Ward 25

STUDENT INFORMATION PACK

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1. Introduction To Renal Services

The Renal directorate has a vast demographic of 1.49million people and covers the areas of Preston and South Ribble, East Lancashire, South Cumbria and Blackpool, Fylde and Wyre. We provide a specialist service for patients with Chronic Kidney Disease, Acute Kidney Injury and kidney transplant patients, of which approximately 1,171 patients are undergoing renal replacement therapy and between 350 – 400 are being monitored by the Kidney Choices team.

The renal directorate consists of:

- The Nephrology Ward (Ward 25) comprising of 23 inpatient beds, treatment room facility for up to 2 patients and 3 acute haemodialysis spaces
- RPH Haemodialysis Unit (hub unit)
- 6 satellite haemodialysis hubs
- The Home Therapy Team
- Kidney Choices Team
- Anaemia Team
- Transplant Team
- Renal Vascular Access Team

2. **CLIP and how it works**

What is CLIP?

CLIP (Collaborative Learning in Practice) has been found to enhance both the quality of the learning environment and increases the placement capacity for students.

CLIP is an initiative that originated in Amsterdam and was then brought to the UK.

The CLIP process entails allocating a number of students to a practice environment, utilising the coaching method as opposed to the traditional 1:1 mentoring technique.

The learners are then divided into smaller groups of 1 - 3 students, from all year groups, who are supervised by a coach, to deliver holistic care to their patients. This includes essential skills, documentation, ward rounds and hand-overs to the next shift. In this environment, the students may also have the opportunity to follow their patient's journey, by visiting specialist bays, going to theatre with their patients and partaking in specialised treatments, thus increasing their knowledge, skills and experience.

An overarching Mentor oversees the coach, providing support, and maintains responsibly for the student's practice assessment documentation.

What we expect from you:

- Completion of a minimum of 3 learning logs a week,
- Direct supervision of main mentor at least twice per week – it is your responsibility that your off duty corresponds with your mentors,
- To be available to work all shifts unless otherwise prior agreement with LEM or ward manager,
- To be punctual and professional in appearance at all times,

- To be proactive in your learning, show initiative in holistic care of patients,
- Arrange own spoke placements relevant to renal care (guidance will be given by main mentor for this),
- To be proactive in getting essential documents completed in a timely manner,
- Have clear objectives of what you want to achieve from the placement and ensure that you communicate these with staff.
- To have access to quadramed within the first week of placement
- In case of sickness/absence you must contact the ward at the earliest opportunity and speak to the nurse in charge, informing them of the reason and estimated length of time you expect to be off.

What to expect from us:

- To have documentation completed in a timely manner
- Assist in teaching you about holistic care for renal patients and help you achieve your learning outcomes and practice assessments.
- Weekly meetings with LEM (learning environment manager) or ward manager as a group,
- Off duty done at least 2 weeks in advance,

3. Ward 25

Ward 25 comprises of 23 acute inpatient beds, a treatment room for up to 2 same sex patients and a 3 bed acute haemodialysis bay. There are 2 side rooms and 1 bay that also have haemodialysis machines there in order to provide treatment to those patients without them needing to leave the ward.

The ward provides care for adult patients who require investigations into their deteriorating renal function and for patients who require inpatient care for complications of dialysis or their kidney transplant.

Ward 25 cares for patients who have developed AKI, CKD, and other renal problems which you will come across in your placement. We also care for patients of other specialities (e.g., vascular, cardiac, orthopaedic), who are unable to care for complex renal patients on their own wards.

Many of the ward nurses have a specialised qualification in Renal Nursing and they also have access to all the other members of the Renal MDT, the majority of who are based within the Lancashire Teaching Hospitals Trust.

Some of the things you may experience in your time here on ward 25:

Fluid Status:

When patients develop renal failure and they become symptomatic, their urine output decreases. As a result of the decrease the fluid gathers on the body and the patient gains weight. By weighing the patients on a daily basis it is possible to establish how much fluid they are retaining. Associated with this is the daily use of fluid balance documentation, this allows the nursing and medical staff to measure the daily intake and output and identify any discrepancies.

Renal Biopsy:

Renal Biopsies are performed on some patients; this involves removing a small amount of tissue from the kidney in order to establish the cause of loss of renal function. Following this procedure patients require close observation for a number for hours.

Renal Angiogram:

Renal Angiograms are performed and once again the patients need close observation for the next 24hrs. The purpose of a renal angiogram is to determine the number and the quality of the blood vessels, which allow the blood to flow to and from the kidneys. It also shows a detailed anatomy of the kidney, ureters and bladder. The procedure may or may not include stenting of the blood vessels.

Parathyroidectomy:

This is an operation where the parathyroid glands are removed. They are found in the neck and they produce parathyroid hormones (PTH). When a patient is in renal failure these glands become overactive and produce too much PTH. This in turn leads to blood calcium and phosphate levels rising. Calcium can then be deposited in the blood vessels and in the skin. To prevent this occurring the patients are advised to undergo a parathyroidectomy. The glands are removed, the blood levels return to normal and prevent these complications developing. After the operation, the patient needs to stay in hospital for a few days. This allows the doctors to do regular calcium checks and to ensure the levels have returned to normal (Stein and Wild 2002).

Acute Kidney Injury:

Acute kidney injury is a sudden episode of kidney failure or kidney damage that happens within a few hours or a few days.

AKI causes a build-up of waste products in your blood and makes it hard for your kidneys to keep the right balance of fluid in your body.

AKI normally happens as a complication of another serious illness. It's not the result of a physical blow to the kidneys, as the name might suggest. This type of kidney damage is usually seen in older people who are unwell with other conditions and the kidneys are also affected although we do see AKI in young adults with no past medical history.

Without quick treatment, abnormal levels of salts and chemicals can build up in the body, which affects the ability of other organs to work properly. If the kidneys shut down completely, this may require temporary support from a dialysis machine, or lead to death.

AKI can also occur in patients with Chronic Kidney Disease. This is known as Acute on Chronic Kidney Disease.

4. **The Functions of the Kidney**

The main functions of the Kidney:

1. The production of erythropoietin (epo)
2. Active in production of vitamin D
3. Active in acid base homeostasis
4. Conserve water, salts and electrolytes
5. Separate urea, mineral salts, toxins and other waste products from the blood.

Common causes of renal failure are:

- Cardiovascular Disease;/ Hypertension,
- Diabetes,
- Autoimmune diseases,
- Multiple Myeloma,
- Genetic Abnormalities,
- Sepsis,
- Trauma,

There are also a high number of people, for whom the cause of their renal failure is unknown. People from certain ethnic backgrounds are also more prone to renal failure; these include South Asian, Afro Caribbean and Chinese.

Common clinical symptoms of renal failure can include:

- Nausea and vomiting (which can result in weight loss)
- Lethargy
- Pruritus

- Oedema (both peripheral and pulmonary)
- Shortness of breath
- Reduced urine output
- Hypertension
- Headaches

5. Home Therapy Unit

The Home Therapy Unit is based at Chorley Hospital and cares for the patients undergoing peritoneal dialysis (PD) and haemodialysis at home. There are approximately 120 PD patients and 20 haemodialysis patients. The home therapy nurses are also based in the community and visit the patients at home, assess their home environment to see if home dialysis is possible. They assess and monitor dialysis techniques, assess their general wellbeing and plan their care, they also deal with any PD patients receiving inpatient care on other wards and undertake their exchanges if the patient is too ill to do them themselves. They deal with the day-to-day enquiries of the PD patients at home and with any complications, which may arise such as peritonitis.

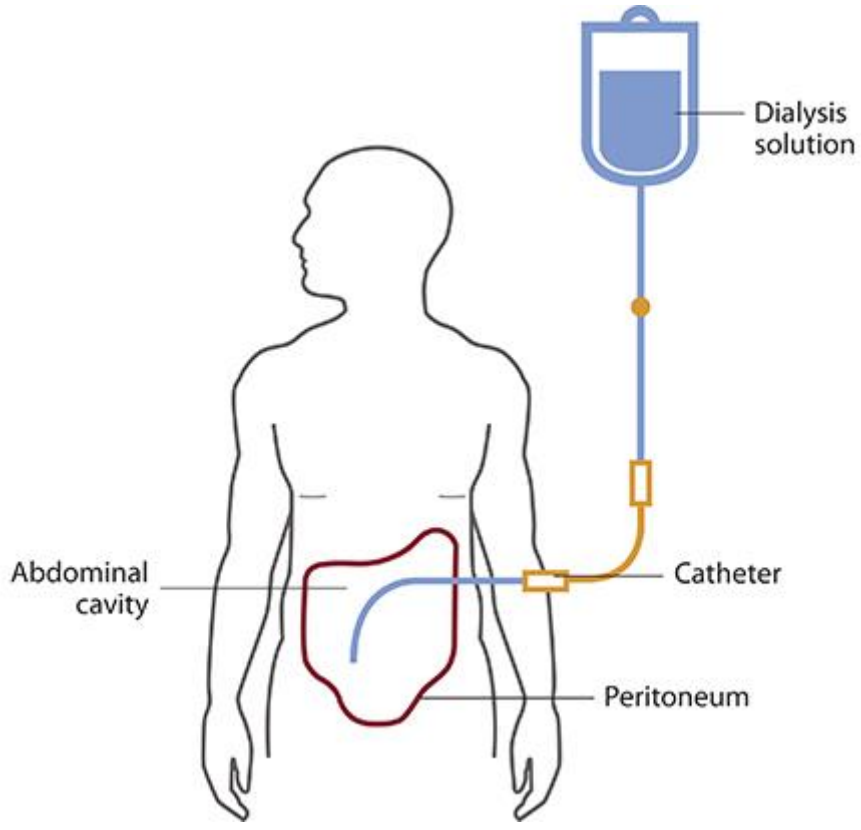
6. Types of Dialysis

Peritoneal:

Peritoneal dialysis is a treatment for kidney failure that uses the lining of your abdomen (peritoneum), to filter your blood inside your body.

A few weeks before you start peritoneal dialysis, a surgeon places a soft tube, called a tenckhoff catheter, in your abdomen.

When you start treatment, dialysis solution water with salt and other additives flows from a bag through the catheter into your abdomen. When the bag is empty, you disconnect it and place a cap on your catheter so you can move around and do your normal activities. While the dialysis solution is inside your abdomen, it absorbs wastes and extra fluid from your body.



After a few hours, the solution and the wastes are drained out of your abdomen into the empty bag. You can throw away the used solution in a toilet. Then, you start over

with a fresh bag of dialysis solution. When the solution is fresh, it absorbs wastes quickly. As time passes, filtering slows. For this reason, you need to repeat the process of emptying the used solution and refilling your abdomen with fresh solution four to six times every day. This process is called an exchange.

You can do your exchanges during the day, or at night using a machine that pumps the fluid in and out. For the best results, it is important that you perform all of your exchanges as prescribed. Dialysis can help you feel better and live longer, but it is not a cure for kidney failure.

Haemodialysis:

Haemodialysis is performed using a dialysis line or an aterio-venous fistula. You will be made familiar with these during your placement.

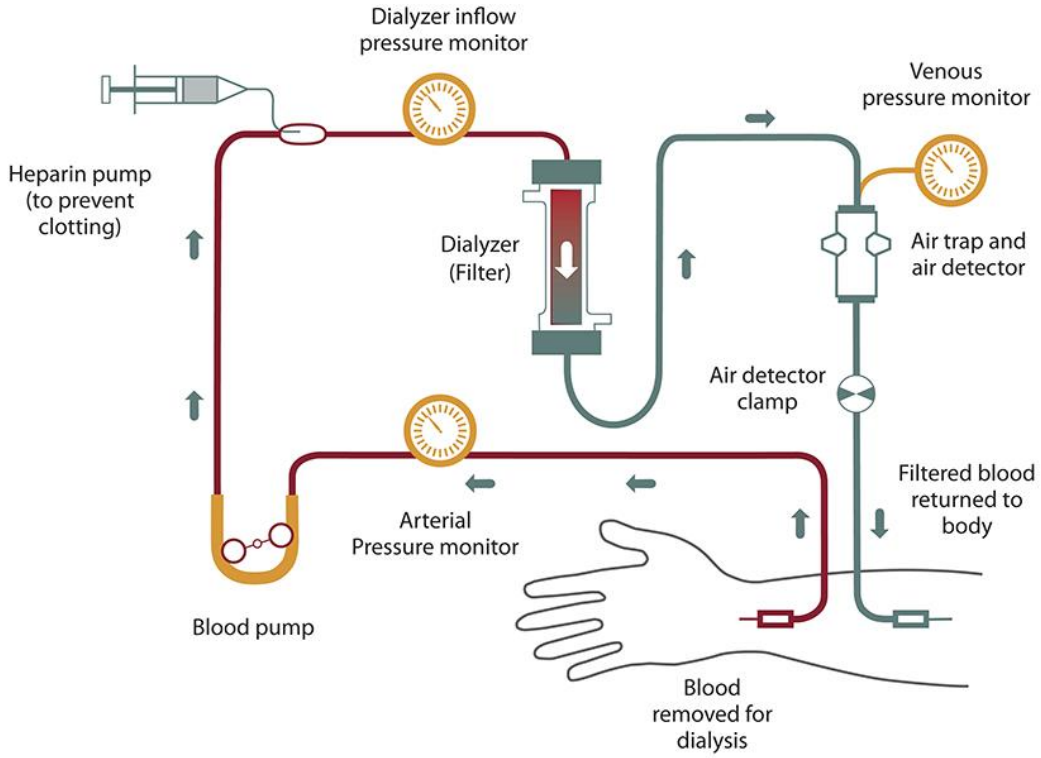
During haemodialysis, your blood goes through a filter, called a dialyser, outside your body. A dialyser is sometimes called an "artificial kidney." At the start of a haemodialysis treatment, a dialysis nurse or technician places two needles into the fistula or attaches two tubes into the dialysis line. Each one is attached to a soft tube connected to the dialysis machine.

The dialysis machine pumps blood through the filter and returns the blood to your body. During the process, the dialysis machine checks your blood pressure and controls how quickly

- blood flows through the filter
- fluid is removed from your body

Blood enters at one end of the filter and is forced into many, very thin, hollow fibres. As your blood passes through the hollow fibres, dialysis solution passes in the opposite direction on the outside of the fibres. Waste products from your blood move

into the dialysis solution. Filtered blood remains in the hollow fibres and returns to your body.



A nephrologist will prescribe a dialysis solution to meet the needs of a patient. The dialysis solution contains water and chemicals that are added to safely remove wastes, extra salt, and fluid from the blood. The doctor can adjust the balance of chemicals in the solution if

- blood tests show blood has too much or too little of certain minerals, such as potassium or calcium
- there are problems such as low blood pressure or muscle cramps during dialysis

7. Common Renal Drugs

There are common medications used in the renal directorate:

Anti-Hypertensives

Anti-lipids

Ant glycaemic medication

Diuretics

Phosphate binders

Calcium supplements

Sodium bicarbonate

Immunosuppression

Anticoagulants

Opiates

Some medications are classed as nephrotoxic drugs; this means that they are toxic to the kidneys; these drugs can cause Acute Kidney injury or long term kidney damage. Some of these drugs include:

- NSAIDs (nonsteroidal anti-inflammatory drug) like ibuprofen
- Opioids such as morphine sulphate
- Pethidine
- Losartan

8. Blood Results

Normal Biochemistry Ranges:

Sodium (Na) 133-148	Albumin 35-55
Potassium (K) 3.5-5.3	Globulin 21-39
Chloride 97-107	Total Calcium (Ca) 2.18-2.63
Bicarbonate 19-32	Ionised Calcium 1.08-1.25
Urea 2.5-6.6	Phosphate (P04) 0.80-1.45
Creatinine 45-130	Magnesium 0.18-0.42
Glucose 4.5-6.5	Zinc 7-18
Total Protein 60-80	Cholesterol 3.9 -7.8

Haematology:

Coagulation:

Haemoglobin 130-180 for men 115-165 for women	PTT 30-40 seconds
WCC 4-11	PT 10-14 seconds
Ferritin 5.8-120	INR 2-4
Iron 13-32	

9. Infection Control

Due to the nature of their illness, many renal patients are immunosuppressed leaving them at high risk of developing an infection. While the public are only too aware of hospital acquired infections, it is of extreme importance that the patients' safety is put first and that infection control policies are adhered to at all times. The simple ways of maintaining good hygiene is through strict ANTT, correct hand washing and the use of antibacterial hand gel when appropriate and after each point of contact with a patient (5 points of care). All healthcare workers should adhere to the uniform policy (which can be found on the intranet). When dealing with a patient who has an infection, personal protective clothing (PPE), including apron and gloves should be worn and removed before leaving the patient area, and any waste disposed in an appropriate manner and in the correct disposal bags. The aim of these procedures is to prevent cross contamination between patients. Whilst all MDT members should abide by these rules it is also important to educate the patients and their visitors and explain to them why we are delivering care in this manner and what measures they can take to help.

As well as preventing the spread of infection, nurses should also identify any causes for concern; this means they can be proactive rather than merely reactive. It is policy within the directorate to swab every patient on admission for the purpose of identifying Staph Aureus (MRSA and MSSA), this then allows any infection to be quickly identified and dealt with, with the use of isolation if required.

Any vascular device is also a potential infection site and should be monitored on a regular basis. Within our department we monitor the vascular access devices and document it on a daily basis on the VAD chart. Also nurses must ensure they use ANTT at all times when dealing with a vascular access device in order to reduce the risk of infection developing. These new guidelines have been effective and there has as a result been an improvement in this area.

Within the dialysis unit there are also strict procedures in place for both haemodialysis and PD to reduce the incidence of infection; these are concerned with the care of the dialysis access. There are guidelines in place for nursing patients who are positive to blood borne infection. These can be found on the intranet, under renal guidelines and policies.

Where a patient is having diarrhoea (loose stools) – classified as type 6 or type 7 on the Bristol Stool Chart, the nurse in charge of the shift should be notified immediately.

If there is no clinical reason for the patient to have diarrhoea (e.g. laxatives) a sample of faeces should be obtained and sent to the lab for testing immediately. This is collected in the blue sample pots available in the dirty utility and sent to the lab. In the lab, the sample will be tested for C-Difficile, VRE and general culture.

10. Student Learning Opportunities

Whilst you are a student in the renal directorate, there is the opportunity to visit other spoke placements.

Home Therapy – 01257 247565

Renal Theatres - 3219

Dialysis Unit – 2755, 2739

Renal Dietician – 2467 Bleep 2921

Transplant Clinic – 4353 (Fiona Biggins)

Kidney Choices Clinic – 2902

By the end of your placement, you should have had the chance to learn about many different aspects of renal nursing. You should be able to understand about the kidney and its different roles, the principles of dialysis and the two different types of dialysis and hopefully some of the signs and symptoms of Acute Kidney Injury. If you are aware of the signs of renal failure, you will then be able to better care for patients during you nursing career as you will be able to refer them to the appropriate doctors and implement appropriate nursing care. Many people find the idea of caring for a renal patient worrying, however, if you have the appropriate support this should not be the case.