Training Programme Information for Posts in Cardiothoracic Surgery at ST1 Level

Recruitment 2018

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

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

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

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

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

<table>
<thead>
<tr>
<th>East Midlands</th>
<th>East of England</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Midlands</td>
<td>Yorkshire and Humber</td>
</tr>
<tr>
<td>Thames Valley</td>
<td>North East</td>
</tr>
<tr>
<td>London</td>
<td>Northern Ireland</td>
</tr>
<tr>
<td>Wales</td>
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</tbody>
</table>

Any information not included in this document should be available from specific deanery websites.
This is a relatively newly restructured programme based around the Cardiothoracic centres in Nottingham and Leicester under auspices of Health Education England working across the East Midlands (HEEM).

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

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

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

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

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

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

2016: ST3,
2015: ACF (East Midlands NTN),
2014: ST3
2013: ST3 and ST1
2012: ST3

We have been successful in the training and progression of the ST1 trainee who was successful in securing the ACF post in 2015.
The Programme has 8 Training post approved by the Post Graduate Dean for higher Specialist Training and 1 NIHR funded ACF.
Our program offers a broad grounding in all aspects of general thoracic, adult cardiac, congenital cardiac surgery and ECMO

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

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

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

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

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

Congenital/ECMO Training Faculty – Dr S Speggiorine

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

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

Nottingham University Hospitals NHS Trust – Nottingham City Hospital
Cardiac: 2 training posts, 1 in 5 non-resident rota (Currently 2 LAS) Complete array of cardiac surgery practice with focus on mitral surgery and trauma

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

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

Leicester Core Surgical Programme:
The Core Surgery programme in the East Midlands is well-established with excellent buy-in from consultants. Over the last three years, just under half of core trainees completing two years of training in the region progressed directly into registrar (ST3) posts. The exam success rate at MRCS is in excess of 85% and in the latest quality assurance survey, 79% of East Midlands core trainees sitting the MRCS OSCE during the 12 months August 1st 2013 to 31st July 2014 were successful. This compares favourably to the National average of 60%.

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

The programme has a dedicated teaching programme and simulation based sessions. The rotations allow the trainee to acquire basic surgical skills and knowledge in the first year and move into the basics of the specialty in the second year.

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

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

Proposed Rotation: ST1 (Core TPD Mr David Bowrey)

<table>
<thead>
<tr>
<th>Year</th>
<th>Base</th>
<th>Specialty</th>
<th>Specialty</th>
<th>Specialty</th>
<th>Exam</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST1</td>
<td>Leicester</td>
<td>General Surgery</td>
<td>Orthopaedics</td>
<td>ED/General Surgery</td>
<td>Core ARCP</td>
<td></td>
</tr>
<tr>
<td>ST2</td>
<td>Leicester</td>
<td>Cardiac Surgery</td>
<td>Thoracic Surgery</td>
<td>Vascular Surgery</td>
<td>MRCS</td>
<td>Core ARCP</td>
</tr>
</tbody>
</table>
This merges onto the following ST3 Programme

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

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

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

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

It offers OOPT options in France for Cardiac Surgery.

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

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

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

**Trust Generic/Specialty Information**

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

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

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

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

There are several regional specialties: Cardiac Surgery, Thoracic Surgery, Renal Dialysis and Transplantation, Burns and Plastics, Cytogenetics and neonatal Medicine and Surgery. Over 750 major thoracic operations are performed each year including 60 major oesophageal resections. Over 800 cardiac cases are performed each year through a 16 bedded critical care unit which is staffed by nurse practitioners allowing the trainee surgeons to run a non-resident on-call rota.

Teaching

In addition to the local MDTS and weekly departmental teaching sessions the rotation has an organized, comprehensive regional teaching program including a biannual Midlands Cardiothoracic Surgical Meeting which encompasses hands-on training and abstract competition. The programme boasts off cadaveric wet-lab facilities in Nottingham and wet and dry lab facilities in both the units. Leicester offers the TOE Course and one Lung Course.

Teaching

Trainers

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

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

Messrs Duffy and Rathinam are Intercollegiate Cardiothoracic Examiners.

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

Our faculty are actively involved with national educational events including;

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

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

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

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

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

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

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

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

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

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

<table>
<thead>
<tr>
<th>Seminar</th>
<th>Event</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar</td>
<td>Mediastinal disorders</td>
<td>Mr Emmanuel Addae-Boateng, Nottingham City Hospital</td>
</tr>
<tr>
<td>Seminar</td>
<td>Lung Cancer surgery assessment</td>
<td>Mr Rathinam, Glenfield Hospital</td>
</tr>
<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</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>Wet labs, Seminars and Abstract presentation</td>
<td>Cadaveric Wet Lab</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</td>
<td>Mr Thorpe/Mr Duffy/Mr Majewski/ Mr Rathinam, Clinical Skills Centre, Nottingham City hospital,</td>
</tr>
<tr>
<td>Cadaveric Wet labs</td>
<td>Cardiac Surgery Wet lab/Dry Lab</td>
<td>Mr Adam Szafranek, Clinical Skills Centre, Nottingham City Hospital</td>
</tr>
<tr>
<td>Wet labs</td>
<td>Cardiac Surgery Wet lab/Dry Lab</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</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</td>
<td>Mr Mariscalco/Mr Szafranek, Clinical Skills Centre, Nottingham City Hospital</td>
</tr>
</tbody>
</table>

### Trainee Success

**Our Trainees have succeeded in the Intercollegiate Exam on first attempt.**

- Vijay Joshi first attempt
- TM Fiyaz Chowdhry first attempt
- Mohamed Hawari first attempt
- Keng Ang, passed first attempt
Pre National selection
Kelvin Lau passed first attempt
Rajwinder Jutley passed first attempt
Antonio Ucar passed first attempt
Mohammed Asif passed first attempt
Haitham Abunasra passed fourth attempt
Anthony Walker passed first attempt
Martin Chamberlain passed first attempt

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

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

Success in National selection: Our trainees and non trainees get good clinical and all round exposure which prepares them for their success in the National Selection.
2016 Ricky Vaja Leicester Core Trainee to ST3 London
2016 Yousef Salmasis Leicester Core Trainee to ST3 London
2016 Nabil Hussein Leicester Foundation Trainee ST1 Yorkshire
2013 Thomas Tsistsias Thoracic Clinical Fellow UHL to ST3 London
2012 Mehmoood 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
Health Education West Midlands

National Selection Information for ST1

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

**Deanery information**

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

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

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

**Rotation Information**

**ST1 / ST2**

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

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

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

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

**ST3 – ST 8**

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

**University Hospital Birmingham:**
Academic adult cardiac surgery programme including intrathoracic transplantation, complex aortic surgery and ventricular assist devices as well as a very active civilian and military trauma practice.

**Heart of England Hospital:**
Dedicated adult thoracic unit practicing all aspects thoracic surgery including complex thoracoscopic, tracheal and chest wall surgery

**Birmingham Children’s Hospital:**
Largest neonatal and infant paediatric cardiac surgical programme in UK. Tertiary referral centre for all aspects of paediatric cardiac surgery including ECMO. The unit also undertakes regular adult congenital heart surgery at UHB.
University Hospital of Coventry and Warwick:
Combined adult cardiac and thoracic programme undertaking all aspects of cardiothoracic surgery including complex mitral and aortic surgery as well as all aspects of thoracic surgery

New Cross Hospital, Wolverhampton:
Combined adult cardiac and thoracic programme including aortic, mitral and minimally invasive and robotic surgery

University Hospital of North Staffordshire:
Combined adult cardiac and thoracic programme.

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

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

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

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

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

For further information please contact Mr Ehab S Bishay – Consultant Cardiothoracic Surgeon ehab.bishay@heartofengland.nhs.uk.
Health Education Yorkshire and the Humber

National Selection Information for ST1

<table>
<thead>
<tr>
<th>HOSPITAL</th>
<th>LOCATION</th>
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<tr>
<td>Castle Hill Hospital</td>
<td>Hull</td>
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<tr>
<td>Leeds General Infirmary</td>
<td>Leeds</td>
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<tr>
<td>Northern General Hospital</td>
<td>Sheffield</td>
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<tr>
<td>St James University Hospital</td>
<td>Leeds</td>
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Health Education England - Yorkshire and the Humber
Health Education England - Yorkshire and the Humber is keen to attract high calibre candidates from across the UK to practice within the region. Yorkshire and the Humber offers a wide range of locations and trusts for trainees to work within, and looks to continuously support a family friendly approach to training. With locations ranging from the diverse cities of Hull, Leeds and Sheffield; all of which offer vibrant night life and city living, to the beautiful rural areas of North Yorkshire and North East Lincolnshire, Yorkshire and the Humber has something for everyone. First rate training is delivered on all sites, and coupled with a robust Quality Assurance process; this ensures that trainees gain the most experience possible from the exciting opportunities available for training and career progression.

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

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

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

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

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

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

The ST1 and ST2 will be based at the Hull and East Yorkshire Hospitals Trustor Northern General Hospital. The program will consist of 12 months cardiothoracic surgery, 6 months vascular surgery and 6 months upper GI surgery. During the cardiothoracic placements, on call commitments will be with the cardiothoracic on call rota.

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

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

**Trust Generic/Specialty Information**

**Leeds General Infirmary**

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

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

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

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

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

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

**St James University Hospital**

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

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

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

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

**Northern General Hospital**

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

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

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

Services to patients include
Castle Hill Hospital

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

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

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

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

Teaching

Hospital based teaching programs

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

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

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

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

Wet lab facilities are available in Leeds, Sheffield and Hull.
The deanery has funded and established simulation facilities in each teaching centre.

**Regional teaching program**

The deanery has supported the introduction of a regional teaching programme that was introduced by the Education Training Program Director, Professor Mahmoud Loubani in 2014. At present there is a 6 monthly training day hosted between the 4 base hospitals. A curriculum based monthly regional training program is in place, all trainees are expected to attend at least 70% of the sessions to satisfy requirements for their ARCP. Time table for the teaching can be viewed on the deanery web site. The Deanery will oversee progress of the trainee on ISCP with all trainees expected to complete a minimum of 40 per year WPBAs for their ARCP.

For Further details please contact
Professor Mahmoud Loubani
Consultant Cardiothoracic Surgeon
Castle Hill Hospital
mahmoud.loubani@hey.nhs.uk
Health Education Thames Valley

National Selection Information for ST1

About Health Education England Thames Valley

Health Education England Thames Valley covers the areas of Berkshire, Buckinghamshire and Oxfordshire. Our vision is to ensure the delivery of effective workforce planning and excellent education and training to develop a highly capable, flexible and motivated workforce that delivers improvements in health for the population of Thames Valley. HEE TV is responsible for the training of around 2000 Foundation and Specialty trainees.

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

The Cardiothoracic Surgery Training Programme

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

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

The Oxford Cardiothoracic Surgery Department

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

- **Coronary artery bypass surgery:** off pump surgery, multiple arterial conduits.
- **Aortic valve surgery:** In addition to routine AVR using stented biological and mechanical prostheses, Oxford has expertise in stentless and homograft valve replacement and in aortic valve-sparing root repair/replacement. The high-risk aortic stenosis programme offers trans-catheter aortic valve implantation (TAVI, >200 cases completed in two years) or surgical aortic valve replacement if found to be unsuitable for TAVI.
- **Mitral valve surgery:** > 95% repair rate for degenerative mitral valve disease, concomitant tricuspid valve repair. The service offers concomitant ablation for atrial fibrillation with coronary artery or valve surgery.
- **Thoracic surgery** - Oxford offers training in the full complement of modern thoracic surgery including VATS lobectomy, VATS thymectomy and dedicated
The Oxford ST1 training program will commence with two years of Core Surgical Training with options for pure cardiothoracic training for a post MRCS ST1 appointee or facilitation of 6-month rotation in T & O, General Surgery or vascular surgery for a pre-MRCS ST1 appointee. It is envisaged that the trainee would start speciality training in Thoracic Surgery to develop early competency in bronchoscopy, VATS, and thoracotomy, and thereby to build first and independent operator experience. Further ST1-2 cardiac experience will allow for training in conduit harvest, sternotomy, cannulation, and vascular anastomoses. Depending on their preference for thoracic or cardiac surgery, the trainee may personalise their ST3-8 training programme with one year spent in non-preferred specialty.

Duties of Post

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

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

Thoracic Surgical ST1 timetable

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<thead>
<tr>
<th>Day</th>
<th>AM</th>
<th>PM</th>
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<tbody>
<tr>
<td>Monday</td>
<td>Theatre</td>
<td>Theatre</td>
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<tr>
<td>Tuesday</td>
<td>Theatre</td>
<td>Theatre</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Lung MDT</td>
<td>Interventional bronchoscopy list</td>
</tr>
<tr>
<td>Thursday</td>
<td>Clinic</td>
<td>Administration</td>
</tr>
<tr>
<td>Friday</td>
<td>Theatre</td>
<td>Theatre</td>
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Oxford ST1 appointed to Oxford will be the sole departmental NTN and have priority to attend all SCTS Educational events and SAC curriculum aligned courses. Non-resident on call does not require cross cover and as such ST can be released to attend all educational events. The departmental educational lead has received £10,000 to purchased minimal access simulator trainers to which the successful ST1 will have priority access.
Oxford ST1 will be supported in audit and QIP. Oxford cardiothoracic department has over 100 publications over the period August 2014-August 2016. Oxford cardiothoracic department includes one chair and one honorary senior clinical lecturer.

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

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

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

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

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

**Rotations**

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

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

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

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

National Selection Information for ST1

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

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

The NHS in the north east is one of the highest performing NHS regions in the country.
Across the region we have a clear vision for healthcare:

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

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

Waiting times for hospital treatment have fallen dramatically.

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

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

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

HEENE operates across a wide and geographically varied area covering Northumberland, Tyne and Wear, North Cumbria, County Durham and Tees Valley. We work with 12 hospital trusts (which includes two specialist trusts providing mental health and learning disabilities services), 198 general practice training practices and 60 general dental training practices.

The North East and North Cumbria, as judged by our junior doctors, provides some of the best postgraduate medical training in the UK.
In the recent 2017 GMC National Trainee Survey we are ranked number one for 15 out of the 17 indicators. These include Handover, Supportive Environment, Teamwork, Workload, Clinical Supervision, Clinical Supervision OOH, Educational Governance, Educational Supervision, Induction, Reporting Systems, Local Teaching, Adequate Experience, Curriculum Coverage, Feedback and Overall Satisfaction.

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

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

To find out more information about what it is like to live and train within the north east and north Cumbria you can visit the following websites

http://www.nhsfindyourplace.co.uk/

https://madeinheene.hee.nhs.uk/

The School oversees all aspects of training in the eleven recognised surgical specialties and its core function is to manage the quality of training, ensuring that trainees have access to the highest standards of teaching at all stages of their training programme.

The School also has a lead role in trainee recruitment, assessments and appraisals, preparation for examinations, practical skills training and the development of non-technical skills. The School has close links to the Newcastle University Medical School and other Universities in the region which provide health related education and research.

The North East has an excellent reputation in surgical research and trainees are encouraged to become involved in the academic aspects of surgery. In addition, there are opportunities to gain specific training in Medical Education and Medical Leadership. Training has to comply with the requirements of the surgical curriculum so the School works with the Royal Colleges and Specialty Advisory Committees at all levels.

The aims of the School are:
- To prepare and equip surgeons to meet the challenges of surgical practice and deliver the highest standard of care for patients
To deliver surgical education programmes within Health Education North East that meet GMC quality standards and embrace College guidelines and ethos.

To recognise and respond to the needs of our trainees, trainers and their employers.

For further information, please visit:  
http://madeinheene.hee.nhs.uk/surgery

**Rotation Information**

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

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

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

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

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

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

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

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

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

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

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

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

**Freeman Hospital**

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

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

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

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

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

**James Cook University Hospital**

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

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

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

Trauma – major trauma centre (including air ambulance)

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

Weekly teaching in both centres

Monthly regional training half days – alternates between centres, with compulsory trainee attendance. These usually coincide with a half day of scheduled operating (to allow anaesthetic audit/training) – which greatly facilitates trainee attendance.
National teaching courses – James Cook runs 3-4 training courses per year for consultants/teams from other units on Minimally Invasive AVR. Trainees are invited to present cases and participate in the teaching sessions.

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

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

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

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

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

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

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

The current trainees have produced 56 peer reviewed publications since 2014.

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

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

Newcastle University offers a Post-graduate Certificate in Clinical Medical Research that can be taken part-time over the course of 12 months, and the Faculty will offer the opportunity to take this course to any new Cardiothoracic trainee. http://www.ncl.ac.uk/biomedicine/study/postgraduate/taught/pgclinres/

London Cardiothoracic Surgery ST1 – post information

The successful trainee will start in the London Core Surgery rotation programme, the information on placements for the first 2 years are provided below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td>Specialty</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>St Mary's Hospital</td>
<td>General Surgery</td>
</tr>
<tr>
<td>St George's Hospital</td>
<td>Plastic Surgery</td>
</tr>
<tr>
<td>Croydon University Hospital</td>
<td>General Surgery (Vascular)</td>
</tr>
<tr>
<td>St George's Hospital</td>
<td>Cardiothoracic Surgery</td>
</tr>
</tbody>
</table>

At the end of the CT2 year, subject to satisfactory progression, the successful post-holder will automatically go into a Cardiothoracic Surgery ST3 run-through programme. The Cardiothoracic Surgery ST3 programme in London covers Pan London, please follow the following link for the sites covered [http://www.lpmde.ac.uk/training-programme/specialty-schools/programmes/cardiothoracic-surgery](http://www.lpmde.ac.uk/training-programme/specialty-schools/programmes/cardiothoracic-surgery)
Health Education East of England

National Selection Information for ST1

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

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

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

For enquiries:
- aman.coonar@nhs.net (RCS(Eng.) Surgical Tutor, Papworth Hospital),
- emma.gray@southend.nhs.uk (Core Training Programme Director EofE),
- y.abuomar@nhs.net (Training Programme Director, Cardiothoracic Surgery EofE)
Health Education London and South East

National Selection Information for ST1

The successful trainee will start in the London Core Surgery rotation programme, the information on placements for the first 2 years are provided below:

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Specialty</th>
<th>Rotation (duration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>St Mary's Hospital</td>
<td>General Surgery</td>
<td>6 months</td>
</tr>
<tr>
<td>St George's Hospital</td>
<td>Plastic Surgery</td>
<td>6 months</td>
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<td>Cardiothoracic Surgery</td>
<td>6 months</td>
</tr>
</tbody>
</table>

At the end of the CT2 year, subject to satisfactory progression, the successful post-holder will automatically go into a Cardiothoracic Surgery ST3 run-through programme.

The Cardiothoracic Surgery ST3 programme in London covers Pan London, please follow the following link for the sites covered [http://www.lpmde.ac.uk/training-programme/specialty-schools/programmes/cardiothoracic-surgery](http://www.lpmde.ac.uk/training-programme/specialty-schools/programmes/cardiothoracic-surgery)
Wales

The Wales Deanery Selection Information for ST1

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

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

Training Programme Information
Cardiothoracic Surgery
Rotational Information

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

Deanery Rotation Base

The strategic aim of the Wales Deanery is to commission, quality assure and support the education and training of trainees, hospital doctors, GPs, dentists and DCPs in Wales. This includes the development of innovative models of education and training delivery, building training capacity and leading on postgraduate medical and educational research. Further information at http://www.walesdeanery.org.

There are currently 630 established training grade posts Cardiff and Vale UHB working across 6 hospitals: University Hospital of Wales (UHW), University Hospital Llandough (UHL), Cardiff Royal Infirmary (CRI), Whitchurch, Barry, St Davids and Rookwood. The majority of trainees are based on the two main hospital sites, UHW and UHL. Cardiff and Vale UHB has a well earned reputation as a centre of excellence for clinical care, medical education and research. Established in 2009, following the reorganisation of health services within Wales the UHB is one of the largest and most diverse healthcare providers in the UK.
There are strong links with the Wales College of Medicine, Cardiff University and this partnership places us at the leading edge of training and education of healthcare professionals as well as research and development into new approaches for healthcare. Cardiff and Vale UHB is unique in Wales in its role as a teaching centre for new doctors, nurses and therapists working under the supervision of some of the best clinicians in their field. This association is a vital part of the UHB’s ability to provide its specialist services.

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

The Wales School for Surgery headed by Professor Wyn Lewis is responsible for core training in Wales and higher surgical training across ten specialties. In addition to traditional training in medical diagnostic, therapeutic and communication skills, as a craft specialty we need to ensure that generic and specialist skills are acquired. Training progresses from the acquisition of basic generic surgical skills in core years to specialty specific skills learned during subsequent dedicated training periods. The final stage of training needs to prepare the young surgeon for the rigors of clinical practice at consultant level. For more information on training in Wales visit www.walesdeanery.org

**ST1/ST2 Cardiothoracic Surgery**

Overview of programme:

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

The ST1 year will involve 2 x 4 months of General Surgery and 4 months of Cardiothoracic Surgery based in Morriston Hospital Swansea and ST2 will offer 12 months of cardiothoracic surgery at the University Hospital of Wales, Cardiff, including a dedicated period in cardiac intensive care. During this time, trainees will be expected to participate in educational activities including the core surgical teaching programme, local specialty teaching sessions / wetlabs, regional training days, and national training courses and meetings.

**The University Hospital of Wales, Cardiff**

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

4 NTNs –1xST1, 1xST2, 2 x ST3-8

Cardiac – One training post at ST3-8; no formal out-of-hours on-call
Thoracic – One training post at ST3-8; no formal out-of-hours on-call
Middle grade: 4 SAS, 6 CF/LAS; Full shift rota
4 Nurse Practitioners/Case Managers
2 Surgeons’ Assistants, 1 Trainee Surgeons’ Assistant
Core training grades: 1 FP2, 2 CT1/2, ST1 & 2 - Partial shift (participate in H@N)

Job Plan

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

The Welsh Cardiothoracic Surgical Training programme

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

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

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

- European Working Time Directive compliance, with NTNs functioning ‘outside’ non-training, service-orientated rotas and shifts. NTNs are therefore supernumerary to service requirements and can take full benefit of training opportunities.

- Full engagement with the Integrated Surgical Curriculum Programme (ISCP) providing a framework for structured training, assessment, and supervision.

- Access to Wet-lab training, regional training days, and journal clubs. This includes mandatory attendance at the Royal Society of Medicine Cardiothoracic Section, and the Annual SCTS Meeting.

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

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

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

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

ST3 :  Cardiac Surgery - Morriston (4 months)
       Integrated Specialties – UHW (4 months)
       Thoracic Surgery – UHW (4 months)
ST4:  Thoracic surgery - UHW
ST5 or ST6  Cardiac Surgery – Morriston
ST6 or ST5  Paediatric cardiac surgery (6 Mo) - BCH
          Transplantation & thoracic aortic surgery (6 Mo)
          – QEH

ST7 & 8  Bespoke training. Options might include:

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

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

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

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

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