

# Learning Environment



Ward 18

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

We would like to welcome you to your learning environment.

Ward 18 is a busy 28 bedded mixed sex medical ward, specialising in cardiology. We work closely with the teams in coronary care and the cardiac catheter lab. We take step down patients from coronary care and we prepare patients for procedures, such as permanent pacemakers, cardiac angiograms and trans oesophageal echocardiograms. We also transfer patients to Blackpool Victoria hospital for more complex interventions as they are the regional cardiac centre.

### Shift times

Day shift: 7:00-19:30

Night: 19:00-7:30

As a learner you will be supernumerary, but we recommend that you work a variety of shifts. This will enable you to fully appreciate the diversity of patients we receive on to the ward.

### Phone Numbers

Switchboard: 01772 716565

Ward 18: 01772 522318

### Learning Opportunities

- Management of cardiac, endocrine and medical patients with varied conditions
- Admission, discharges and transfers
- Work and make decisions within the multi-disciplinary team (MDT), enhancing your communication skills
- Taking care of a team of patients for a shift
- Develop clinical skills in the management of pain, utilizing medication, distraction techniques and physical intervention
- Develop knowledge and skill in administering sub-cut/intramuscular/intravenous medication including drug calculations
- Medicines management: knowledge of medication used on the ward
- Documentation such as risk assessments, monitoring charts e.g. fluid balance and nursing notes
- Pressure area management: gaining a basic knowledge in wound care and the utilisation of equipment, such as pressure mattress
- Importance of fluid management and its documentation
- Observe a variety of procedures on and off the ward
- Management of infectious disease and barrier nursing
- Palliative care, nursing the dying patient and counselling their relatives

- Identification of the deteriorating patient, through haemodynamic observations, assessments, ECG's etc
- Giving information to patients and relatives where appropriate using aids such as health promotion leaflets
- Using IT to access policy and procedures to improve/inform your practice

### National Early Warning Score ( NEWS 2 )

NEWS is this trusts observation scoring system used to identify deteriorating patients. In order to recognise abnormal observations, it is important to have knowledge of normal ranges

Normal readings:

Respiratory Rate: 12-20

Oxygen saturation: >96%

Temperature: 36.0-38.0 degrees

Systolic Blood Pressure: 100mmhg-210mmhg

Heart Rate: 50-90bpm

Blood Glucose: 4-7mmol



It is important to note that these are only guidelines and you should consider the patient's condition. Should you find abnormal readings or significant change it is your responsibility to inform a senior nurse. The nurse will then assist you to manage this and escalate accordingly.

The NEWS 2 scoring system also has pain, nausea and sedation assessment scale. These are rated on a scale of 0-3. Talk to your patient and use your clinical judgement to assess this. Urine output and blood glucose levels are also on the NEWS 2

### A-E Assessment

This assessment tool should be followed when signs of deterioration are noted. This should also be performed when a patient is scoring a NEWS of 5 and above or 3 in one specific parameter.

I F	Step	Assessment	Management	A S S E S S
U N S U R E	A Airway	<ul style="list-style-type: none"> <li>• Is the airway patent and maintained</li> <li>• Can the patient speak</li> <li>• Are there added noises</li> <li>• Is there a see-sawing movement of the chest and abdomen</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure airway is patent and maintained</li> <li>• Simple airway manoeuvres</li> <li>• Suction</li> </ul>	R E S P O N D

			<ul style="list-style-type: none"> <li>Consider using airway adjuncts and position patient</li> <li>O2 via high concentration mask</li> </ul>	
C A L L	B Breathing	<ul style="list-style-type: none"> <li>Observe rate and pattern</li> <li>Depth of respiration</li> <li>Symmetry of chest movement</li> <li>Use of accessory muscles colour of patient</li> <li>Oxygen saturations</li> </ul>	<ul style="list-style-type: none"> <li>Position of patient</li> <li>Consider physio therapy and nebulisers</li> <li>Bag valve mask</li> <li>O2 via high concentration mask</li> </ul>	A F T E R
F O R	C circulation	<ul style="list-style-type: none"> <li>Manual pulse and BP</li> <li>Capillary refill time</li> <li>Urine output fluid balance</li> <li>Temperature</li> <li>Ensure patient iv access</li> </ul>	<ul style="list-style-type: none"> <li>Cannulate</li> <li>Take appropriate bloods</li> <li>Blood cultures</li> <li>Fluid bolus administer titrate</li> </ul>	E A C H
H E L P	D Disability	<ul style="list-style-type: none"> <li>Conscious level using AVPU</li> <li>Blood glucose level</li> <li>Pupil size and reaction</li> <li>Observe for seizure</li> <li>Pain assessment</li> </ul>	<ul style="list-style-type: none"> <li>Consider recovery position</li> <li>Correct blood glucose</li> <li>Control seizure</li> <li>Control pain</li> </ul>	I N T E R
	E Exposure	<ul style="list-style-type: none"> <li>Perform head to toe examination front to back</li> </ul>	<ul style="list-style-type: none"> <li>Manage abnormal findings appropriately</li> </ul>	V E N T I O N

## Sepsis

### Sepsis inflammatory response criteria

Systolic Blood Pressure	<90mmhg or drop of 40mmhg
Lactate	>2mmols/l
Heart rate	> 130bpm
Respiratory rate	>25/per min
Oxygen saturations	<91%
Acutely altered mental state	
Non Blanching rash, mottled or cyanosed	

Urine output	Not passed urine in 18hours or <0.5mls/kg/hr
Neutropenic	<0.5x10 <sup>9</sup> per litre

### Sepsis 6

Give 3:

- Oxygen to maintain target saturations
- Anti-biotics given IV within 60minutes
- IV Fluid resuscitation

Take 3:

- Blood cultures, consider source control
- Lactate & relevant bloods
- Hourly urine output & perform RWT

### Bloods/samples normal ranges

- **U&E**  
Sodium 133-146 mmol/l  
Potassium 3.5-5.3mmol/l  
Urea 2.5-7.8 mmol/l  
Creatinine 45-84umol/l
- **FBC**  
WCB 4.0-11.0 19\*9/l  
HGB 115-165 GL  
Platelets 140-440 10\*9/l
- **CRP** 0.0-5.0 MG/L
- **Trop** 3-14 NG/L
- **B-type Natriuretic Peptide (BNP) –**
  - BNP levels below 100 pg/mL indicate no heart failure.
  - BNP levels of 100-300 pg/mL suggest heart failure is present.
  - BNP levels above 300 pg/mL indicate mild heart failure.
  - BNP levels above 600 pg/mL indicate moderate heart failure.
  - BNP levels above 900 pg/mL indicate severe heart failure.

### Common drugs

The following is a list of drugs commonly used on ward 18. It may be of some benefit for you to familiarise yourself with them.

<u>Drug</u>	<u>Clue</u>	<u>Usage</u>	<u>Side effects</u>
Amioderone	Arrhythmias		
Amlodipine	Hypertension		

Amoxicillin	Antibiotic		
Aspirin	Anti-coagulant		
Atenolol	Beta blocker		
Atorvastatin	Cholesterol		
Atrovent	Breathing		
Bisoprolol	Beta blocker		
Clopidogrel	Anti-coagulant		
Digoxin	Anti-arrhythmic		
Diltiazem	Hypertension		
Docusate	Bowels		
Enalapril	Hypertension		
Ferrous sulphate	Vitamin supplement		
Fragmin	Anti-coagulant		
Furosemide	Diuretic		
GTN	Chest pain		
Heparin	Chest pain		
Inhalers	Breathing		
Isorbide mononitrate	Angina		
Lactulose	Bowels		
Lansoprazole	Gastric acid		
Levofloxacin	Antibiotic		
Metoclopramide	Anti-sickness		
Morphine	Pain killer		
Nitronal	Chest pain		
Omeprazole	Stomach acid		
Perindopril	Hypertension		
Prednisolone	Steroid		
Ramipril	Hypertension		
Salbutamol	Breathing		
Senna	Bowels		
Sotalol	Beta blocker		
Spirolactone	Diuretic		
Thyroxine	Hormone		

### **Abbreviations**

AF – Atrial fibrillation  
 AXR – Abdominal x-ray  
 BD- Twice Daily  
 BP – Blood Pressure  
 C/N – Charge nurse  
 C/O – Complaining of  
 C&S – Culture and sensitivity  
 CABG – Coronary artery bypass graft

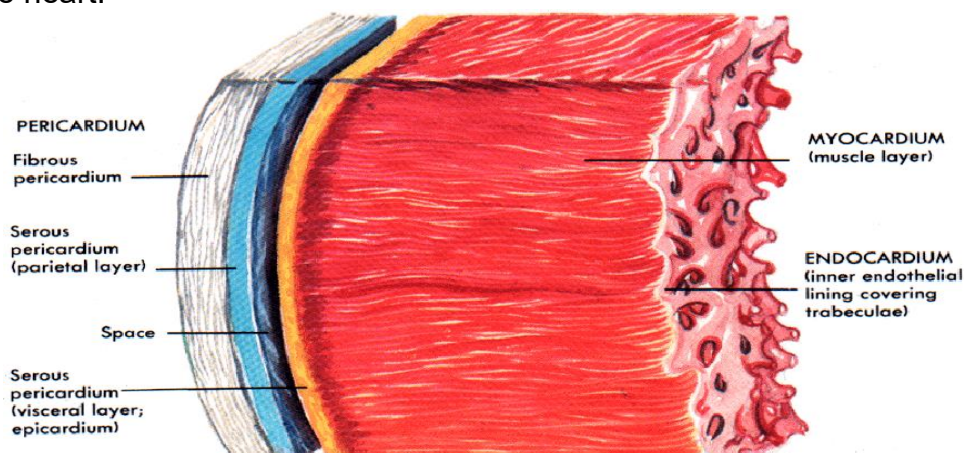


CCF – Congestive Cardiac Failure  
CCU – Coronary care unit  
CRCU – Intensive care unit  
CSSU – Catheter specimen of urine  
CVA - Cerebral vascular accident  
CXR – Chest x-ray  
DWT – Daily weight  
ECG – Electrocardiography  
ECHO – Echocardiogram  
FBC - Full Blood count  
FR – Fluid restriction  
Hb – Haemoglobin  
I/C – With  
IDDM – Insulin dependent diabetic  
IHD – Ischaemic heart disease  
IM – Intramuscularly  
IV – Intravenous  
IVAB – Intravenous antibiotics  
IVI – Intravenous infusion  
LP – Lumbar Puncture  
LVF – Left ventricular failure  
Mane – Morning  
MI – Myocardial infarction  
MSSU - Midstream Specimen of urine  
NAD – No abnormality detected  
NIDDM – Non insulin dependent diabetic  
PE – Pulmonary embolism  
PO – Oral  
PPM – Permanent pacemaker  
PR – Per Rectum  
PRN – As required  
PV – Per vagina  
QDS – Four times a day  
S/B – Seen by  
SN – Staff Nurse  
SR – Sister  
Stat – Immediately  
TDS – Three times a day  
TNT – Trop T  
TPN – Total Parental Nutrition  
TPR – Temperature, Pulse and Respirations  
TTH – To take home  
TTO – To take out  
U & E – Urea and Electrolyte  
VT – Ventricular tachycardia  
WCC – White cell count

## Cardiology

### Layers of the heart

The heart consists of three layers of tissue. The pericardium is a fibrous covering around the heart that holds it in a fixed position. The myocardium is the muscular section that contains specialised cells used in the conduction of the electrical activity. The endocardium is a thin smooth three-layered membrane that forms the inner lining of the heart.



### Blood Flow:

The heart comprises of four chambers, two atria form the top proportion of the heart and two ventricles form the bottom. The heart is divided into the right and left side separated by the septum, with each side having an atria and ventricle. The atria receive the blood coming into the heart from the inferior and superior vena cava. The ventricles pump the blood out of the heart.

The right side of the heart pumps blood into the pulmonary arteries, it is interesting to note these are the only arteries that carry deoxygenated blood. The pulmonary arteries carry blood to the lungs and gaseous exchange takes place before it is returned to the left side of the heart through the pulmonary veins, which are the only veins that carry oxygenated blood. The left side of the heart pumps oxygenated blood out of the ventricle into the aorta and the general circulation of the body.

### The valves

The heart consists of four valves, which prevent the back flow of blood.

- The tricuspid valve prevents the back flow of blood from the right ventricle to the right atria, during cardiac contraction.
- The pulmonary valve prevent back flow of blood from the pulmonary artery to the right ventricle, during cardiac contraction
- The mitral (bicuspid) valve prevents the back flow of blood from the left ventricle to the left atria, during cardiac contraction.

- The aortic valve prevent back flow of blood from the aorta to the left ventricle, during cardiac contraction

### How the Heart Beats

The heart muscle is unique in that each cell has the ability to generate its own electrical impulse. However, a normal heartbeat is produced by the generation of electrical impulse from Sinoatrial node located in the right atrium, near the superior venacava. The SA node is the hearts natural pacemaker, as it has small, specialised cells which initiate impulses more rapidly than other heart cells. The AV node is a small mass of neuromuscular tissue situated in the wall of the atria septum, near the atrioventricular valves. It conducts electrical charge by impulses that sweep over the atria myocardium.

1. Electrical impulse begins at the SA node
2. The atria then begin to fill with blood
3. The electrical impulse then travel towards the AV node
4. At this point valves begin to open allowing the passage of blood to the ventricles
5. The impulse then continues down the Bundle of His and bundle branches
6. The ventricles are then completely filled with blood
7. The impulse is now at the purkinje fibres causing the heart to beat and pump blood out of the ventricles
8. The process then re-starts

### Myocardial Infarction

A heart attack (myocardial infarction or MI) is a serious medical emergency in which the supply of blood to the heart is suddenly blocked. It is diagnosed commonly from ECG changes or a raise in Troponin levels.

Symptoms:

- Chest pain – this could radiate to the back, arms or neck
- Chest tightness
- Shortness of breath
- Lightheaded
- Clammy
- Nausea
- Cough/wheeze
- Raised Troponin levels
- ECG changes

### Types of MI

**STEMI** (ST Elevation Myocardial Infarction) is a complete occlusion of the coronary artery. This is seen on an ECG. Where there is a raise of ST segment of 1 or more small squareS. This could be in just one lead so it is important to check all leads. Rapid assessment of an STEMI is vital. Treatment of a STEMI is more rapid these patients will be given medication but will be listed for urgent PCI too. Here at RPH it is trust policy to blue-light patients with new onset ST elevation to Blackpool Victoria Hospital.

**NSTEMI** (Non-ST Elevation Myocardial Infarction) is a partial occlusion of the coronary artery. This is seen on an ECG. There is no elevation in the ST segment. ST depression could occur as could T wave inversion.

MI's can occur in different leads. This indicates the part of heart that is damaged.

### Treatments

Following an NSTEMI patients are placed on the Acute Coronary Syndrome (ACS) treatment. This consists of the following medication:

- ACE inhibitor
- Analgesia
- Anti-thrombolytic drugs e.g. Clopidogrel
- Aspirin
- Beta-Blockers
- Lipid lowering drugs (Statins)
- Low molecular weight heparin
- Nitrates
- Oxygen – this tends to be used as a precaution and does not necessarily need to remain as part of the treatment

Patients will then usually have angiograms (is a test that looks inside your coronary arteries). Following this, patients will usually have stents inserted at the same time. Lancashire Teaching Hospitals doesn't offer this service and patients are sent to BVH, mainly as a day patient.

### Heart Failure

Heart failure is where the heart isn't able to pump blood effectively, through long term damage. The main causes are:

- Chronic Heart Disease (CHD)
- Hypertension

- Cardiomyopathy
- Arrhythmias
- Valve disease
- Alcohol and drug abuse
- Diabetes

Heart failure varies in severity and is scaled in a class system of, 1-4. The higher the class denotes the severity of heart failure symptoms impacting daily life. Heart failure can be diagnosed with X-rays, echocardiograms, ECGs and blood tests.

Echocardiograms are the best way to diagnose heart failure. They can assess left ventricular function in terms of ejection fraction; this is a common term you will hear on the ward. Ejection fraction is the percentage of blood pumped out of the left ventricle during each beat. A normal ejection fraction is 55-70%. An ejection fraction of less than 30% is considered extremely poor.

#### Symptoms

- Breathlessness – this due to an excess of fluid putting pressure on the heart. Breathlessness can vary in severity resulting in a reduced exercise tolerance
- Oedema – swelling and excess fluid particularly occurs in lower limbs
- Wheeze – often a result of the breathlessness
- Fatigue

#### Types of heart failure

- Acute HF – Symptoms that exacerbate rapidly resulting in breathing difficulties and possible pulmonary oedema
- Left sided HF– patients tend to have a ‘wet’ sounding chest because of pulmonary congestion, resulting in breathlessness. Left sided heart failure is categorised into 2 elements
- Systolic HF – The left ventricle doesn’t contract normally and isn’t able to pump enough blood around the body
- Diastolic HF – The left ventricle doesn’t fill back up properly or with enough blood because the muscle is stiff
- Right sided HF– Peripheral oedema is present in this case, due to the inability to pump blood/fluid back to the heart

CCF is a combination of both left and right sided heart failure.

Should you be absent, please ring the ward in plenty of time and email [learner.absences@lthtr.nhs.uk](mailto:learner.absences@lthtr.nhs.uk)

We hope you enjoy your placement on ward 18 and learn plenty. Please remember that you are responsible for your own learning. All staff are here to help you and your progression.

## 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.