Training Programme Information for Posts in Cardiothoracic Surgery at ST1 Level

Recruitment 2019

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/curriculum/surgical/surgical_syllabus_list.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 of England</th>
<th>London</th>
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<tbody>
<tr>
<td>West Midlands</td>
<td>North East</td>
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<tr>
<td>Northern Ireland</td>
<td>Wales</td>
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<tr>
<td>East Midlands</td>
<td>North West</td>
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Any information not included in this document should be available from specific deanery websites.
Health Education East Midlands

National Selection Information for ST1

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

This is a 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. We are a positive outlier in the GMC JCST surveys of 2017 and 2018. We had a very positive report regarding our training programme in the recent JCST Quality report.

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.

2018 1 ST3 and 1 ST1
2017 2 ST3 and 1 ST1
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.

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: Mr Alwyn Abraham Consultant Orthopaedic 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, Mr Mohammed Fiyaz Chowdhry

Cardiac Training Faculty –

Nottingham: Mr Adam Szafreneck, Mr S Shanmuganathan

Leicester: Prof Gavin Murphy, Dr Jacek Szostek, Dr Giovanni Mariscalco, Dr Victor Zlochas, Mr Christopher Efytimiou

Congenital/ECMO Training Faculty: Prof A Cornu
Training Posts:

University Hospitals of Leicester NHS Trust - Glenfield Hospital:

**Thoracic:** 2 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 ST3, 1 GAP LAS, 1 ST5 (OOPR))

**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 ST3 (ACL), 1 GAP LAS Clinical Fellow)

**Congenital:** 0 training post; 1:3 non-resident rota. All aspects of congenital cardiac surgery and ECMO (Currently none but exposure is offered as a part of Glenfield Cardiac attachment)

**Core surgical training** (Currently ST1 & ST2)

Nottingham University Hospitals NHS Trust – Nottingham City Hospital

**Cardiac:** 1 training posts, 1 in 5 non-resident rota (Currently 1 ST4) 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 ST5 ) and 1 GAP LAS

We have the capacity to accommodate all the posts we have bid for due to gaps in the programme with recent CCTs and progression to Consultantt posts..

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 Alwyn Abraham)**

<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>Trauma Orthopaedics</td>
<td>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>
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This merges onto the following ST3 Programme MRCS Success id mandatory to progress into ST3 and failure to pass after a 6 month extension in core programme may lead to exit from the 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>CTS ARCP</td>
<td></td>
</tr>
<tr>
<td>ST4</td>
<td>Nottingham</td>
<td>Thoracic surgery</td>
<td>Thoracic</td>
<td>CTS ARCP</td>
<td></td>
</tr>
<tr>
<td>ST5</td>
<td>Nottingham</td>
<td>Advanced Cardiac Surgery</td>
<td>Advanced Cardiac Surgery</td>
<td>CTS ARCP</td>
<td></td>
</tr>
<tr>
<td>ST6</td>
<td>Leicester</td>
<td>Advanced Cardiac Surgery OPCAB</td>
<td>Advanced Cardiac Surgery (Aortic)</td>
<td>CTS ARCP</td>
<td></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>CTS ARCP</td>
<td></td>
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</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>
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<td>CTS ARCP</td>
</tr>
<tr>
<td>ST7</td>
<td>Nottingham</td>
<td>Advanced Thoracic Surgery</td>
<td>Option for OOPT</td>
<td>FRCS(CTh)</td>
<td>CTS ARCP</td>
</tr>
<tr>
<td>ST8</td>
<td>Leicester</td>
<td>Advanced Thoracic Surgery (Chest Wall Emphysema)</td>
<td>Advanced Thoracic Surgery (Finishing school)</td>
<td></td>
<td>CTS ARCP</td>
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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

General
All the consultants of the rotation have completed TtT, Trace and have registered with ISCP.
The SCTS Education Secretary, 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 (Mehmood Jadoon) who reports issues directly.

Trainees complete placement assessment forms.

Trainee Success

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

**Intercollegiate Exam record**

Mehmood Jadoon 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
Rajwinder Jutley
Antonio Ucar
Mohammed Asif
Haitham Abunasra
Anthony Walker passed
Martin Chamberlain

**Progress to Substantive Consultant Appointments (latest first)**

Mehmood Jadoon Consultant Thoracic Surgeon(L), Guy’s Hospital London
Vijay Joshi Consultant Thoracic Surgeon, Manchester
Mohamed Fiyaz Chowdhry Consultant Thoracic Surgeon, Leicester
Keng Ang Consultant Thoracic Surgeon, Leicester
Mohamed Hawari Consultant Thoracic Surgeon, Nottingham
Kelvin Lau Consultant Thoracic Surgeon St Bartholomew’s Hospital London
Anthony Walker Consultant Cardiac Surgeon, Blackpool
Haitham Abunasra Consultant Cardiac Surgeon, Manchester
Mohammed Asif Consultant Thoracic Surgeon, Glasgow
Martin Chamberlain Consultant Thoracic Surgeon, Southampton
Rajwinder Jutley Consultant Cardiac Surgeon, Nottingham (Now in Nairobi)
Anthony Ucar Consultant Thoracic Surgeon, Leicester, Nottingham (Now in Coventry)

**OOPT trainees from other regions:**

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 Naiill McGonigle ST8 Northern Ireland Thoracic Surgery
Success in National selection:
2016  Ricky Vaja Leicester Core Trainee to ST3 London
2016  Yousef Salmasi Leicester Core Trainee to ST3 London
2016  Nabil Hussein Leicester Foundation Trainee ST1 Yorkshire
2013  Thomas Tsistsias Thoracic Clinical Fellow UHL to ST3 London
2012  Mehmood Jadoon LAT 12 months into ST3 East Midlands
2012  Mohammed Mydin LAT 12 months ST3 North East
2012  Vijay Joshi LAT 12 months into ST3 East Midlands
2011  Amir Khosravi LAT 18 months to ST3 Wessex
       Imran Rizvi LAT 12 months to ST3 South West
       Anupama Barua LAT 12 months to ST3 Yorkshire
2010  Keng Ang LAT 12 months to ST3 East Midlands

GMC Survey and STAR Rating
The East Midlands programme has very positive feedback both in the national GMC,
JCST Surveys 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 Edward Caruana, Trainee Representative on STC

Visit our website:
https://www.eastmidlandsdeanery.nhs.uk/surgery/cardiothoracic_surgery
Health Education West Midlands

National Selection Information for ST1

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<thead>
<tr>
<th>HOSPITAL</th>
<th>LOCATION</th>
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<tbody>
<tr>
<td>Heart of England NHS Foundation Trust (Heartlands Hospital)</td>
<td>Birmingham</td>
</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. Considerable effort has been expended in to core surgical teaching across all specialties in the region with the appointment of 2 regional core teaching directors who are developing a 2 year clinical and professional issues / behaviours programme aligned to all the surgical curricula and the GMC professional behaviours framework.
Core ST1 and ST2 posts in Cardiothoracic; cardiac; Thoracic; Vascular and general surgery have been carefully realigned by the regional workforce team to facilitate a run through programme relevant to both cardiothoracic and vascular surgery.

The region has developed a strong surgical tutor network with the appointment of joint HEE / Trust / College tutors in to each trust with funded PA time - these tutors will support all surgical trainees within trusts in addition to the strong regional training programme support structure.

The first year (ST1) will be based at Heartlands Hospital and includes 6 months in Thoracic Surgery and 6 months in Vascular Surgery. The second year (ST2) will be spent at University Hospital Birmingham rotating between Cardiac Surgery for 6 months and Upper GI Surgery for the remaining 6 months.

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<thead>
<tr>
<th>Specialty</th>
<th>Location</th>
<th>Duration</th>
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<tbody>
<tr>
<td>ST1 Thoracic Surgery</td>
<td>Heartlands Hospital</td>
<td>6 months</td>
</tr>
<tr>
<td>ST1 Vascular Surgery</td>
<td>Heartlands Hospital</td>
<td>6 months</td>
</tr>
<tr>
<td>ST2 Cardiothoracic Surgery</td>
<td>University Hospital Birmingham</td>
<td>6 months</td>
</tr>
<tr>
<td>ST2 Upper GI Surgery</td>
<td>University Hospital Birmingham</td>
<td>6 months</td>
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</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 Australia, Malaysia, Hong Kong, Belgium, France, 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 17 years 34 NTNs/VTNs have completed the training programme. 32 achieved consultant posts within 12 months of CCT (incl. adult cardiac, cardiopulmonary transplantation, thoracic, cardiothoracic and paediatric cardiac surgery) (1 current staff grade) in the United Kingdom, 1 in Ireland, and 1 in Canada. The region has a pass rate for the intercollegiate specialty fellowship taken by NTNs and VTNs over the past seventeen years of 85% first time (33/39) and 100% overall. In the last 5 years The McCormack medal for the best performance at the FRCS Part 3 examination has been awarded to three 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 international links with Prince of Wales Hospital, Hong Kong, and the Institut Jantung Negara, Malaysia involving the rotation of trainees.

For further information please contact Mr Ehab S Bishay – Consultant Cardiothoracic Surgeon ehab.bishay@heartofengland.nhs.uk.
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 are top of the class for postgraduate medical training once again, the 2018 survey of junior doctors has revealed. Junior doctors, who are training in hospitals, GP practices and other healthcare settings, ranked the region as number one in England in 16 of 18 indicators in the annual national training survey published by the General Medical Council.
The number one ranking secures the region as providing some of the best postgraduate medical training in the UK and is an improvement on last year’s survey when the region was ranked number one in 15 of 17 indicators. The North East and North Cumbria has also been number one for overall satisfaction for six out of the past seven years.

Areas where the region ranked number one include overall satisfaction, regional teaching, reporting systems, rota design, clinical and educational supervision, supportive environment, workload, teamwork, adequate experience and curriculum coverage.

For more information, please visit: http://madeinheene.hee.nhs.uk/qualityne/

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/

School of Surgery

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 Jonathan Ferguson – jonathan.ferguson@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 University, performing research and 2 Honorary Clinical Lecturers with the University of Durham, and 1 Honorary Senior Lecturer at UCL London. Grants have allowed research fellows to be appointed to continue this research.

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

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

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

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

Newcastle University offers a Post-graduate Certificate in Clinical Medical Research that can be taken part-time over the course of 12 months, and the Faculty will offer the opportunity to take this course to any new Cardiothoracic trainee. [http://www.ncl.ac.uk/biomedicine/study/postgraduate/taught/pgclinres/](http://www.ncl.ac.uk/biomedicine/study/postgraduate/taught/pgclinres/)
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>
</tr>
<tr>
<td>Croydon University Hospital</td>
<td>General Surgery (Vascular)</td>
<td>6 months</td>
</tr>
<tr>
<td>St George's Hospital</td>
<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)
Health Education and Improvement Wales

National Selection Information for ST1

Health Education and Improvement Wales (HEIW), 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.

HEIW was established on 1st October 2018. It is a special health authority within NHS Wales created by bringing together three key organisations for health - the Wales Deanery, NHS Wales’ Workforce Education and Development Services (WEDS), and the Wales Centre for Pharmacy Professional Education (WCPPE). Ongoing investment provides some of the most modern medical and dental educational facilities within the UK. Leading edge education research activity is of national and international excellence will remain the forefront of HEIW.

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: Thoracic, Plastics, General Surgery</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/Cardiac Intensive Care</td>
</tr>
<tr>
<td>ST3 – ST8</td>
<td>University Hospital of Wales &amp; Morriston Hospital</td>
<td>Cardiff and Vale and Abertawe Bro Morgannwg University Health Boards</td>
<td>6 years as per Cardiothoracic Curriculum</td>
</tr>
</tbody>
</table>

HEIW Rotation Base

The strategic aim of the HEIW 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 https://heiw.nhs.wales/

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

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

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

**ST1/ST2 Cardiothoracic Surgery**

Overview of programme:

The current Welsh Training Programme has gone from strength to strength since its reconfiguration in 2008, with recruitment of its first trainee in 2009 to now having 8 trainees, from ST1 to ST8, based over two sites. The success of the programme is reflected in the appointment to consultant positions of four out of five trainees that have completed CCT to date, with the latest trainee currently on a post-CCT fellowship. From initially being a consortium for training between Wales and the West Midlands Deanery, the Wales training programme has matured to being able to provide the majority of general cardiac and thoracic training in-house, with sub-specialty training in ST7-8 delivered through OOPT and fellowship opportunities, selected by trainees according to their needs. The need for the Consortium link is no longer necessary.

The Wales Training Programme was among the first in the UK to deliver run-through training in Cardiothoracic Surgery. With the appointment of its first trainee in 2013, the success of this programme has now seen its sixth such trainee commencing in August 2018. Its structure has been devised from its inception through consultation with both Core Surgical TPD and the former Deanery, ensuring that trainees participate in the Core Surgical training programme in ST1, and while ST2 is spent within the specialty of Cardiothoracic Surgery, Core Surgical training activities remain part of their educational commitments. The Programme has been configured thus:
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.

It is expected that trainees would prepare and sit the MRCS exams in the first year of training, ensuring that they will have successfully gained MRCS by the end of ST2. Most trainees either have MRCS prior to entry or complete this exam in ST1.

The period in Cardiac Critical Care provides structured, consultant-led teaching on aspects of peri-operative care, addressing elements of physiology, pharmacology, procedures, and investigations involved in the care of critically ill cardiac and some thoracic patients. This placement also involves an element of out-of-hours training with on-site supervisory support from both anaesthetic and Surgical Registrars, in preparation for their duties and responsibilities as Registrars in ST3.

All ST1-2 trainees gain out-of-hours experience through their participation in the 'Hospital@Night' system, which is a requirement for Core surgical training.

Successful passage to ST3 is not automatic, with both the completion of MRCS and a supportive ARCP 1 at ST2 being requirements for progression. We are currently undertaking internal benchmarking to determine the relative success of run-through training in achieving the desired competence requirement for entry into ST3.

**ST3-8 in Cardiothoracic Surgery**

The two centres in Wales offer comprehensive exposure to a wide range of adult cardiac and thoracic training opportunities. Subspecialty training is offered in complex aortic, minimally invasive aortic valve surgery (both sites), beating heart surgery including complex arterial revascularisation (UHW), mitral valve repair (both sites), AF surgery, TAVI (both sites), VATS lobectomy (UHW), endobronchial valves, pectus repair. Congenital and transplantation are available as OOPT.

A unique feature of the training programme in Wales is the commitment to optimising opportunities for training, supervision and assessment, while maintaining service delivery and an appropriate work/life balance. This has been delivered consistently since 2009, through:

- a Firm-based training structure with full exposure to elective, urgent and emergency activity, but with limited commitment to onerous and time-consuming out-of-hours shift or on-call rotas that otherwise may contribute
little to training opportunities. Thus, not only do trainees receive continuity of consultant trainer input and feedback, their involvement in the whole patient pathway and care provides excellent exposure to all elements of clinical practice.

- Trainees have full access to study leave opportunities, allowing attendance to all Core and Specialty training courses, as well as regular attendance to National and some International meetings. This is supported through ISCP educational agreements and on-line study leave administration process. A comprehensive educational programme includes ad-hoc weekly curriculum-based teaching, regular monthly themed Training days & Wet Labs (protected through study leave), regular timetabled MDTs, and participation in Q&S events.

- Beyond ST2, trainees out of hours commitments involve working at least four 12 hour shifts within an 11 week shift cycle (remaining shifts covered by non-NTN grades), but trainees are expected to maintain engagement in the postoperative care of complex cases, emergencies attended by their training consultant, and all cases where they have been the primary operating surgeon. Trainees work patterns are monitored regularly by the health board for compliance with New Deal and EWTD.

- Integrated exposure at ST3 to allied specialties including anaesthesia, critical care, respiratory medicine, oncology, interventional cardiology, echocardiography, electrophysiology, heart failure therapies, device therapies, cardiac imaging, and endovascular therapy. Trainees have the opportunity to develop experience in imaging and catheter skills, which they can develop over subsequent placements in order to acquire certification, such as in Transsthoracic Echo.

- Exposure to sub-specialty training at ST7-8 is encouraged through OOPT and fellowships to meet development requirements that are not provided within the Programme.

Training from ST3-8 therefore currently follows the broad theme of:

<table>
<thead>
<tr>
<th></th>
<th>CARDIAC themed</th>
<th>THORACIC themed</th>
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<tbody>
<tr>
<td>ST3</td>
<td>Cardiac with allied specialties</td>
<td>Thoracic with allied specialties</td>
</tr>
<tr>
<td>ST4</td>
<td>Cardiac</td>
<td>Cardiac with allied specialties</td>
</tr>
<tr>
<td>ST5</td>
<td>Cardiac</td>
<td>Thoracic</td>
</tr>
<tr>
<td>ST6</td>
<td>Thoracic with allied specialties</td>
<td>Thoracic</td>
</tr>
<tr>
<td>ST7</td>
<td>OOPT/Fellowship</td>
<td>OOPT/Fellowship</td>
</tr>
<tr>
<td>ST8</td>
<td>Cardiac/OOPT/Fellowship</td>
<td>Thoracic/OOPT/Fellowship</td>
</tr>
</tbody>
</table>

Thoracic training is currently based at the University Hospital of Wales (UHW), with Cardiac training provided at both UHW and Morriston (MOR) sites.
Success of the Welsh Cardiothoracic Surgical Training programme has been reflected in recent GMC surveys, placing the experience at UHW as a positive outlier for local teaching, experience gained, teamworking and overall trainee satisfaction.

For further information please contact Mr Dheeraj Mehta, Training Programme Director, at dheeraj.mehta@wales.nhs.uk.
Health Education North West

National Selection Information for ST1

ST1 and ST2 Cardiothoracic Surgery Training Locations:

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

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

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

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

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

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

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

Introduction / Overview of the programme:

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

General description of rotation:

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

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

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

Educational opportunities:

Trainees in ST1 and ST2 will be expected to attend local educational programmes which are held within the hospital they are working in.

There is a comprehensive core teaching programme which takes place on at Wythenshawe and Liverpool Heart and Chest Hospitals, attendance is mandatory and an attendance register is kept and monitored.

The timetable for teaching can be viewed at [www.surgicalcourses.com](http://www.surgicalcourses.com)

Research / audit / teaching:

Opportunities for clinical research exist within all departments involved in the programme and trainees are expected to take advantage of this.

All trainees should be actively involved in audit on an ongoing basis and be in a position to demonstrate this at annual appraisal and ARCP interviews.

Teaching of less experienced medical colleagues, medical students, nurses and other paramedical staff is an integral part of the post and all trainees are expected to be involved in this.

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

**North West Cardiothoracic Consortium – Health Education North West**

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

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

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

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

The program involves the following centers:

<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>Wythenshawe, Manchester</td>
</tr>
<tr>
<td>Manchester Royal Infirmary (MRI)</td>
<td>Manchester</td>
</tr>
<tr>
<td>Lancashire Heart Centre, Victoria Hospital</td>
<td>Blackpool</td>
</tr>
</tbody>
</table>
Northern Ireland Medical and Dental Training Agency

National Selection Information for ST1

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.

Cardiothoracic Surgical Services are provided on the Royal Hospitals site. The Cardiac Surgical Unit is the sole provider of adult cardiac surgical service in Northern Ireland (population 1.8 million) with the exception of paediatric cardiac surgery and transplantation. The current level of demand requires approximately 1200 open heart procedures per annum, an increasing proportion of which are complex and higher risk cases. There is a wide range of coronary artery surgery, aortic valve surgery including TAVI, mitral valve surgery including a range of less invasive procedures and thoracic aortic surgery. The Thoracic Surgical Unit is also the sole regional service and provides for the full range of procedures. Major areas of expertise include thoracoscopic surgery for benign or malignant conditions and laser surgery. There are strong links to trauma and cancer services.

The Royal Group of Hospitals is the largest hospital complex in Northern Ireland, comprising the Royal Victoria Hospital, the Royal Jubilee Maternity Hospital (RJMH), the Royal Belfast Hospital for Sick Children (RBHSC) and the School of Dentistry. Major re-developments of the Royal Group of Hospitals are underway including a new Critical Care Building with emergency department and intensive care. The Royal Hospitals play a major role in clinical education, training and research, with many links to the Queen’s University of Belfast. It is part of the Belfast Health and Social Care Trust which includes the following hospitals:

- Belfast City Hospital is a major teaching hospital and includes the Northern Ireland Cancer Centre. It has a strong strategic focus on molecular medicine, cancer and renal services which has enabled the development of a vigorous research programme, together with a large Cancer Clinical Trials Unit.
- The Mater Hospital is a long established teaching hospital affiliated to the Queen’s University of Belfast. It also provides the regional hepatobiliary surgical service.
- Musgrave Park Hospital is the Regional Orthopaedic Unit for Northern Ireland. The Musgrave Park Regional Orthopaedic Service is the largest in the British Isles and includes the Queen’s University Department of Orthopaedic Surgery.

The Cardiothoracic Surgery Department has close links with the Core Training Programme. Many trainers act as Clinical Supervisors or Assigned Educational Supervisors for Core Trainees. Currently, Core Trainees rotate through the Cardiac and Thoracic specialties. ST1 level trainees will complete all core competencies and undergo APCP in conjunction with Core Training. Their training will include
Cardiothoracic surgery placements in addition to a range of other related workplace experiences with a view to obtaining satisfactory ARCP at the end of ST2 training before progressing to ST3 level.

The programme of training and the amount of time allocated to either cardiac or thoracic surgery for ST3 and beyond will vary according to the needs of the individual trainee. This is overseen by the local Surgical Training Committee and confirmed at ARCP taking into account requirements for CCT. There are academic links to Queen's University Belfast and all recent trainees have completed PhD, MD or Masters degrees. Many trainees have benefited from training opportunities in other centres in UK, Ireland or United States.

There is a strong tradition of supportive mentoring with a particular focus on supervised operative training. The feedback from the trainees about training in Belfast is positive as are SAC reports. There are a number of dedicated weekly teaching times. All study leave requests for mandatory courses for trainees are granted with funding. Additional funding is available for other desirable courses. There are local skills courses and these augment the SAC/SCTS programme for which travel is fully funded.

All candidates for the FRCS(CTh) who had obtained a National Training Number have been successful on their first attempt. All NTN holders have obtained Consultant posts in a range of centres across the UK.

For further information please contact Mark Jones, Training Programme Director, mark.jones@belfasttrust.hscni.net.