



*Intensive Care
Unit*

Student Name:

Welcome to our Intensive Care Unit (ICU). We are looking forward to working with you!

We hope that you enjoy your time with us and that you find it a worthwhile and interesting experience.

ICU can be a foreign environment for students who sometimes feel a little 'lost' or unsure of what's going on. This booklet provides you with information that will give you a bit of insight into our ICU and how we operate. The intention is to provide you with an opportunity to get the most out of your placement.

Please feel free to ask any questions or seek clarification of things you are not sure about.

We have a **multi disciplinary approach** to patient care.

The team is made up of:

Doctors (from primary team), Anesthetic team, (Consultants, Registrars), Nurses, Social Worker, Dietician, Physios, Pharmacist and the Chaplain.

We also use other specific services that are available when appropriate i.e. Maori Health Unit, Pacific Health Unit, interpreter service etc.

Admissions to the ICU

All potential admissions are discussed by the patient's primary team with the on call anesthetic registrar or consultant. (The Anesthetic department authorize any admissions to ICU)

The anesthetic registrar/consultant then liaises with the nursing staff about bed availability and staffing.

We are funded as a 4 bed unit but staff availability and acuity dictate how many patients we can take.

Anesthetic staff are available 24 hrs a day but aren't necessarily always in the unit. They are always on site and can be contacted through the hospital paging system.

Patient Management in ICU

If the patient is deemed **High Dependency** they remain under the management of their primary team. If they are an **Intensive Care patient** i.e. ventilated or on inotropes, their care is taken over by the anesthetic department until they are no longer deemed to be an Intensive care patient. Their care is then handed back to the primary team.

Any patient requiring care beyond the level that we provide is usually transferred to a higher-level ICU, usually Wellington. In this situation the receiving hospital sends a retrieval team to collect the patient.

ICU – Student Nurses

Admissions received from:

Patients are admitted to our ICU from various places within the hospital:

- Emergency
- MAPU
- Surgical/Orthopedic/Plastic Wards
- CCU/Medical Wards
- Pediatrics
- Theatre

As HVDHB provides a regional Plastic Surgery service we also receive patients from other hospitals for specialist burn or plastics management.

Reasons for Admission:

- Haemo dynamically unstable patients requiring complicated fluid management.
- Those who need close cardiac monitoring or nursing interventions outside the scope of a general ward.
- Patients who have had plastic surgery involving their face or neck, for airway monitoring/ventilation (including babies post cleft pallet repair)
- Post cardiac arrest if the patient requires ventilation.
- Acute respiratory distress/failure
- Post op patients who have a significant medical history and are at risk of complications.
- Patients who are neurologically compromised and unable to reliably maintain their airway.
- Patients requiring short to medium term ventilation, or other respiratory support e.g. Mask CPAP.

Family and visitors room:

We have a large waiting room where families and close friends can have some privacy, make a drink and have some time out. The experience of having a loved one in ICU can be very stressful and difficult for families, thus we encourage them to take frequent breaks and look after themselves.

Visiting:

Generally close family can visit when they like except for the ICU doctors ward round and the nursing handovers and we may ask them to leave for procedures, X-ray etc. To maintain privacy for the patients during these times, we have a closed unit from: 0700-0930, 1430-1530 and 2230-2330.

We endeavor to provide a service that is culturally and spiritually sensitive to our patients and their families.

Contacts

Intensive Care Unit	Reception ICU	DD 5709227
Clinical Nurse Educator	Trudy Lunn	DD 5709227
Clinical Nurse Manager	Susan Cartmell	DD 5709227 Pager 628

Your Preceptor

Student preceptors in this unit are most of the senior staff.

If you look at the roster, you will see your name highlighted. One of our staff nurses will have the same color highlighted on your shift and this will be the person you will be mainly working with for this shift.

We will try and roster you on with one main person but this is not always possible due to most staff being rostered and rotating.

We think there is a benefit in this as every one has different teaching styles and brings a different perspective to the job.

It would be good if in the first week you identify the person you will be working with most often.

Plan a time to go through your objectives with this person on a weekly basis and ask him/her to do your assessment forms.

They may ask for feedback and assistance from others you have worked with to help complete your assessment form.

We hope that you enjoy your placement with us.

If there is anything we can do or if you have any problems please don't hesitate to ask.

Trend Care

No doubt you will hear about this on your placement in ICU.

You may have come across trend care already in previous placements.

In a nutshell, **trend care** is a soft ware program that compiles a lot of data like bed utilization on each shift, peaks and troughs in patients acuity, staff rosters etc. The most obvious one is that it measures patients acuity relating to clinical nursing hours required for care, e.g. it predicts nursing labor hours required to give each patient appropriate care according to the data that we have entered in trend care for this patient.

The beginning of each shift each nurse will enter his / her patients care requirements on trend care to enable it to work out the total nursing hours required for the unit.

He/she will update this information throughout the shift.

The bed manager in central coordination gets all this information and will supply more staff or shift staff around throughout the hospital wherever the need is highest!

It may be useful for you to have a look at trend care with your preceptor as it may become an important part of your future nursing career.

Expectations of the Student Nurse while in ICU

The shifts in the Intensive Care Unit are:

Morning	:	0645hrs to 1515hrs
Afternoon	:	1445hrs to 2315hrs
Night	:	2245hrs to 0715hrs

We have a few expectations of student nurses working in the Intensive Care unit:

- ❖ It is expected that you arrive on time for your shift. If you are going to be late or you are unwell and cannot come to work, call the unit on *phone number 5709227*.
- ❖ You must complete the full shift that you are allocated to work. If you are unable to do so please discuss this with your preceptor or nurse educator. A lot of learning occurs at quiet times in the unit!!
- ❖ It is important for your preceptor or the nurse you are working with that he/she is aware of your objectives
- ❖ Due to infection control a clean uniform must be worn, long hair must be tied back and cardigans must not be worn when working on the floor
- ❖ If you are not achieving your objectives please see Trudy or your preceptor (before the last week in the unit)
- ❖ Please ensure all documentation you need to complete for the polytechnic/university is accomplished before the last days in the unit – your preceptor may not complete any paper that is given to him or her if it is given in the last days of your placement
- ❖ If you are not sure about anything please don't hesitate to ask!

Safety Measures in ICU

Your role in particular situations

During an Cardiac Arrest or other emergency

- Please feel able to get close enough to see what is going on but assess the best place to stand where you will not get in the way.
- You may be asked to send bloods to the lab in the lamson tube.
- You may be asked to page various people (xray, lab, etc.) Do this by dialing '0 'for the operator and ask for the appropriate person to be paged. Ask the ICU nurse if they want to tell you to tell the operator to put the page out urgently.
- You may be asked to get the emergency equipment.

During a fire alarm

- There is a panel on the wall of the corridor between the workroom and the office. When the fire alarm sounds you can see where the fire is located. Please familiarise yourself with this on your first day.
- The area where ICU is located, is divided into "cells" by fire doors that should always be kept closed. The next "cell" is theatre and this is where we evacuate to with all the patients and visitors if the fire is in ICU.
- In all cases of fire or smoke, follow strict instructions from the fire warden. This will be most likely the person coordinating the shift. She will hand out cards with instructions to every staff member present. It may be a good idea to have a look at these cards as well on your first day.

When an intra venous pump alarms:

- Alert the nurse. Some of the drugs infused in ICU must not be stopped! (i.e.inotropes)

Swipe cards:

- We use swipe cards to get in and out of ICU and for getting in the drug room. You won't be getting your own swipe card. Please enter through the visitors room when you come to work and ring the bell. If you need to be in the drug room or need to leave the Unit for a short period you will need to borrow your preceptors swipe card.

Treasure Hunt

This list is designed to help you become familiar with the environment, but is by no means exhaustive of all the things you will be required to locate.

- Central monitor
- IV fluids and tubing
- Dangerous Drug cupboard
- Defibrillator Trolley
- Intubation and emergency drug trolley
- Paediatric emergency trolley
- Suction equipment
- Linen supplies
- Clinical Nurse Manager Office
- CNE Office
- Work and hand over room
- Ventilators x4
- Staff tea room/kitchen
- Sluice room
- Blood trolley
- Pendants
- Dressing Materials
- Oxygen isolation "shut off" valve
- Naso gastric equipment
- Urinary catheterisation equipment
- Cpap equipment
- Where to store your bags
- Syringes and interlink/needles
- Emergency oxygen and air cylinders
- Clinical policies & procedures
- "Notes on Injectable Drugs"
- Evacuation procedures, yellow cards etc
- Linen trolley
- Drug fridge
- Roster
- Manual BP machine
- Suction Equipment
- Bio-hazard bags
- Tympanic thermometer covers
- Stationery supplies
- Photocopier
- Patient charts
- Laboratory forms
- Portable monitor
- Wash trolleys
- Art and CVL trolleys
- Sterile Gloves
- Lamson Tube System

Objectives

Objectives will help you focus on your learning.

*Note- due to the acuteness of the ICU setting, student's work at all times with the supervision or their buddy nurse. The role of the student in ICU is often an observational one.

Suggested objectives for your placement in ICU:

- Assessing patient's condition and documenting same i.e. fluid balance chart (FBC), vital signs including central venous pressure (CVP), mean arterial pressure (MAP), neurological observations, physical assessment e.g. completing patient assessment care plan on the back of the flowchart.
- Oxygen therapy and reasons why different equipment is used i.e. venti mask, non rebreather mask etc.
- Care of the tracheostomy (dressings, suctioning, humidified circuits, potential complications etc).
- The role of the ICU nurse in patient advocacy, ethical dilemmas, withdrawing treatment, not for resuscitation (NFR) orders.
- Enteral feeding
 1. Priming and programming a nasogastric (NG) or nasojejunal (NJ) feeding pump.
 2. Giving flushes and medication via NG tube.
 3. Insertion of an NG tube.
 4. Trouble shooting.
- Assisting in the care of a ventilated patient.
- Assisting in the care of a patient on continuous positive airway pressure (CPAP)
- Monitoring and emptying drains/stomas.
- Monitoring and care of chest drains.
- Insertion of a urinary catheter (IDC)
- Communicate effectively and confidently with other members of the multidisciplinary team. (Verbal and written)
- Plan and evaluate patients care.
- Partake in assessment, planning and evaluating patient care. (e.g. Doctors rounds, family meetings)
- Consider ethical and legal responsibilities in the ICU environment.

Some more ambitious/advanced objectives could be:

- Basic interpretation of arterial blood gasses. (ABG)
- Gain an understanding of basic chest xrays. (CXR)
- Recognise basic electro cardiogram (ECG) rhythms i.e. SR, SB, ST, AF, VT, VF.
- Gain an understanding of invasive lines and the management of them i.e. intravenous catheters (IVC) arterial lines, central venous lines (CVL).
- Become familiar with different types of fluid i.e. colloids, crystalloids and when and why they are used.

Procedures you may get a chance to observe:

- CVL insertion
- Arterial line insertion
- Computerised tomography (CT scan)
- Magnetic resonance imaging (MRI)
- Gastroscopy
- Intubation/extubation
- Epidural and patient controlled analgesia (PCA) monitoring.
- Free flap monitoring
- Removal of drains
- Chest drain insertion/removal

Skills you may get a chance to use and develop:

- Neurological observations
- Oxygen therapy, nebulisers
- Specimen collection and result interpretation
- Dressings/wound care
- Ostomy care
- Tracheostomy care
- Suctioning
- Documentation and verbal handover
- Taking ECG's
- Drawing up intra venous (IV) medication
- Enteral feeding
- Removal of intravascular cannulas (IVCs)
- Cardiovascular observations
- Patient assessment.

Common Presentations to ICU

Common presentations to ICU include:

- Cardiac Arrest (Community or in Hospital)
- Hemorrhage (Gastro intestinal bleeds, Post Partum Hemorrhage)
- Head Injuries
- Burns (depending on % and location)
- Deliberate Self Harm/Overdose
- Exacerbation of COPD/Asthma
- Pneumonia/Respiratory failure
- Shock (septic, cardiogenic, hypovolemic, anaphylactic)
- Left ventricular failure
- Pancreatitis
- Status Epilepticus
- Facial Trauma, #Le Forte, #Mandible (awaiting surgery)
- Diabetic Ketoacidosis
- Post op general surgery (with many medical comorbidities)
- Neck dissections and free flap reconstructions
- Cleft palate repair (post op 1st 24 hrs)
- Ischemic strokes for thrombolysing
- Sub Arachnoid Bleeds

Medications

As a student you are given the opportunity to learn and participate in the care of patients receiving intravenous and related therapies. It is therefore vital that you always follow your preceptor's instructions and adhere to standards set by our organization.

Use and read the IV resource book for students as a primary IV learning resource. This is available through your educator.

DO NOT:

- Insert peripheral catheters
- Perform phlebotomy
- Access central venous access devices (CVAD)
- Program PCA pumps

Learn to do these activities under the direction of a registered health professional;

1. Prepare and reconstitute an i.v. medication (e.g. an antibiotic)
2. Administer a saline flush or an antibiotic through a peripheral i.v. cannula
3. Prime an i.v. infusion set and administer an i.v. fluid through an electronic infusion device.
4. Watch how to set up a blood product transfusion and observe how it is commenced.
5. Remove a peripheral i.v. cannula.

Know your basic drug calculations;

Converting Gram to Milligrams;
Number of Grams x 1000

Converting Milligrams to Gram;
Number of Milligram :1000

Converting Milligrams to Microgram;
Number of Milligrams x 1000

Converting Microgram to Milligram;
Number of Milligrams :1000

Drug Dosage formula;
Prescribed dose : Stock dose X Stock volume (ml)

Fluid Rate formula (ml/hr);
Volume to be infused : Hours to be infused

Fluid Rate formula (drops/min);
Volume to be infused X dropfactor : by Minutes to be infused

Calculating for Body Surface Area / BSA (m²)
Get the square root (√) of:
Height (cm) x Weight (kg) : 3600

Other Helpful Resources

Senior Nurses. Ward Educator. IV Trainer.
Pharmacist. Notes on Injectable Drugs Book. MIMS.
Intranet Policies.

Medications commonly used in ICU

Inotropes (e.g. Noradrenaline)
Vasopressors (e.g. Phenylephrine)
Amiodarone
Morphine
Antiemetics –Maxolon, Cyclizine, Ondansetron.
Propofol
Midazolam
Fentanyl
Potassium, Phosphate and Magnesium
Phenytoin
Antibiotics
Aminophylline
Salbutamol/Atrovent
Clonidine
Actylase

There is a **folder in ICU that contains protocols for most common drugs given in ICU**. The protocols cover dilution, infusion rate and duration etc. This is a very good resource that we constantly refer to. We recommend that you have a look at it.

We also have an **ICU policy manual** that you should have a look at. This manual has all the important policies in it, needed for giving patients “best care”. We aim to update these policies regularly.

Pre-reading/Resources

We do not expect you to do a lot of pre reading before you start your placement.

If you are very keen you could look up some subjects like Arterial Blood Gas analysis, ECG's, Sepsis or you can look up any Common Presentations to ICU (see page 11) before your placement.

You will find that often there are quiet moments in ICU, this will give you an opportunity to read up about subjects, certain illnesses that patients present with, policies and guidelines etc. (see our **ICU policy manuals**)

A book that we definitely like you to read while you are in ICU is **the ABC of Intensive Care**. This will be on our book shelve, along with many others that may be of interest to you.

Evaluation of your Clinical Preceptor

Please return your evaluation to Angeline (Nurse Educator)

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				

Cut along line

Describe what your preceptor did well

Describe anything you would like done differently

Signed: _____ Name: _____

Notes

Please use this space for notes.