Training Programme Information for Posts in Cardiothoracic Surgery at ST3 Level

Recruitment 2017

This document has details of all of the training programmes in the UK/Eire/Scotland areas.

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

Details of the full curriculum for Cardiothoracic Surgery ST3 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.

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<thead>
<tr>
<th>East Midlands</th>
<th>London</th>
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<tr>
<td>Northern Ireland</td>
<td>North West</td>
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<td>South West</td>
<td>Yorkshire and Humber</td>
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<td>Wales (LAT)</td>
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Any information not included in this document should be available from specific LETB/deanery websites.
Health Education East Midlands

National Selection Information for ST3

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

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 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

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.

**Proposed Rotation:**  
**ST3 Cardiac 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>Cardiac Surgery</td>
<td>Cardiac Surgery with Congenital exposure</td>
<td>CTS ARCP</td>
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</tr>
<tr>
<td>ST4</td>
<td>Nottingham</td>
<td>Thoracic surgery</td>
<td>Thoracic</td>
<td>CTS ARCP</td>
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<tr>
<td>ST5</td>
<td>Nottingham</td>
<td>Advanced Cardiac Surgery</td>
<td>Advanced Cardiac surgery</td>
<td>CTS ARCP</td>
<td></td>
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<tr>
<td>ST6</td>
<td>Leicester</td>
<td>Advanced Cardiac Surgery</td>
<td>Advanced Cardiac Surgery OPCAB (Aortic)</td>
<td>CTS ARCP</td>
<td></td>
</tr>
<tr>
<td>ST7</td>
<td>Leicester</td>
<td>Advanced Cardiac Surgery</td>
<td>Option for OOPT FRCS(CTh)</td>
<td>CTS ARCP</td>
<td></td>
</tr>
<tr>
<td>ST8</td>
<td>Nottingham</td>
<td>Advanced Cardiac Surgery (Mitral)</td>
<td>Advanced Cardiac Surgery (Finishing school)</td>
<td>CTS ARCP</td>
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</table>
Proposed Rotation: **ST3 Thoracic Theme** *(Subject to change due to needs of trainee and programme)*

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<thead>
<tr>
<th>Year</th>
<th>Base</th>
<th>Specialty</th>
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<th>Exam</th>
<th>Assessment</th>
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</thead>
<tbody>
<tr>
<td>ST3</td>
<td>Leicester</td>
<td>Thoracic surgery</td>
<td>Thoracic Surgery</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</td>
<td>Advanced Thoracic Surgery</td>
<td></td>
<td>CTS ARCP</td>
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<td></td>
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<td>(VATS)</td>
<td>(Oesophageal)</td>
<td></td>
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<tr>
<td>ST6</td>
<td>Leicester</td>
<td>Advanced Thoracic Surgery</td>
<td>Advanced Thoracic Surgery</td>
<td></td>
<td>CTS ARCP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(VATS)</td>
<td>(Mesothelioma)</td>
<td></td>
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<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</td>
<td>Advanced Thoracic Surgery</td>
<td></td>
<td>CTS ARCP</td>
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<tr>
<td></td>
<td></td>
<td>(Chest Wall Emphysema)</td>
<td>(Finishing school)</td>
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The Programme offers opportunities for OOPT in Seattle, Mayo Clinic, Toronto, Hong Kong and Ghangzhou 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.

**Trainers**

All the consultants of the rotation have completed TT, 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**

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

**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](https://www.eastmidlandsdeanery.nhs.uk)
Introduction to Programme
The Pan-Thames programme (old North Thames + South Thames) in Cardiothoracic surgery is delivered across 10 centers in London and Brighton for a total of 35 NTN’s. Entry is at ST3 level but an earlier entry at ST1 level is being considered.

Overview
The London Training Programme is the largest in the country and aims to provide excellent clinical as well as academic opportunities for the trainees. Training centres in London are divided into North and South Thames. Training takes place in the following teaching hospitals in London and The Royal Sussex County Hospital in Brighton:

**South Thames Hospitals**
- Guy's Hospital
- King's College Hospital
- St. George's Hospital
- St. Thomas’ Hospital
- Royal Sussex County Hospital, Brighton

**North Thames Hospitals**
- Barts Heart Centre
- Hammersmith Hospital
- Royal Brompton and Harefield Hospitals

The London Programme is led by the Lead Provider at St. George’s Hospital where training is conducted collaboratively with the School of Surgery at London Deanery. The program allows for a comprehensive training experience over a very wide range of surgical and academic options. It is also responsible for the existing nationally approved paediatric training between GOS and Birmingham.

London has an established excellence for training amongst junior doctors, as was shown by 7 out of the top 10 NTN appointments last year choosing London as their first choice.

London Training programme

In addition to routine procedures, the programme provides;
- Comprehensive range of operations in adult cardiac, paediatric cardiac and thoracic surgery.
- Specialist training in off-pump CABG, mitral valve repair, surgery for aortic root (including valve preserving procedure), arch surgery and de-branching techniques, TAVI, EVAR, ECMO, transplantation, mini-bypass, mini aortic valve replacement, VATS lung resection, surgery for mesothelioma and Norwood operation. (Some of these specialist areas have been highlighted in the last addition of the Blue Book).
- Specialist training in imaging - including echocardiography, achieved by spending time in the echo lab.
- Obtaining endovascular and cardiological techniques, achieved by spending time in the catheter lab.

These training opportunities have been discussed with the cardiologists, vascular interventionalists and radiologists and the placements are confirmed. We have an established simulation training program.
Chair of Training Board:
Professor Marjan Jahangiri, St. George’s Hospital

Programme Directors:
Mr. Jatin Desai (South Thames) Kings College Hospital
Mr. Prakash Punjabi (North Thames) Hammersmith Hospital

Teaching Program and Quality Monitoring

A curriculum based Pan Thames education programme is now established, where NTNs and other interested trainees receive dedicated consultant led teaching using lectures, interactive sessions, wetlabs and simulators. A senior thoracic programme is set up for dedicated ST7/8 trainees who have passed the exit FRCS exam and are looking for specialist thoracic training prior to CCT. This will rotate through all the recognized thoracic centres in London.

The NTNs are provided with education contracts at the start of their rotation and progress is monitored and logged using the ISCP web site. Trainees meet with their educational supervisors every two months and with their TPDs twice a year. There are four annual London Training Board meetings where representatives from the SAC, London School of Surgery and trainees meet. Standards are maintained through regular ARCP interviews but trainees are also encouraged to have more informal discussions with their supervisors to ensure that personal training and development is discussed. This allows for appropriate matching of trainers with trainees to be made so that optimum training experience is attained. If focused training is required, a meeting is convened between the trainee, TPD and trainer and a suitable plan is formulated.

Dedicated Training Days. The programme has dedicated teaching days every two months, including two Cardiothoracic RSM meetings per year. The attendance at these meetings is mandatory.

Academic Opportunities. There are several academic and research opportunities in the London Programme of excellent quality. Trainees who do not wish to take part in a formal period of research are encouraged and supervised with clinically based research and audit topics, specific deadlines to complete the projects and present them at national and international meetings. There are also opportunities for trainees to devote a dedicated period of research towards obtaining a higher research degree (MDRes or PhD). There are several cardiovascular laboratories based at Imperial College, St. Thomas’, St. George’s and King’s College Hospitals and their universities providing opportunities for first class cardiovascular research. At the last three meetings of Society for Cardiothoracic Surgery of GB & Ireland, trainees in the programme have had the highest numbers of abstracts and presentations in the UK. On average three trainees are awarded prizes for presentations and research at the annual SCTS meeting.

Quality Monitoring. The London School of Surgery and The Lead Provider, St. George’s Hospital regularly visit and assess the hospitals with Core and Specialist Trainees. The trainees are interviewed and encouraged to comment anonymously on their training opportunities within the programme. The visit also looks at IT and library access and checks for EWDT compliance. A report is compiled and sent to the Chief Executive, detailing the findings and suggesting changes or giving recommendations. Funding from the Deanery is discretionary and may be withdrawn if standards are not met.

1. EWTD rota compliance (inc effect of EWTD on training). All rotas are fully compliant with EWTD in all the hospitals in London for all levels of doctors.

2. Appropriate and safe learning environment and procedures (facilities, handover, consent etc). All centres have dedicated offices of a high quality for the trainees. Some of the facilities include complete access to Pubmed and CTS Net and University libraries. In
addition, to the university library each unit has a general room of all journals in cardiothoracic surgery and medicine. There are twice daily wards rounds by the registrars, senior nursing staff and nurse practitioners. The educational supervisors in each unit have set out clear handover instructions to take place. Individual consultants take responsibility for consenting of their patients. At times the consent is performed by the registrar’s. Again, at the outset the educational supervisors and the individual consultants have set out the criteria for consenting.

3. Level of Deanery support and engagement in quality assurance of training

The Training Board meets four times a year in association with the School of Surgery at London Deanery. There are at least two representatives from each unit, two representatives of SAC, trainee rep and representations from Quality Team present. The London Deanery and Health Education England have undertaken visits to all the units. A written report is made after the visit with recommendations. There are strict requirements to meet the recommendations made and these are assessed by revisits. To date, all units have complied and performed well.

4. Equality and diversity issues within the training programme (inc flexible training provision and uptake)

Every consultant has completed the equal opportunity course. There are several members of ethnic minorities comprising the surgical teams in all the hospitals. There has not been a single complaint in any of the hospitals for discrimination. The programme provides flexible training and one of the registrars who opted for flexible training is now an NTN and another one who had opted out for flexible training has become a consultant.

5. Level of trainee feedback within training programme (GMC survey, e.g. 5/7) and any challenges to training highlighted.

Trainees are invited to the visits of the Deanery. NTNs, non NTNs and core trainees are invited to obtain a clear and general as well as specific idea of quality of training. We believe that we are the only School of Surgery which regularly visits units with written feedback and action points which require implementation. Furthermore, there is always a non-cardiac surgeon present as part of the visiting group, ensuring externality.

There are educational contracts signed by the educational supervisors. The trainees are reviewed at a minimum of 3 monthly intervals with extensive in-house assessments. There are also extensive ARCP assessments at the London Deanery.

6. Level of trainer feedback within the training programme (GMC survey).

A trainee survey is performed annually, the results of which are shared with the SAC. The last SAC report was very favourable and commended the London Programme to be of an excellent quality in all aspects of training. During the visits described in section five, the trainees are invited to attend. To ensure an honest and unrestrained reporting, the trainees and trainers are met separately with confidentiality. A full written report follows the visit with feedback. Furthermore, during ARCP assessments there are opportunities for feedback to trainees. On these occasions, it is ensured that trainees are not assessed by their current trainers, again to ensure impartiality and externality.

Clinical Activity

The trainees spend a minimum of 2 full days in the operating theatre with full supervision and graded training. Attendance at at least one MDT is mandatory. Trainees attend and conduct clinics at least once a week seeing both new and follow-up patients.

Research and Academic Activity

There are opportunities for all cardiothoracic registrars and also doctors in their core surgical training to take part in clinical, basic science and clinical trials research. The Deanery provides excellent facilities for these individuals to either enter research before their specialist training or take a period out of their formal programme.
In addition the basic research provided by St. Thomas’s, King’s College, Imperial College and St. George’s Hospital; St. George’s Hospital provides a comprehensive range of research for trainees in cardiology and cardiothoracic surgery. In the last 7 years 15 candidates have registered for MD (Res) and PhDs and have completed and have been awarded their degrees.

There is strong collaboration between all the hospitals and respective universities. Some of these collaborations include Department of Cardiac and Vascular sciences, St. George’s University of London, James Black Cardiovascular Centre at King’s, Cardiovascular Research Institute at St. Thomas’ Hospital and the Rayne’s Institute at University College of London.

**London Postgraduate Medical and Dental Education**

Please find below a link to the Surgery Specialty Schools section for London: [http://www.lpmde.ac.uk/training-programme/specialty-schools/surgery](http://www.lpmde.ac.uk/training-programme/specialty-schools/surgery)
Northern Ireland Medical and Dental Training Agency

Deanery Information

The Northern Ireland Medical and Dental Training Agency (NIMDTA) is responsible for funding, managing and supporting postgraduate medical and dental education within the Northern Ireland Deanery. It provides a range of services for those engaged in the delivery of postgraduate Medical and Dental education and training.

Overall management responsibility rests with the Chief Executive / Postgraduate Dean, Professor Keith Gardiner.

http://www.nimdta.gov.uk/
Health Education North West

National Selection Information for ST3

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 LETB for overall supervision of their training.

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

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

The program involves the following centres:

<table>
<thead>
<tr>
<th>HOSPITAL</th>
<th>LOCATION</th>
</tr>
</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>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>
Rotation Templates

1. Cardiothoracic Surgery Training Rotation for trainee with Mersey Number:
   - Four years in Liverpool (LHCH / Alder Hey)
   - One year in Manchester (UHSM /MRI/ Blackpool)
   - One year in OOPE depending on area of subspecialty training.
   - 6 -12 months at Alder Hey for Congenital Cardiac Surgery

2. Cardiothoracic Surgery Training Rotation for trainee with North West Number:
   - Two years at UHSM
   - One year in Liverpool
   - One year in Blackpool
   - One year in MRI
   - 6 -12 months at Alder Hey for Congenital Cardiac Surgery
   - One year OOPE /OOPT depending on area of subspecialty interest

3. Six Year Thoracic Surgery Themed Training Programme, for trainees with both Mersey and North West Numbers
   - Two years in thoracic surgery Liverpool (LHCH)
   - Two in thoracic surgery in UHSM
   - One year cardiac surgery (UHSM/ Blackpool / MRI/ LHCH)
   - One year OOPE (minimally invasive / oesophageal / lung transplant / tracheal) depending on subspecialty interest

The above programmes are templates and do not indicate the exact order of placements within a training programme. They are subject to change to suit individual trainee requirements.

Mersey

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

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, endobronchial 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
- Sutureless 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

National Selection Information for ST3

Deanery Rotation Base(s)

<table>
<thead>
<tr>
<th>HOSPITAL</th>
<th>LOCATION</th>
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<tbody>
<tr>
<td>Derriford Hospital</td>
<td>Plymouth</td>
</tr>
<tr>
<td>Bristol Royal Infirmary</td>
<td>Bristol</td>
</tr>
<tr>
<td>Bristol Royal Hospital for Children</td>
<td>Bristol</td>
</tr>
<tr>
<td>Bristol Heart Institute</td>
<td>Bristol</td>
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</tbody>
</table>

The South West regional training scheme in cardiothoracic surgery is shared between University Hospitals Bristol (Severn Deanery) and Derriford Hospital in Plymouth (Peninsula Deanery). Supervision of the programme is led through the Severn Deanery, however the TPD rotates between the two centres. Trainees rotate between the two centers with approximately half their training at either centre. Appointment to the rotation at ST1/ST3 level is through national recruitment.

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

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

ST3 Rotation
Expected rotation arrangements for this programme are:

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

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

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

Trust Generic/Specialty Information:

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

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

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

scan here to visit the Bristol cardiac surgery clinical site

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

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

- 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. The South West is one of very few UK cardiothoracic programmes able to offer training in oesophageal surgery.

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

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

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

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

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

Our faculty are actively involved with national educational events including;

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

Trainees and faculty at our lung resection wetlab, School of Anatomy, Bristol.
Health Education Yorkshire and the Humber

National Selection Information for ST3

Rotation Base(s)

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

Health Education England - Yorkshire and the Humber offers high quality training across a wide geographical area, which means that training experiences are tailored to meet the needs of our trainees.

We offer a comprehensive training program. In addition to the broad specialty there are training opportunities to gain experience in aortic surgery, mitral valve repair, AF ablation surgery, oesophageal resections, mesothelioma surgery and major chest wall resections.

Following significant investment, HEYH is at the forefront of clinical skills and simulation. Trainees have access to extensive clinical skills facilities including state of the art high fidelity simulators, manikins and simulated patient environments.

HEYH has an extensive quality management process which ensures the training delivered to trainees is of consistent, high quality.

Rotation Information

The training program rotates between the four training centres. Trainees spend one year at each of the training centres during the first four years, rotating between posts every 6 months. Each of the training centres can offer significant training opportunities to at least two trainees and for the final two years trainees elect where they wish to continue their training in the program. The aim is that senior trainees are be supernumerary. Any trainee wishing to specialise 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 can 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 of all 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 co-located 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 over 1100 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 30% of cases.

Surgical staff include:
- 10 Consultant Surgeons
- 2 NTNs
- 7 Clinical Fellows at Registrar level
- 4 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 with outpatient facilities, a 25 bedded ward, hob facilities, two theatres plus extra theatre sessions and access to the large ITU.

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

Surgical staff include:
- 5 Consultant Surgeons
- 1 NTN
- 1 LAT
- 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 over 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
  2 NTNs
  1 LAT
  7 Clinical Fellows at Registrar level
  3 Surgical Care Practitioners

Services to patients include:
  Mitral Valve Surgery (minimally invasive)
  AF Ablation surgery
  Aortic surgery
  VATS lung resections and lobectomy
  Mesothelioma surgery

**Castle Hill Hospital**

Newly built, opening in 2010, the cardiothoracic centre at Castle Hill Hospital has excellent facilities with two 25 bedded dedicated cardiothoracic wards with 12 Hob beds, ITU beds, 3 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 are performed 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 include:
  6 Consultant Surgeons
  2 NTNs
  7 Clinical Fellows at Registrar level
  4 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. There are weekly teaching sessions at each hospital covering the syllabus and including journal clubs. Wet lab facilities are available at Leeds, Sheffield and Hull. Health Education Yorkshire and the Humber has funded and established simulation facilities in each teaching centre.
Mr M Loubani has been appointed as the Educational Training Program Director. The Regional Teaching Programme has been designed to cover all the topics in the Intercollegiate Surgical Curriculum Programme for Cardiothoracic Surgery and to incorporate simulation, Wet Labs and problem based learning. It is planned over two years and intended to be delivered by trainers at all the participating hospitals in the programme over a half a day normally on a monthly basis. The trainees will be released to attend the teaching and will be expected to attend at least 70% of the sessions over the two years. The programme incorporates the Yorkshire Cardiothoracic Meeting which is held as an all day event every six months.
Wales

The Wales Deanery Selection Information for Locum Appointment for Training (LAT) ST3

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>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

**The University Hospital of Wales, Cardiff**

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

**4 NTNs –1xST1, 1xST2, 2 x ST3-8**

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

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

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

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

**The Welsh Cardiothoracic Surgical Training programme**

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

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

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

- European Working Time Directive compliance, with NTNs functioning ‘outside’ non-training, service-orientated rota 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

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