Training Programme Information for Posts in Cardiothoracic Surgery at ST3 Level

Recruitment 2019

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

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

Details of the full curriculum for Cardiothoracic Surgery ST3 can be found on the Intercollegiate Surgical Curriculum Programme (ISCP) website: https://www.iscp.ac.uk/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.

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Any information not included in this document should be available from specific LETB/deanery websites.
Health Education London and South East

National Selection Information for ST3

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

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

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

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

The London Programme is led by the Lead Provider at St. George’s Hospital where training is conducted collaboratively with the School of Surgery at London Deanery. The program allows for a comprehensive training experience over a very wide range of surgical and academic options. It is also responsible for the existing nationally approved paediatric training between GOS and Birmingham. London has an established excellence for training amongst junior doctors, as was shown by 7 out of the top 10 NTN appointments last year choosing London as their first choice.

London Training programme

In addition to routine procedures, the programme provides;

- Comprehensive range of operations in adult cardiac, paediatric cardiac and thoracic surgery.
- Specialist training in off-pump CABG, mitral valve repair, surgery for aortic root (including valve preserving procedure), arch surgery and de-branching techniques, TAVI, EVAR, ECMO, transplantation, mini-bypass, mini aortic valve replacement, VATS lung resection, surgery for mesothelioma and Norwood operation.
  (Some of these specialist areas have been highlighted in the last addition of the Blue Book).
- Specialist training in imaging - including echocardiography, achieved by spending time in the echo lab.
- Obtaining endovascular and cardiological techniques, achieved by spending time in the catheter lab.
These training opportunities have been discussed with the cardiologists, vascular interventionalists and radiologists and the placements are confirmed. We have an established simulation training program.

**Chair of Training Board:**
Professor Marjan Jahangiri, St. George’s Hospital

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

**Teaching Program and Quality Monitoring**

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

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

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

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

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

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

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

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

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

5. **Level of trainee feedback within training programme (GMC survey, e.g. 5/7) and any challenges to training highlighted.** Trainees are invited to the visits of the Deanery. NTNs, non NTNs and core trainees are invited to obtain a clear and general as well as specific idea of quality of training. We believe that we are the only School of Surgery which regularly visits units with written feedback and action points which require implementation. Furthermore, there is always a non-cardiac surgeon present as part of the visiting group, ensuring externality.

There are educational contracts signed by the educational supervisors. The trainees are reviewed at a minimum of 3 monthly intervals with extensive in-house assessments. There are also extensive ARCP assessments at the London Deanery.
6. Level of trainer feedback within the training programme (GMC survey). A trainee survey is performed annually, the results of which are shared with the SAC. The last SAC report was very favourable and commended the London Programme to be of an excellent quality in all aspects of training. During the visits described in section five, the trainees are invited to attend. To ensure an honest and unrestrained reporting, the trainees and trainers are met separately with confidentiality. A full written report follows the visit with feedback. Furthermore, during ARCP assessments there are opportunities for feedback to trainees. On these occasions, it is ensured that trainees are not assessed by their current trainers, again to ensure impartiality and externality.

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

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

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

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

National Selection Information for ST3

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

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

For details of Severn School of Surgery, Cardiothoracic Specialty


ST3 Rotation
Expected rotation arrangements for this programme are:

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

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

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

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

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

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


The thoracic unit has a particular interest in minimal access surgery. It one of only two European centers to host Clinical Immersion Courses in VATS lobectomy with Covidien, and is hosting an ESTS Itinerant Expert Course in 2015. In 2013, 60% of all lobectomies were performed thoracoscopically. There is also an active endobronchial and surgical lung volume reduction programme, supported by a severe COPD MDT.

Training in Bristol will comprise time spent in adult & paediatric cardiac and general thoracic surgery, depending upon the trainee’s career intentions. There will be excellent training in all aspects including OPCAB/minimal-access surgery & VATS resections.

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

X1 British Heart Foundation Professor of Cardiac Surgery
There are a large number of high impact papers published by our trainees each year.

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

There are 6 full time cardiac consultants and 2 full time thoracic consultants. Minimally invasive oesophageal surgery (MIO) has now relocated from Exeter to Derriford. The South West is one of very few UK cardiothoracic programmes able to offer training in oesophageal surgery.

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

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

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

Plymouth cardiothoracic site


Teaching

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

1. Weekly departmental teaching for trainees in Plymouth and Bristol
2. Monthly regional Core Trainee Meetings (Peninsula)
3. Regional study days held 3-4 times per year between Severn and Peninsula Deaneries
4. Aortic Valve Study Day – (Peninsula)
5. Aortic Surgical Study Day (Bristol) – (Severn, Peninsula, Cardiff and Wessex Deaneries)
6. Minimally Invasive Workshop – Bristol –
7. Mitral Study Day and Wetlab teaching – (Peninsula)
8. Cardiopulmonary Bypass Study Day –
9. Thoracic Stapling and Airway Anastomosis Course – Bristol
10. Modern Management of Lung Cancer Symposium Bristol
Our faculty are actively involved with national educational events including:

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

Trainees and faculty at our lung resection wetlab, School of Anatomy, Bristol.
Health Education West Midlands

National Selection Information for ST3

Rotation Base(s)

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<td>Birmingham</td>
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<tr>
<td>University Hospital Birmingham NHS Foundation Trust (QE Hospital)</td>
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Deanery Information

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

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

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

Rotation Information

ST3 – ST 8

The West Midlands Cardiothoracic Training Programme offers comprehensive training thro 18 Deanery funded and educationally approved cardiothoracic training posts across 6 hospitals:

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

- **Heart of England Hospital**: dedicated adult thoracic unit practicing all aspects thoracic surgery including complex thoracoscopic, tracheal and chest wall surgery.
- **Birmingham Children’s Hospital**: largest neonatal and infant paediatric cardiac surgical programme in UK. Tertiary referral centre for all aspects of paediatric cardiac surgery including ECMO. The unit also undertakes regular adult congenital heart surgery at UHB.
- **University Hospital of Coventry and Warwick**: combined adult cardiac and thoracic programme undertaking all aspects of cardiothoracic surgery including complex mitral and aortic surgery as well as all aspects of thoracic surgery
- **New Cross Hospital, Wolverhampton**: combined adult cardiac and thoracic programme including aortic, mitral and minimally invasive and robotic surgery
- **University Hospital of North Staffordshire**: combined adult cardiac and thoracic programme.

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

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

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

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

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

For further information please contact Tim Jones, Regional Training Programme Director  

tim.jones@bch.nhs.uk