following

- Ability to provide comprehensive training in all aspects of cardiac, thoracic, congenital and transplantation surgery
- Ability to fully train a cardiac or thoracic surgeon with subspecialty interests
- Close relative geographic location of hospitals in the program
- Ability to provide training to suit the needs of all trainees
- Excellent educational resources
- High pass rate at FRCS(CTh) and excellent history of appointment to UK consultant positions for trainees
- Opportunities for academic development
- Trainee representation on regional training committee
- Deanery / School of Surgery support
- Previously hosted Intercollegiate FRCS(CTh) examinations
- Excellent trainee feedback

Operative Experience
The following information relates to the percentage of cases carried out by trainees as lead surgeon between 2007 and 2012, operating either alone or with consultant assistance.

Cardiac Surgery

**LHCH**
- All middle grades = 11%
- Senior (ST5-ST6) numbered trainees= 24%

**UHSM**
- All middle grades = 27%
- Senior (ST5-ST6) numbered trainees = 63%
- Heart retrievals = 100%
- Heart Implants = 3.6%
MRI
- All middle grades = 21%

Lancashire Cardiac Centre
- All middle grades = 10.3%
- ST4 trainees
  - CABG = 56%
  - AVR = 62%
- ST3 trainees - Sternotomy / IMA harvest / Cannulation / Decannulation
  - > 90% of cases

Thoracic surgery

LHCH
- All middle grades = 41%
- Senior (ST5-ST6) numbered trainees = 69%

UHSM
- All middle grades = 40%
- Senior (ST5-ST6) numbered trainees = 76%
- VATS lobectomy - Aug 2009 to Sep 2010 = 20 cases
- Lung retrieval = 100%
- Lung implants = 39%

Lancashire Cardiac Centre
- All middle grades = 20%

Junior Medical staffing

LHCH
- NTN specialty registrars: 7
- Clinical fellows (including overseas thoracic fellow): 7
- Specialty doctors: 3
- Rota = two tiers of full shift middle grade cover, EWTD compliant (junior = 1 in 9, senior = 1 in 8)
- SHO grade - CT1/CT2 = 2, FY2 = 3, Trust SHO = 5. Rota = 1 in 10

Alder Hey
- Specialist registrar/ Clinical Fellows: 5
- ROTA: 1:5, EWTD compliant

UHSM
- NTN specialty registrars: 3
- Clinical fellow: 5
- Speciality Doctor / Associate specialist: 3
- Transplant fellows: 5
- CT1/CT2: 3
- Rota = 1:9 partial shift, EWTD compliant
- Trust fellow (SHO grade): 3
MRI
- NTN specialty registrars: 1
- Clinical fellow: 7
- Rota = 1:8 partial shift, EWTD compliant
- CT1/CT2/F1: 3

Lancashire Cardiac Centre
- NTN specialty registrars: 1
- Clinical fellow: 7
- Rota = 1:9, resident on call, EWTD compliant
- CT1 / CT2: 2
- Trust grade (SHO): 3
Health Education South West

Deanery Rotation Base(s)

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<tbody>
<tr>
<td>Derriford Hospital</td>
<td>Plymouth</td>
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<tr>
<td>Bristol Royal Infirmary</td>
<td>Bristol</td>
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The South West regional training scheme in cardiothoracic surgery is based 2 hospitals – Bristol Royal Infirmary (Severn Deanery) and Derriford Hospital – Plymouth (Peninsula Deanery). Overall supervision of the programme is led through the Severn Deanery, however the TPD rotates between the two centres. The trainees rotate between the two training hospitals with approximately half their training at either centre. Appointment to the Cardiothoracic Surgery rotation at ST1/ST3 level is undertaken by national recruitment.

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

ST1 Rotation Information:

The ST1 post is based in Plymouth and is spent as 2 years at Core Trainee level with 6 months General Surgery, 6 months Vascular Surgery and 12 months Cardiothoracic Surgery before progressing through to the SouthWest ST3 rotation

ST3 Rotation Information:

Expected rotation arrangements for this programme are:

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

Registrar rotas at both units are compliant with the EWTD. Changes that have been made over the last two years include:

- Non-resident on call registrar
- Commitment to firm based training
- Mandatory day off post on-call
- Weekly publication of rota allocation to allow planning of non-operating day post on-call
- Reintroduction of firm based training at core training level
- Amalgamation of cardiology and cardiac surgical on call at night rota
- Structured training for core trainees by SCPs in theatre
Trust Generic/Specialty Information:

The Bristol component of the training programme takes place on three separate but closely-linked campuses – The Bristol Heart Institute (BHI) (Adult Heart Surgery, 1700 cases annually), The Bristol Royal Infirmary (General Thoracic Surgery, 950 cases annually) and the Bristol Royal Sick Children’s Hospital (Paediatric Cardiac Surgery, 400 cases annually). There are 15 Consultant Surgeons (including 2 Professors and 2 readers).

Particular strengths include the significant contribution of trainers to training (more than 50% of cases performed by trainees), the wide experience in OPCAB and research with the pre-eminent Academic Surgical Unit, training courses in Aortic Surgery and Minimal Access Surgery, weekly postgraduate seminars and opportunity to work in the outstanding Academic Department. Three NTN’s have been appointed as Consultant Surgeons and 1 NTN is currently in New York doing a Fellowship in adult Cardiac Surgery.

The last 3 years has seen new £65 million purpose-built BHI, the expansion of the Thoracic Surgery Service from 450 cases to 960 annually, development of the minimal access surgery unit (≥100 TAVI’s, 70 MIDCAB & 54 mini-mitrals) and the development of a VATS Lobectomy programme. There has now been the introduction of Aortic and Minimal access courses.

Training in Bristol will comprise time spent in Adult & Paediatric Cardiac and General Thoracic Surgery depending upon the trainee’s career intentions. There will be excellent training in all aspects including OPCAB/minimal-access surgery & VATS resections.

The academic component is based at the Bristol heart Institute that links the University of Bristol with the Cardiothoracic Centre in UBHT. There are:

X1 British Heart Foundation Professor of Cardiac Surgery
X1 Bristol University Professor of Cardiac Surgery
X2 Bristol University Readers of Cardiac Surgery
X2 ACFs
X1 Research Fellow

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

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

There are 6 full time cardiac consultants and 2 full time thoracic consultants. Minimally invasive oesophageal surgery (MIO) has now relocated from Exeter to Derriford.

Particular areas of specialisation include minimal access mitral and aortic valve surgery, TAVI, AF surgery, minimally invasive valve surgery and aortic surgery.
Training has been particularly strong in this region with skilled trainees performing up to 50% of the cases. There has been excellent progression of trainees from ST3 level to completion and taking up consultant posts in 100% of the trainees.

Teaching:

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

1. Weekly departmental teaching for the junior trainees in Plymouth and Bristol
2. Monthly regional Core Trainee Meetings (Peninsula)
3. Regional study days held 3-4 times per year between Severn and Peninsula Deaneries
4. Aortic Valve Study Day – March 2011 (Peninsula)
5. Aortic Surgical Study Day (Bristol) – Nov 2011 (Severn, Peninsula, Cardiff and Wessex Deaneries)
7. Mitral Study Day and Wetlab teaching – March 2012 – (Peninsula)
8. Cardiopulmonary Bypass Study Day – March 2013
9. Thoracic Stapling Course – Bristol Nov 2013

The department has strong links with National Education with faculty involved with national teaching:

1. Speciality skills Course in Cardiothoracic Surgery
2. Intermediate Skills Course
3. Professional Development Course
4. Birmingham Review Course
Wales

Deanery Rotation Base for ST1-2 Cardiothoracic Surgery:

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

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

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

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

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

Overview of programme:

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

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

**The University Hospital of Wales, Cardiff**

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

**4 NTNs – 1xST1, 1xST2, 2 x ST3-8**

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

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

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

**Job Plan**

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

The Welsh Cardiothoracic Surgical Training programme

The Joint Wales and West Midlands Training Consortium offers a modern, comprehensive, fit-for-purpose training programme for Cardiothoracic Surgery, drawing upon the strengths of both Welsh centres, and a number of centres from the West Midlands Deanery. In particular, the consortium offers the full spectrum of broad general as well as specialist cardiothoracic training that can be tailored to an 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.
o Attendance at Royal College of Surgeons' Cardiothoracic Training Courses incorporated into educational agreements and resourced through study leave budget.

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

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

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

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

ST4: Thoracic surgery - UHW
ST5 or ST6 Cardiac Surgery – Morriston
ST6 or ST5 Paediatric cardiac surgery (6 Mo)- BCH
     Transplantation & thoracic aortic surgery (6 Mo)
     – QEH

ST7 & 8 Bespoke training. Options might include:

1. **Paediatric / Congenital surgery** – supported application for GOSH/BCH programme

2. **Adult Cardiac surgery** – UHW/Morriston with options to develop experience in OPCAB & mitral repair.

3. **Adult Cardiothoracic Surgery** - Morriston/UHW

4. **Adult Thoracic Surgery** – currently OOPE at HoEH, then UHW

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

Deanery Rotation Base(s)

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

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

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

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

Rotation Information

ST1 / ST2

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

The first year (ST1) will be based at Heartlands Hospital and includes 3 four month attachments. The second year (ST2) will be spent at University Hospital Birmingham again rotating thro 3 four month training posts.
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<tr>
<th>Specialty</th>
<th>Location</th>
<th>Duration</th>
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<tr>
<td>ST1 General Surgery</td>
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<td>Surgery</td>
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<td>Surgery</td>
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<tr>
<td>ST1 Thoracic Surgery</td>
<td>Heartlands Hospital</td>
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<td>ST2 Intensive care</td>
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<td>ST2 Trauma &amp;</td>
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<td>Orthopaedics</td>
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<tr>
<td>ST2 Cardiothoracic</td>
<td>University Hospital</td>
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<tr>
<td>Surgery</td>
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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 18 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. There are 4 further research fellows at QEH, BCH and Heartlands Hospitals

Over the past 15 years 28 national trainees have completed the training programme, 27 have achieved consultant posts in the United Kingdom (incl. adult cardiac, cardiopulmonary transplantation, thoracic, cardiothoracic and paediatric cardiac surgery) and 1 in Canada. In the last 3 years the McCormack medal for the best performance at the FRCS Part 3 examination has been awarded twice to West Midland trainees.

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

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