

RENAL UNIT

URU AROTAU

STUDENT NURSE ORIENTATION

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Welcome to Health NZ | Te Whatu Ora Te Pae Hauora o Ruahine o Tararua | MidCentral Renal Service

Welcome to the Health NZ MidCentral Renal Service, we are happy to have you here for your clinical experience. We hope that you enjoy your time with us and that you find it a worthwhile and interesting learning experience. This package will give you some brief information about what you can expect from your time with us. Throughout the package you will find Checkpoints with critical thinking activities for you to complete prior to your first day with us. Completing these activities will help you prepare for the specific clinical context you are coming into.

Our service is committed to provide the highest possible quality service to people with renal failure, to encourage independence, and to ensure patients have their maximum quality of life. The Renal Unit is open six days a week, from Monday to Saturday to deliver in centre haemodialysis treatment for renal patients. There are 23 dialysis spaces in the main Renal Unit, and also a room located in Ward 23 and Star 4 in Horowhenua respectively. The unit runs about three to four dialysis sessions each day, for approximately 130 patients generally having three sessions per week.

Apart from in-centre haemodialysis, we have a home therapies team that is led by clinical nurse specialists to offer a range of renal services. Including providing pre-dialysis care and support for patients with early stages of kidney disease, pre and post-transplant care, home peritoneal dialysis and haemodialysis dialysis training for patients who wish to dialyse themselves at home. During your placement you may have the opportunity to spend some time with this team.

KEY CONTACTS

The main phone number for Renal Services is (06) 350 8055. When phoning, inform the reception staff who you are calling for and they can direct the call to the correct extension.

Charge Nurse: Yan Li (06) 350 8057	Associate Charge Nurses: Anthea Jackson Leigh Birondo Jaycee Jocson	Educator: Anna Li Pager: 414
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LOCATION

The renal unit is located in the STAR Centre. The unit can be accessed through the Heretaunga Street entrance (Gate 5) or via the main hospital entrance on Rauhine Street. Please ring the intercom by the double doors for entry to the unit. During your orientation you will be shown the location of other renal hubs throughout the hospital.

Renal Service Mission Statement

Te Ratonga Tākihi: Tauākī Kawenga Mahi

We aspire to deliver the best care possible through delivery of equitable services, encouraging independence and enhancing quality of life for all. We will openly communicate and provide support to people with kidney disease and their whānau/family to self-determine and manage their treatment by partnering with people, communities and health providers.

Kia eke taumata te kounga o ā mātou ratonga mohimohi, i runga i te tōkeke, te whakatairanga i te rangatiratanga, me te whakahaumako anō i te oranga mō te katoa. Ka kōrero pono mātou, ka matatika anō hoki tā mātou tautāwhi i te hunga e mate tākihi ana me ō rātou whānau, kia whai mana ai rātou i roto i ngā maimoatanga. Arā, ka pono tā mātou mahi tahi ki te tangata, te hapori me ngā kaiwhakarato hauora.

PHILOSOPHY

All staff within the renal service are committed to providing quality care and support for all people and their whanau requiring treatment for kidney disease. This will be achieved through empowering people to make informed decisions about treatment options and encouraging self-reliance and independence, to have their treatment at home, wherever possible, while promoting kidney health.

Checkpoint 1: what will I do in my nursing practice to ensure I promote the values of the DHB and the philosophy of the renal services? List three things.



- 1.
- 2.
- 3.

ORIENTATION TO CLINICAL AREA

It is important that you have an awareness of the environment in which you will be working to ensure the safety of both yourself and that of the patients and other staff members.

On the first day of your placement please meet at **0815** at the main entrance to the hospital. The Nurse Educator will meet you here and your first hour will be spent orientating to the department.

The week prior to your placement, please contact the Nurse Educator or Charge Nurse to confirm your starts dates and times. If you are unable to attend your placement, please ring the main reception and advise your Clinical Lecturer.

PRECEPTOR

Your preceptor is responsible at all times for the guidance, counseling, teaching and supervision of you, the student.

We will endeavor to ensure that you work mainly with your preceptor who is responsible for helping you complete your objectives; however, this is not always possible. It is your responsibility to ensure the nurse you are working with is aware of your objectives for the day/week. You must provide evaluations and/or other paperwork to your preceptor in a timely fashion (i.e. not on the due date). If you have any concerns or questions do not hesitate to contact the Nurse Educator or Charge Nurse.

PARKING

A parking map is provided at the back of this package. When parking in hospital grounds please ensure you park in a designated staff area. Take your ticket to a pay booth along with your student ID to receive subsidised parking (currently \$3 per day). Motorbikes, scooters and bikes can be parked in the hospital grounds at no cost. See the map for designated bike and motorbike spaces.

EXPECTATIONS OF THE STUDENT NURSE

Code of Conduct

The Nursing Council Code of Conduct “is a set of standards defined by the Council describing the behaviour or conduct that nurses are expected to uphold. The Code of Conduct provides guidance on appropriate behaviour for all nurses and can be used by health consumers, nurses, employers, the Nursing Council and other bodies to evaluate the behaviour of nurses. Failure to uphold these standards of behaviour could lead to a disciplinary investigation” (NCNZ, 2012: para 3).

The Code is framed around four core values – respect, trust, partnership and integrity – and eight primary principles. As a student nurse you are expected to uphold the standards of behaviour described in the Code. This includes being on time, being in uniform, taking responsibility for your own learning, being aware of professional boundaries and confidentiality, not being on your cellphone in the clinical areas and speaking up for safety.

Attendance and absence

It is expected that you arrive on time for your allocated shift. The renal unit is open Monday to Saturday. Hours of work are:

Morning duty 0630-1500 hours/0700-1530 hours

Midday duty 1200-2030 hours

Afternoon duty 1330-2200 hours/1430-2300 hours

If you are going to be late for your shift or are unable to attend placement, it is your responsibility to notify the unit about this by calling the main number on page one. You must also notify the Nurse Educator/Clinical Lecturer overseeing your placement of your lateness/absence. If you are unable to work the days that you have been rostered, you need to discuss this with your Clinical Lecturer and the Nurse Educator.

UNIFORM

Ensure that your uniform meets your institution standards and that your uniform is clean, jewelry is removed and long hair is tied back. Hair longer than shoulder length must be tied back and not fall over your shoulder. Your name badge and student ID card must be visible at all times when you are in the clinical setting.

Shoes:

Slip on/lace up shoes that are cleanable, provide good support, have a nonslip, soft sole and heel (to minimise noise) an enclosed toe (to minimise risk to toes should a crush or other injury occur) with sensible heel height. Backless, open toe shoes, sandals/jandals constitute a hazard and are not recommended (MDHB-2862).

Bare below the elbows:

Hands and forearms are free of jewelry and sleeves are above the elbow. A flat wedding band may be worn.

HEALTH AND SAFETY

Every staff member is responsible for their own safety and the safety of others. The Occupational Health and Safety Manual outlines the hazards within the department. Please familiarise yourself with these hazards and their management. All incidents/accidents of any sort are to be reported to your preceptor and the Charge Nurse.

If an incident/accident involves a student nurse the Nurse Educator/Clinical Lecturer must be notified immediately and the relevant Tertiary Institutions incident report completed along with a Health NZ MidCentral incident report. The Nurse Educator/Clinical Lecturer will assist the student to complete this paperwork.

Health NZ MidCentral has a no-blame approach to incidents. If you are involved in an incident it is your responsibility to speak up and report it as soon as possible so as to reduce the risk of the incident recurring and minimize the impact of the current incident.

EMERGENCIES

During your orientation you will be orientated to emergency responses and your role in these. All students are expected to familiarise themselves with the response requirements for any emergency that may occur in the clinical setting.

Ensure that fire exits are always kept clear and that corridors are kept uncluttered. Clear exits must be available at all times. During an emergency follow the instructions of the Charge Nurse/Shift Leader.

The internal emergency number for Fire, Cardiac Arrest and Security is **777**. In an emergency situation, please follow the direction of the nursing and medical staff.

OBJECTIVES

Before you start in the unit please consider what you want to achieve on this placement. Bring to the unit a list of objectives, remembering that these need to be realistic. Please share with your preceptor/s at the beginning of your placement the documentation that must be completed while on that placement. Use your initiative to make the most of your placement, for example:

- Ask lots of questions
- Ask to go places, e.g. radiology, theatre, peritoneal dialysis
- Ask to do and see things, e.g. Dressings, procedures.

Objectives may include but are not limited to:

- Documentation
- Gain an understanding of the multidisciplinary team
- Infection prevention and control
- Patient assessment-including risk assessments

- Time management and prioritising care
- Vital signs – accurate recording and interpretation
- Fluid and electrolyte management
- Interpreting lab results



Checkpoint 2: what are my objectives for my first week?

LIPPINCOTT PROCEDURES

(Sponsored by Palmerston North Hospital Medical Trust)

Lippincott America have provided procedures for clinical staff for decades and it was introduced to Midlands region (Waikato, Bay of Plenty, Hauora Tairāwhiti, Taranaki and Lakes DHB) in 2012. In 2015 South Island DHBs introduced Lippincott and since then Wairarapa, Whanganui and Hawkes Bay DHB's have joined Lippincott. During your placement you can access Lippincott from any PC in the unit and the Clinical Library.



[Lippincott Procedures Website](#)

MEDICATION MANAGEMENT

The RN preceptor must directly supervise all medication preparation and administration by student nurses/ CAP students. The RN is responsible for ensuring the task being directed is appropriate for the student's level of knowledge and competence.

Oral medications: can be prepared and administered by a student nurse/CAP student at the judgment of the RN preceptor. The RN preceptor must directly supervise the activity.

Subcutaneous (SC) and Intramuscular (IM) medications: can be prepared and administered by a student nurse/CAP student at the judgment of the RN preceptor. The RN preceptor must directly supervise the activity.

Intravenous medications: 2nd year students - IV infusions/medications may be prepared under the direct supervision of a RN. The 2nd year student nurse cannot administer IV infusions/medications.

3rd year and CAP students– IV infusions/medications may be prepared and administered under the direct supervision of a RN after completion of the student workbook (please see the Nurse Educator/Clinical Lecturer for a copy of this).

Controlled Drugs: Controlled drugs are kept in the locked controlled drugs cupboard, inside the general drugs cupboard at all times. Student nurses and CAP students are not permitted to double check, sign for or administer controlled drugs.

Dialysate, Saline and Heparin: the student nurse/CAP student can prepare and connect these under the direct supervision of the RN in the set-up phase only (when the patient is not connected). The student nurse/CAP student cannot administer saline boluses during treatment.

Haemodialysis prescription: the student nurse/CAP student may programme the hemodialysis prescription into the machine under direction and supervision of the RN. As the student/CAP is not CVAD certified they cannot connect the patient or complete the treatment. The student nurse/CAP student can help to line the machine prior to treatment and clean the machine at the end of treatment under the RN's supervision.

Checkpoint 3: Fill in the Gaps (5 + rights of medication administration)



The RIGHT _____ receives the RIGHT _____ at the RIGHT _____ by the RIGHT _____ at the RIGHT _____, and that the patient is showing the RIGHT _____ to receive the medication. The patient has the RIGHT to _____ after being fully informed. The nurse checks the patient is not _____ to the medication. The nurse completes the RIGHT _____ before and immediately after administration of the medication.

Standing orders: Standing Orders are used extensively by nurses and midwives across many health-care settings as a means of:

- > facilitating timely access to medicines in an emergency;
- > where a prescriber is unavailable; and/or
- > where patient outcomes are likely to be improved through their use (Walker, Clendon & Nelson, 2015; Wilkinson, 2015; Pirrett, 2012; Scott-Jones, Young, Keir, Lawrenson, 2009).

In the renal unit, several medications are administered under standing orders. These include erythropoietin, heparin, citralock, normal saline for hypotension, and lignocaine.

Checkpoint 4: Standing Orders



Select one medication that can be administered by standing order in the renal unit. Find the standing order prescription and the guideline for this medication. Discuss the 5 + rights of medication administration and process for administration of this with your preceptor or nurse educator.

Further reading: Health Quality and Safety Commission. (2015). *National Medication Chart User Guide (Second Edition) National Medication Safety Programme.*

New Zealand Nurses Organisation. (2018). *Guidelines for Nurses on the Administration of Medicines.* Wellington: New Zealand Nurses Organisation.

New Zealand Nurses Organisation. (2015). *NZNO Practice Guideline: Standing Orders New Zealand*. Wellington: New Zealand Nurses Organisation.

PATIENT ASSESSMENT

Nursing assessment is a fundamental skill that generates valuable assessment data essential for care planning. Review your nursing assessment text book, paying particular attention to fluid and electrolyte assessment. The following is an excerpt from Lippincott Procedures about assessing a patient prior to commencing haemodialysis. The following Lippincott Procedure lists the assessments that may be done prior to someone commencing haemodialysis.

Lippincott Procedures: Haemodialysis, arteriovenous access

Revised: December 14, 2018

Performing pre-haemodialysis patient assessment

1. Assess the patient for changes in energy and overall well-being.
2. Obtain the patient's blood pressure. Obtain both sitting and standing blood pressures, as the patient's condition permits. If the patient receives an antihypertensive medication, determine whether the pretreatment dose was held or administration times were changed, if ordered.
3. Obtain the patient's temperature.
4. Assess the patient's heart rate and rhythm. Attach the patient to a cardiac monitor if the heart rate less than 50 beats/minute or greater than 120 beats/minute, or as ordered. Make sure that the alarm limits are set appropriately for the patient's current condition and that the alarms are turned on, functioning properly, and audible to staff.
5. Assess the patient's fluid balance, including intake and output, and insensible fluid losses caused by burns, wounds, ventilation, and temperature elevation).
6. Weigh the patient (in kilograms) at the same time daily. Compare the daily weight to the prescribed "dry" weight obtained from outpatient records, if available, or to the hospital admission weight.
7. Assess for edema. If present, grade the severity using a scale, such as 0 = no pitting; 1+ = trace; 2+ = mild; 3+ moderate; and 4+ = severe.
8. Assess for ascites and neck vein distention.
9. Assess the patient's mucous membranes and skin turgor and integrity.
10. Monitor hemodynamic status using bioimpedance, impedance cardiography, pulmonary artery pressure, or central venous pressure, if ordered.
11. Assess pulmonary status by assessing respiratory rate, rhythm, and pattern; auscultating breath sounds; assessing for cyanosis; obtaining oxygen saturation level by pulse oximetry; assessing fraction of inspired oxygen (if applicable); and reviewing current arterial blood gas values and trends and chest X-ray results.
12. Assess the patient's gastrointestinal (GI) status, including the presence of bowel sounds and stool output. Hold anticoagulation and notify the practitioner if you suspect suspected GI bleeding.

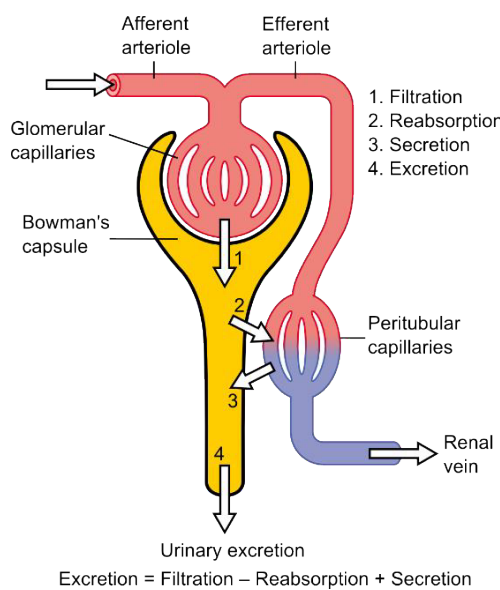
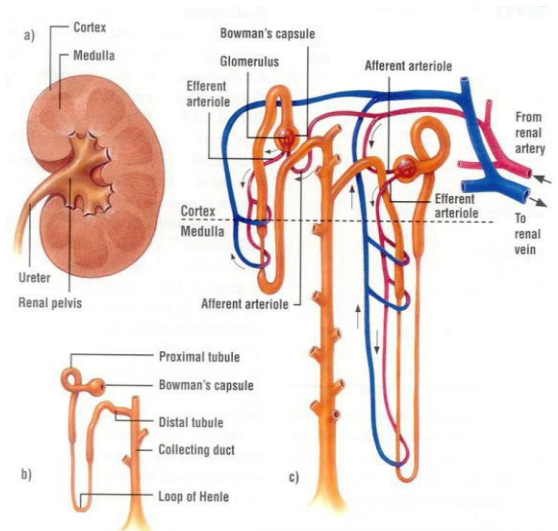
13. Assess the patient's genitourinary status, including the primary cause of acute kidney injury or chronic kidney disease.
14. Assess the patient's endocrine status by reviewing blood glucose level stability and evaluating hemoglobin A1c value, if ordered.
15. Assess the patient's neurologic status, including level of consciousness; risk factors for patients receiving hemodialysis, such as disequilibrium syndrome, use of anticoagulation, and intracranial bleed; and the presence of brain injury for which the patient requires intracranial pressure monitoring.
16. Assess the patient's current laboratory test results as needed and ordered.
17. Assess the AV access site.
18. Inspect the access extremity and compare it to the other extremity, noting obvious differences.
19. Assess the fistula for redness, warmth, drainage from prior needle sites, ecchymosis, hematoma, rash, skin breakdown, aneurysm, and stenosis.
20. Auscultate for the presence of a bruit. Notify the practitioner of changes in the sound or character of the blood flow through the fistula.
21. Palpate the fistula for a continuous vibration sensation known as a thrill.
22. Determine whether the patient had any problems with the last dialysis treatment, if applicable. Inquire about post-treatment recovery time, if applicable.
23. Compare your assessment findings to previous treatment records (if applicable).
24. Remove and discard your gloves and other personal protective equipment, if worn.
25. Perform hand hygiene.

KIDNEY DISEASE

Anatomy of the Kidney

Kidneys are a pair of bean-shaped organs located in the retro-peritoneum of the abdomen. Each kidney is divided in two distinctive parts: Cortex and the Medulla.

The functional unit of the kidneys are known as nephrons. Each nephron is made up of a Bowman's capsule (Glomerulus, the filter) and a series of intricate tubules (proximal tubule, loop of Henle, distal tubule and a collecting duct). The collecting duct opens into the pelvis of the kidney from where the urine is transported via the ureters to the urinary bladder for storage.



The Bowman's capsule is formed by the capillaries which arise from the afferent arteriole, an eventual branch of the renal artery.

Filtration: Glomerulus filters plasma into the proximal tubules.

Reabsorption: Loop of Henle reabsorbs a large part of water and other necessary substances.

Secretion: After filtration, blood leaves the Bowman's capsule through the efferent arteriole. On its way back to the renal vein, some waste products are directly secreted into the distal tubule and the collecting ducts of the nephron.

Excretion: The urine is then transported via the ureters to

the urinary bladder for excretion.

Checkpoint 4:



The Bowman's capsule is situated in the _____ whereas the tubules are situated in the _____ part of the kidney.

Define Glomerular Filtration. What is a normal Glomerular Filtration Rate?

The basic functions of the normal kidneys include that of excretory, regulatory and metabolic:

- To excrete metabolic waste products such as urea and creatinine.
- To regulate body's water volume and osmolarity
- To regulate electrolyte balance such as _____ and _____
- To produce rennin.
- To regulate acid base balance.
- To activate vitamin _____
- To produce erythropoietin



Checkpoint 5: In the space below, define any terms in the list above that you are unfamiliar with.

Stages of End Stage Renal Disease

There are 5 stages of the kidney failure:

GFR (mL per minute per 1.73 m ²)	Stage	Description
≥ 90	1	Kidney damage with normal kidney function
60 to 89	2	Kidney damage with mildly decreased kidney function
30 to 59	3	Moderately decreased kidney function
15 to 29	4	Severely decreased kidney function
< 15 (or dialysis)	5	End stage kidney failure

(Kidney Health New Zealand, 2009).

Causes of End Stage Renal Disease (ESRD)

Diabetes Mellitus and Hypertension are the two major causes of chronic renal failure that can lead to ESRD. Other major causes include:

- Renal Artery Stenosis
- Polycystic Disease; also other genetic disorders such as Sickle Cell Anaemia and Bardet Biedl Syndrome
- Analgesic Nephropathy caused by pain medications; Long-term use of drugs such as NSAIDs
- Autoimmune disorders such as Systemic Lupus Erythematosus, Goodpasture's Syndrome and Wegener's Granulomatosis

- Injury or trauma that can lead to Renal Rhabdomyolysis
- Glomerulonephritis
- Interstitial Nephritis due to infections or a drug allergy
- The Nephrotic Syndrome
- Reflux Nephropathy due recurrent infections caused by backward flows of the urine in to the kidney
- Malignancies such as Multiple Myeloma



Checkpoint 6: Choose one of the above causes and research the relationship between that and ESRD. Make notes below.

Haemodialysis

Haemodialysis is a method for removing waste products such as urea and creatinine, as well as free water from the blood when kidneys are in failure. Haemodialysis is one of the three kidney replacement therapies; the other two therapies are peritoneal dialysis and kidney transplant.

The principles of fluid removal in haemodialysis are

- Osmosis
- Convective transport (Hydrostatic Ultrafiltration)
- Diffusion

Osmosis is the movement of water through a semi-permeable membrane.

Hydrostatic pressure is the pressure that is created when the blood is pumped through the filter.

The pressure on the opposite side of the membrane is lower pressure whether filled or not with the dialysate fluid; this results in the movement of the fluid from the area of high pressure to the area of lower pressure. As a result of the hydrostatic pressure, the fluid moves across the porous membrane, and this process is known as Ultra filtration (Hamilton, 2000)

In haemodialysis, diffusion also plays an important role in the fluid removal; when solute moves from the areas of higher concentration to the areas of lower concentration, it also facilitates the fluid movement along with it.



Checkpoint 7: What is the difference between peritoneal dialysis and haemodialysis?

EVALUATION OF YOUR PRECEPTOR

Please return your evaluation to your Charge Nurse

Name of Preceptor _____ Date _____

E = Excellent VG = Very Good S = Satisfactory NI = Needs Improvement

Please read the following statements then tick the box that best indicates your experience

My Preceptor:	E	VG	S	NI
Was welcoming and expecting me on the first day				
Was a good role model and demonstrated safe and competent clinical practice				
Was approachable and supportive				
Acknowledged my previous life skills and knowledge				
Provided me with feedback in relation to my clinical development				
Provided me with formal and informal learning opportunities				
Applied adult teaching principals when teaching in the clinical environment				

Describe what your preceptor did well

Describe anything you would like done differently

Signed: _____

Name: _____

YOUR CONTACT DETAILS

We care about your well-being as well as your education. If you don't arrive for a planned shift, if there is illness on the ward or in the case of an emergency we need to be able to contact you. Please could you provide the ward with your contact details and an emergency contact using the form below.

Your Name	
Your Home Phone number	
Your mobile phone number	
Name of emergency contact	
Phone number of emergency contact	

From time to time the staff on the ward may need to contact your lecturer regarding your progress, for support or in the case of problems. Please could you supply the contact details of the Lecturer/CTA that will be supporting you during this placement, in the form below?

Name of Lecturer/CTA	
Phone number of Lecturer/CTA	

This information will be kept for the length of this placement and then disposed of. It will not be shared with anyone else without your permission unless there is an emergency.

Korero
mai

Let's talk

BACK TO BASICS MEDICATION SAFETY

THE '5+3 RIGHTS' OF MEDICATION ADMINISTRATION

1

RIGHT PATIENT

- Use TWO identifiers:
 - you must ask the patient to identify themselves.
 - check the patient's ID band for their NHI number.

2

RIGHT MEDICATION

- Check for allergy and adverse drug reactions.
- Check the name, strength and form of the physical medication against the medication prescribed on the medication chart.

3

RIGHT DOSE

- Check the prescription.
- Confirm appropriateness of the dose using the New Zealand Formulary (NZF).
- If necessary, calculate the dose and have another nurse calculate the dose independently.

4

RIGHT ROUTE

- Check the prescription for suitability and appropriateness of the prescribed route.
- Confirm the patient can take or receive medication by the prescribed route.
- Check whether medication is appropriate to use by the prescribed route (e.g. NG tubes).

5

RIGHT TIME

- Check the frequency.
- Does administration fit within the timeframe?
- Confirm timing of the last dose.

+3

+1. RIGHT TO REFUSE

- Under some circumstances.

+2. RIGHT REASON

- Before giving the medication, confirm the rationale for the prescribed medicine. *What is the patient's history? Why is the patient taking this medication?*

+3. RIGHT DOCUMENTATION

- After giving medication, document administration. (e.g. sign medication chart)
- Chart the time, route, dose given and any other specific information as necessary. (e.g. the site of an injection or any laboratory result or vital sign that needs to be checked before giving the medication).

REMEMBER:
IF YOU CAN'T READ
THE PRESCRIPTION
DO NOT GIVE
THE MEDICATION

ANY QUESTIONS?

Ask Pharmacy or the Centre for Patient Safety & Service Quality team - they're happy to help you!

