

Learning Environment



Cardiac Catheter Lab

Learner Booklet

Welcome

We would like to warmly welcome you to Lancashire Teaching Hospitals NHS Foundation Trust (LTHTR). Incorporated on the 1st of April 2005, LTHTR was the first trust in the county to be awarded “Teaching Hospitals” status.

We have created this pack as a useful resource to help you to settle in with us. The purpose of this booklet is to provide you with information to help you on your learning environment.

About LTHTR

We have three equally important strategic aims:

- To provide outstanding and sustainable healthcare to our local communities
- To offer a range of high-quality specialist services to patients in Lancashire and South Cumbria
- To drive health innovation through world class education, training and research

We provide a range of Hospital based health services for adults and children and cover a range of specialities. These include cancer services such as radiotherapy, drug therapies and surgery, disablement services such as artificial limbs and wheelchair provision. Other specialities include vascular, major trauma, renal, neurosurgery and neurology including brain surgery and nervous system diseases.

Our five core values:

- Being caring and compassionate
- Recognising individuality
- Seeking to involve
- Building team spirit
- Taking personal responsibility



We deliver care and treatment from three main facilities:

- Royal Preston Hospital
- Chorley and South Ribble Hospital
- Specialist Mobility and Rehabilitation Centre, Preston

In relation to car parking, please refer to your Induction to the Trust, for information regarding car parking. Additional information can be found on our Intranet page.

<https://legacy-intranet.lthtr.nhs.uk/car-parking-documents>



Learning Environment

Welcome to the Cardiac Catheterisation Suite at Royal Preston Hospital. This pack has been prepared to provide you with information for your placement with us so you can have the greatest learning outcome and enjoy the experience.

Whilst on placement you will be assigned an Assessor and a Supervisor. We will endeavour to synchronise your shift rota with them so you can have the maximum support for your learning opportunities.

In order to achieve high standards and a quality service, practice will be research/evidence based within a multidisciplinary environment adhering to latest technologies and research.

Unit philosophy: The Cardiac Catheterisation Suite at Lancashire Teaching Hospitals aims to provide a state-of-the-art service to patients who are in need of diagnostic procedures and treatments relating to Heart Disease.

‘We will acknowledge each patient as an individual ensuring dignity, respect and a very high standard of care is had by all. We will all communicate effectively offering confidentiality, guidance and support to every patient and their family.

Our goal is to provide an excellent informed service, before, during and after procedures offering the best care available.’

Lancashire Teaching Hospitals NHS Foundation Trust operates a Zero Tolerance policy to safeguard the staff, patients & relatives. As such aggressive verbal or physical behaviour will not be tolerated.

General Information

Contact Number: 01772 52 4382 or 01772 52 8350

Shift Times: 08:00 – 18:00

Learners are **NOT** allocated for on-call shifts.

Off Duty:

As mentioned, we will endeavour to synchronise your shift rota with your Assessor so you can have the maximum support for your learning opportunities. If your Assessor is not working with you directly or is absent you will have the support of the Supervisors and other members of the team.

If you anticipate any problems with off duty, please let either your Assessor or Supervisors know as soon as possible.

Breaks:

When possible, there is a morning break of 15 minutes and 30 minutes for lunchtime between 12:00 and 13:30, allocated by the shift coordinator.

Use of Kitchen Facilities:

In the kitchen you will find a sink, detergent and a sanitiser machine. Please clean up the mugs and any other utensils that you use.

There is a microwave, feel free to use it but remember to clean it after use.

There is a toaster, remember do not leave the kitchen when making toast – please refer to the fire safety policy.

The fridge that you will find in the kitchen is exclusively for storage of patient food. You will find the staff fridge in the staff room. Please label your food with the date and your name before placing it in the fridge. It is your responsibility to make sure you do not keep spoiled food in the fridge.

Sickness and absence:

All learners need to leave their contact information (including an emergency contact) with the department in case of emergency or if staff need to change any shifts due to illness or any other unforeseen reason.

All absences must be reported daily to the nurse in charge (please call the CCS around 08:00 am) and you must notify your university as per policy. You will also need to email learner.absences@lthtr.nhs.uk

Uniform:

Please use the blue scrubs provided in the department. They are stored in the changing rooms. Due to the physical space of the male changing room is not possible to store a lot of scrubs in there. There is a cabinet where a large stock of scrubs is kept in the female changing room, so please ask one of your female colleagues to get you the size that you need. Please put all used scrubs in the blue linen bags provided in the changing rooms.

Use the shoes provided by the department. Shoes that you use outside the department or hospital are not allowed inside the Cath Lab procedure rooms.

No jewellery allowed (except plain wedding band) and for people with long hair please tie it up so that it does not touch the shoulders – please refer to the uniform policy and the infection control policy.

Please present yourself in a professional manner, use light perfume because strong smells may disturb the patients.

No nail varnish or false nails allowed – please refer to the infection control policy.

Reporting Accidents and Occurrences:

Any accident or occurrence affecting a member of staff, a patient, a relative or any visitor to the department must be recorded and documented via the online incident reporting system. Always report any incident to the senior nurse in charge of the department and they will guide you through the incident reporting process.

ALL Emergencies: DIAL 2222

Stating where the emergency is and the nature of the emergency, such as Cardiac Arrest; fire or security alert, Massive Haemorrhage situation, i.e.: “*Cardiac Catheterisation Suite, Adult cardiac arrest or Massive Haemorrhage*”.

Policies and Procedures:

Please familiarise yourself with the following Trust and Department Policies and protocols which you can find on the intranet:

- Uniform Policy
- Infection Control
- Manual Handling
- Sharps injury
- Fire safety
- Radiation Protection
- Massive Haemorrhage protocol
- ANTT
- Confidentiality and data protection
- Same sex accommodation procedure
- Clinical waste management
- Renal protocol

What you can expect from us

During your placement, you will be allocated an Assessor and there will also be Supervisors to work alongside.

They will give you an induction into your work area to ensure you are familiar with the environment and are able to practice safely.

An initial meeting will be performed between you and your Assessor where it is possible to discuss your learning needs and outcomes at the beginning of the placement.

Your Assessor will assess your performance with your learning outcomes with input from the Supervisors and provide regular feedback.

You will have the opportunity to work within all areas of the Cardiac Catheterisation Suite (Recovery and Laboratories) and with different members of staff who can offer varying experiences and learning opportunities. You will always receive supervision during your clinical practice.

You will be given the opportunity to work with other MDT members and experience the whole patient journey.

Due to the specific nature of this department, you may have the opportunity to do some shifts on the Coronary Care Unit and Ward 18 (Cardiac Ward) so you can practice and be evaluated in specific responsibilities such as support in the patient's hygiene care, drug rounds and ward rounds.

What do we expect from you?

We expect you to be punctual, and arrive on time for shifts (08:00am prompt, changed and ready to start the shift).

We expect you to dress in accordance with your College/University uniform policy, and also in accordance with the Trust /CCS uniform policy.

We expect you to act in a professional manner, at all times.

You should inform your Assessor or nurse in charge if you are unwell and not able to attend your placement. Please refer to the Sickness/Absence policy mentioned above.

We expect you to maintain and promote patient's privacy and dignity at all times regarding patient information and discussions between yourself and your Assessor.

We expect you to ensure your Assessor is aware of your learning outcomes for the placement and specific learning needs.

It is expected that you refer to the student board to check when the meetings with your Assessor are due so you can have the relevant documentation ready for the day.

It is expected that you arrange days for your SPOKE placements. The contacts and respective extension numbers are available on the student board and in the student file. Insert the dates agreed on the student board.

If you have any concerns or issues, please discuss them with your Assessor or Supervisors or PEF if this is not possible.

We expect your total adherence to the Trust and our Department Policies and Protocols. Please familiarise yourself within your first week of placement. You can find them on the Intranet.

Learning Outcomes

- Experience in the management, delivery and evaluation of care to patients requiring cardiac investigations or treatment of cardiac arrhythmias
- Basic life support skills and cardiac rehabilitation
- Working as part of a Multidisciplinary Team
- Working in a theatre environment
- Working in a theatre recovery/admission and discharge area
- Working in a procedure room performing less invasive procedures
- Familiarisation with cardiac drugs
- Understanding basic ECG readings
- Basic understanding of medical and cardiac terminology
- Gain knowledge of anatomy and physiology of the heart, systemic and pulmonary circulation
- Be exposed to emergency situations where immediate cardiac intervention is needed.

Learning Resources

Royal Preston Hospital is a teaching hospital. It holds an excellent library on site, based in Education Centre 1, or in Chorley District Hospital in Education Centre 3. It holds a professional information service for all staff and students on placement. A wide range of services and resources can be accessed electronically via the trust intranet.

There is also a student folder that you can use for reference. Please feel free to add any articles that you find interesting and are related with this area of Cardiology!

Common Cardiac Medication

- **ACE Inhibitors** (pril's) i.e. Ramipril, Lisinopril, Enalapril.
Angiotensin Converting Enzyme Inhibitor, prevents synthesis of Angiotensin II which is a vasoconstrictor. This lowers peripheral resistance and blood pressure.
- **Anti coagulants** i.e. Warfarin, Sinthrome.
Prolongs blood clotting time.
 - **Novel Oral Anticoagulants** (NOAC's) or
Direct Oral Anticoagulants (DOAC's) (ban's) i.e. Apixaban, Rivaroxaban, Edoxaban, Dabigatran.
Less influenced by diet and other medications. Do not require regular monitoring. Shorter acting than Warfarin.
Low Molecular Weight Heparin i.e. Enoxaparin (Clexane).
Treatment of ACS, DVT, PE and prophylactic treatment to guard against these.
- **Anti platelet agents** i.e. Aspirin, Clopidogrel.
Interfere or inhibit the adherence of platelets to collagen at site of vascular injury.
- **Beta Blockers** (lol's) i.e. Atenolol, Bisoprolol, Sotolol.
Decrease heart rate, contractility and oxygen demand.
- **Calcium Channel Blockers** i.e. Diltiazem, Amlodipine.
Relieve angina pain by decreasing myocardial contractility and oxygen demand.
- **Cholesterol lowering drugs** (statin's) i.e. Atorvastatin, Pravastatin, Simvastatin.

Act by inhibiting the synthesis of cholesterol and increasing the excretion of cholesterol.

- **Diuretics** i.e. Furosemide, Bumetanide, Spironolactone, Co Amilofruse.

Promote diuresis, the formation and excretion of urine.

- **Nitrates** i.e. GTN spray, patches, isosorbide mononitrate or IV GTN.
Relieve angina pain by decreasing oxygen demand, dilate veins and in higher doses dilate all major arteries.
- **Thrombolytic Agents** i.e. Streptokinase, rTPA (recombinant tissue plasminogen activator), TNK (tenecteplase).
Initially used to treat STEMI's but now replaced by Primary Percutaneous Coronary Intervention. Dissolves a clot by converting plasminogen to plasmin.
- **Benzodiazepines** i.e. Midazolam, Diazepam.
Enhance the effect of the neurotransmitter gamma-aminobutyric acid (GABA) at the GABA_A receptor, resulting in sedative, hypnotic (sleep-inducing), anxiolytic (anti-anxiety), anticonvulsant, and muscle relaxant properties.
- **Opioids** i.e. Fentanyl, Morphine, Diamorphine.
Inhibit neurotransmitter release. Used primarily for pain relief.

Glossary

This is a list of words often used in a cardiac environment. Each word comes with a brief meaning. For in depth interpretation please research online or ask a member of staff.

Acute Coronary Syndrome

Acute conditions of the heart such as STEMI, NSTEMI and Unstable Coronary Artery Disease.

Aneurysm

A balloon like swelling which weakens the wall of an artery which could rupture.

Angina

Discomfort in the chest, arms, jaw, face, neck or back caused by narrowing of the arteries, reducing blood supply and oxygen to the heart muscle.

Angiography

A test to show where arteries are narrowed and to what extent.

Angioplasty

A treatment to improve blood supply to the arteries. A fine hollow tube (catheter) with an inflatable balloon device is inserted into an artery in the groin/wrist and passed through to the narrowed artery. The balloon is then gently inflated to widen the artery.

Arrhythmia

An abnormality of the heart rhythm.

Atrial fibrillation

An irregular heart rhythm (arrhythmia) which originates in the atria and the ventricles respond by beating quickly and irregularly. The rate is often fast and can cause the patient to experience palpitations, shortness of breath and chest discomfort.

Atrial flutter

Another irregular heart rhythm (arrhythmia) originating in the atria.

Blocks

This is the term used to describe a rhythm that does not follow the normal electrical pattern due to a “block” in the pathway.

Bradycardia

Slow heart rate, below 60bpm.

Coronary artery disease

When the walls of the coronary arteries (blood vessels that supply blood rich in oxygen to the heart) gradually become narrowed due to a build up of fatty plaque known as atheroma, leading to angina, heart attack or sudden death.

DVT

Deep Vein Thrombosis, a blood clot in one of the lower limbs.

Echocardiogram

An ultrasound scan of the heart that looks at the structure of the heart i.e. valves, pericardial effusion, etc.

Electrocardiogram (ECG)

A recording of the hearts rhythm looking at it from ten different views from which a lot of information can be gained.

Electrode

Paper, plastic or metal device that contains conductive material and is applied to the patients' skin.

Enzymes

Particular enzymes that are released from damaged muscle. Two particular enzymes, Creatinine Kinase (CK) and Troponin T are more specific to the myocardium (heart muscle).

Exercise test (also known as treadmill test or ETT)

This is when the patient is attached to an ECG and then exercised on a treadmill. Exercise can induce angina and this is used to diagnose angina.

Left ventricular failure

Failure of the left ventricle to pump adequately, resulting in a build up of fluid in the heart and lungs causing sudden shortness of breath and distress due to the feeling of “drowning”.

NSTEMI

Non-ST Elevation Myocardial Infarction.

Myocardial Infarction

The correct terminology for a heart attack. A blockage caused by a clot in an artery supplying the heart muscle with blood and oxygen. Consequently the heart muscle is damaged.

Pacemaker

A device that stimulates the contraction of the heart muscle by electrical pulses. A pacemaker is implanted into the body and the lead(s) secured to the heart.

PCI

Percutaneous Coronary Intervention. Use of a balloon or stent to open up narrowed coronary arteries.

PE

Pulmonary Embolism. A blood clot that forms in the lung.

PPCI

Primary Percutaneous Coronary Intervention. This is first line treatment using balloons and/or stents to open up narrowed arteries. It is ideally performed within 90 minutes of the onset of chest pain.

STEMI

ST Elevation Myocardial Infarction

Stent

An expandable scaffolding device inserted into the coronary arteries to maintain patency of the artery. Inserted during PCI.

TOE

Transoesophageal Echocardiogram. An ultrasound scan of the heart produced from a probe passed down the oesophagus.

UCAD

Unstable Coronary Artery Disease commonly known as Unstable Angina.

Coronary anatomy abbreviations

LAD: Left Anterior Descendent (Artery) **PDA:** Patent Ductus Arteriosus

LMS: Left Main Stem (Coronary Artery) **ICD:** Implantable Cardioverter Defibrillator

RCA: Right Coronary Artery

IM: Internal Mammary (Artery)

SVG: Saphenous Vein Graft

OM: Obtuse Marginal (Artery)

CABG: Coronary Artery Bypass Grafts

AVR: Aortic Valve Replacement

MVR: Mitral Valve Replacement

AR: Aortic Regurgitation

AS: Aortic Stenosis

PFO: Patent Foramen Ovale

ASD: Atrial Septal Defect

Induction

The Local Induction process will take place throughout the first week of your placement.

This will comprise of:

- Trust and department orientation, including housekeeping information
- Location of emergency equipment
- IT access
- Reading & acknowledgement of Mandatory Trust policies such as Health & Safety, Fire Safety, Infection Control, Information Governance, Staff Code of Conduct, Social Networking and Dress Code policies.
- Adult Basic Life Support training if applicable
- Trust Moving & Handling Training if applicable
- COVID-related policies & procedure
- Orientation
- Professional voice: - freedom to speak up, datix, chain of command, open door policy
- An awareness of our Educational Governance Team- evaluation and importance of feedback
- Inter-professional Learning Sessions
- Practice Assessment Record and Evaluation (PARE) training, if applicable
- Collaborative Learning in Practice (CLiP™), if applicable
- How the role of Practice Development Facilitator can support you, where applicable



What to bring on your first day

- Uniform: All other items in the dress code policy must be adhered to <https://legacy-intranet.lthtr.nhs.uk/search?term=uniform+policy>
- A smallish bag which would fit into a small locker.
- You may wish to bring a packed lunch and a drink on your first day.

Inter-professional Learning Sessions and eLearning Resources

At our Trust, our Education Team facilitates a yearly programme of Inter-professional Learning (IPL) sessions. This programme consists of various teaching sessions, delivered by our Specialist Teams, to support and enhance our learners and trainees' learning experience with us.

Inter-professional learning is an important part of your development and allows you to build professional relationships and communication skills with the wider multi-disciplinary teams. Our IPL sessions are valuable in supporting you to stretch your knowledge and experiences to enhance your clinical practice. They also help bridge the gap between theory and practice, allowing you to hold a deeper understanding of the topics discussed. Our sessions are open for all learners and trainees on placement at our Trust to attend and these learning opportunities are an extension to your learning environment; therefore, these hours need to be recorded on your timesheets. We encourage our staff to facilitate enabling a learner/trainee to attend these sessions.

Please note: You must inform your learning environment prior to attending a session. These IPL sessions need to be discussed in a timely manner with your learning environment.

You are required to complete a reflection on each of your IPL sessions, as well as documenting on your HEI documentation what you have learnt and how this relates to your current placement.

You can book onto our IPL Sessions by accessing this link <https://elearning.lthtr.nhs.uk/login/index.php> and searching for 'IPL'.

You can access our policies and procedures via our Intranet page, which will help expand and stretch your knowledge.

Support with evidencing your learning outcomes or proficiencies

We encourage you to use the Trust learning logs to collate and evidence your skills, knowledge and abilities achieved. You can then present your completed learning logs to your Practice Assessor/Educator during your assessment meetings. Any staff member who is involved in coaching you can complete your learning log feedback.

You can request time during your placement hours to complete these and request feedback prior to the shift ending. To obtain a copy of our learning logs, please visit our Health Academy Webpage on the link below, where you will see a copy of our CLiP™ Learning Log available for you to download, on the right hand side - <https://healthacademy.lancsteachinghospitals.nhs.uk/support/clinical-placement-support/collaborative-learning-in-practice-clip/>

Chain of Command

Keeping patients safe, providing the best care that we can and learning in an environment where you feel safe and valued is important to us. Speaking up about any concern you have on your learning environment is also important. In fact, it's vital because it will help us to keep improving our services for all patients.

There may be occasions where we witness, experience or are asked to do something that causes us concern. Often, these concerns can be easily resolved, but sometimes it can be difficult to know what to do.

Our Clinical Placement Support Team are available Monday – Friday, 8.00am – 4.00pm should you need to contact them in relation to any concerns regarding your learning environment. If your concern relates to patient safety and/or your concerns are outside of these hours, please follow the chain of command in your learning environment and speak with the person in charge.

Please visit our Freedom to Speak Up page on the Intranet for more details.



We value your feedback

Our Trust values your feedback. To continuously improve, we offer opportunities for our learners and trainees to provide feedback regarding both your learner experience and your learning environment. We would encourage you to kindly complete your end of placement evaluation, within your clinical hours.

We will keep you updated with the improvements that we make based on the feedback you provide us with.

Learning Environment Improvement Forum

Our Learning Environment Improvement Forum began in November 2021, with key stakeholders attending; Learners, Trainees, Clinical Staff, Education Leads and our Nursing Directorate. Monthly meetings are held to share new and innovative ideas as to how we can collaboratively enhance our learning environments, to support both learners, trainees and staff.

All attendees at the Learning Environment Improvement Forums contribute their suggestions and guidance on our projects. Collaboratively, exciting improvements are implemented to enhance our learning environments.

Innovative changes made by our Learning Environment Improvement Forum, within Academic Year 2021-2022;

- NEW Learner Boards designed and placed on our learning environments
- Learner booklets made available on our Health Academy webpage to prepare our learners and trainees for their clinical placements, as suggested by our learners and trainees
- PARE and CLiP™ training embedded into our Learner and Trainee Inductions
- Quick Reference Guide designed and created to welcome our learners and trainees to the Trust and prepare them for their clinical placements

We welcome any of our staff, learners and trainees at the Trust to attend our Learner Environment Improvement Forums, to contribute your ideas and suggestions for our new and innovative projects. You can join via the E-Learning Portal - <https://elearning.lthtr.nhs.uk> and going to Courses, then selecting the tab 'Inter Professional Learning', where you will see our forum listed.