

# Student Nurses



## *Special Care Baby Unit*

Student Name:

# Student Contact Details for .....Ward/department

## Contact details

The staff on the ward/department care about your well-being as well as your education. They will notice and be concerned if you don't arrive for a planned shift, if there is illness on the ward or in the case of an emergency. They may need to contact you to check you're ok and to let you know if there needs to be a change to your shifts.

Please could you provide the ward with your contact details and an emergency contact using the form below? **This information will be kept by a senior staff member for the length of this placement and then will be destroyed. It will not be shared with anyone else without your permission unless there is an emergency.**

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

## Contacting your Tutor/CTA

From time to time the staff on the ward may need to contact your tutor regarding your progress, for support or in the case of problems.

Please could you supply the contact details for the tutor/CTA that will be supporting you during this placement, in the form below?

Name of Tutor/CTA	
Phone number for Tutor/CTA	

**Please complete a new form before each new placement and give it to the senior staff at the beginning of your placement.**

Thank you

## **The Special Care Baby Unit**

We are located on the first floor of the Heretaunga Block in the obstetric unit. We are funded for 12 cots. Our babies range in ages from 32 – 40 weeks and some post term babies. We are a level 2 SCBU. Babies that require level three care are sometimes stabilized here then transferred to Wellington NICU.

We have a community and hospital focus, with a multidisciplinary approach. We work closely with postnatal ward, delivery suite, children's ward and other health care providers to provide the best holistic approach to our babies and their families.

Parents may visit at any time; there is a limit of two people at the bedside per baby. Please can we work hard at maintaining our visiting policy, when it is really busy the unit can be really loud and quite congested.

There is a medical ward round every morning; it is helpful if you can be there when your babies are being seen.

Medical staff are interested in -

- Trend of weight loss/gains,
- Tolerance of feeding,
- Feed frequency,
- Feeding method and volumes.
- What type of formula used
- Tolerance of breast or bottle.

If client is having any apnoeas or bradys or both if there is a pattern to these events and how often are they occurring?

If there is any specific details dependant on condition i.e. drug withdrawal.

Any social concerns with the baby and family.

If there are any sudden changes in your clients condition please let the coordinator and medical staff know ASAP.

Welcome!!  
We are looking forward to working with  
you

# Contacts

This should contain information on all the key contacts for the ward/unit

Special Care Baby Unit		Phone number for Unit (04) 570 9054 (04) 570 8045
Clinical Nurse Educator	Jenny Stott	DD 570 9113 Pager 374
Clinical Nurse Manager	Sagni Prasad	DD 570 9037 Pager 606
Associate Clinical Nurse Manager	Rebecca Abbotts	DD 570 9113 Pager 760

## Your Preceptor

In order that you get the best learning out of your time in SCBU we have a preceptorship programme. Ideally you should be assigned 2 – 3 staff nurses for your clinical placement and direct supervision. You may not spend your entire orientation with your preceptors, but they will be the main people responsible for your assessments and acclimatization.

During your placement you will meet with your preceptors (s) and CNE to discuss your progress and attainment of assessments. However, please feel free to approach the nursing staff at any time for support or any other need.

Please feel free to make an appointment with your CNM at any stage throughout your orientation. We are all here to support you to achieve your potential.

The orientation manual is just a guide and we would appreciate your evaluation of our current nursing practices. We look forward to your ideas and approaches that you can bring to our unit.

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!!). Your preceptor will not complete any evaluations if you give it to them on your last days in the unit

# Expectations of the Student Nurse while in SCBU

The shifts in the SCBU are:

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

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

- ❖ Please be punctual. If you are going to be late or cannot make the shift please phone the unit on (04) 5709054.
- ❖ You must complete the full shift that you are allocated to work – if you are unable to do so please discuss this with your nurse, preceptor or nurse educator. A lot of learning occurs at quiet times in the unit!!
- ❖ We try to give you a fair roster with continuity of preceptors. If you are unable to work these shifts please discuss with your preceptor or CNE.
- ❖ We don't expect you to have a working knowledge of neonates. Once you begin, and your objectives are set and realistic then your knowledge base will improve and expand.
- ❖ 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 in the floor.
- ❖ If you are not achieving your objective please see the CNE 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 will **not** complete any paper that is given to him or her if it is given in the last days of your placement.

# Safety Measures in SCBU

- ❖ In the event of a **neonatal emergency** it is unlikely you will be involved directly with emergency patient care. However it is important that you know what to do in an emergency to support SCBU Staff. This includes knowing the location of the emergency bells, and how to activate these, as well as how to call a **777**. Additionally it would be expected that you would assist with the smooth running of the unit, while senior staff were attending the emergency, which may involve assisting with their patient loads (of stable infants).
- ❖ **Fire** - If the fire alarm sounds check your area for fire or smoke. The two situations that SCBU will face are **standby mode** (when you have an incident in Heretaunga that is not in your fire cell but the fire system is notifying you to standby e.g. stop non-essential work). If there is no sign of fire or smoke WAIT, remain on STANDBY and report to the nurse in charge.

The other is **evacuate mode** – Follow R.A.C.E. guidelines as outlined in the Emergency Procedures manual, located in the SCBU office. The nurse in charge puts on the Fire Warden vest, distributes action cards, calls 777 if the fire is in SCBU and requests additional staff to help evacuate.

- ❖ Follow correct procedures following any incident or **blood/body fluid exposure** as guided by your preceptor and HVDHB Policies and Guidelines.
- ❖ SCBU doors remain locked allowing access for SCBU staff only with a **swipe card** or, for parents via a bell and intercom system. Staff will guide you how to manage entry for yourself and for babies' significant others/visitors, early on in your orientation.
- ❖ Our **visiting times** are 2:30 – 6:30pm. It is important that these times are adhered to, for the best interests of the babies.

Visitors are not able to visit the unit unless they are well or they will be asked to leave.

Siblings are allowed for a brief visit but need to be supervised by a family member while in the unit. There are to be no other children under the age of 16 allowed onto the unit (only 2 visitors per baby at a time).

# 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.

ITEM	LOCATED	ITEM	LOCATED
baby gowns		spare incubators	
baby singlets		Ohio open incubator	
cloth nappies		phototherapy lights	
disposable nappies		pulse oximeter	
towels		Hewlett Packard monitors (2)	
nurses gowns		Apnoea monitor (2)	
woollen baby clothes		Criti-care monitor	
Wee-vac		X-ray apron	
cot linen		suction	
store room		oxygen outlets	
scales		oxygen masks	
BM stix		EME Infant flow driver	
		CPAP generator	
screens		EME heated infant flow circuit	
thermometers		EME infant flow bonnets (med, lge,XL)	
electric breast pump		ECG leads	
milk formula		ambu bag	
clean teats & bottles		ventilator	
bottle brush		IV tubing	
Milton bucket		gauze squares,cotton wool balls, tape	
Milton tablets		IV splints	
nasogastric tubes		IV fluids	
oral gastric tubes		Case notes	
Litmus paper		Syringe pump	
Paper tape measures		Drug fridge	
		Syringes	
Baby baths		IV medications	
Length board		DD cupboard	
Pillows		Clerical admission form	
Bucket for cleaning incubator		Admission list forms	
		Feeding charts	
		Weight charts	
		Medication charts	
		Other stationery	



# Objectives

We aim to provide safe and appropriate care for the neonate and their family, with the continued with support and supervision from your preceptor, including:

- Accurate assessment
- Competent implementation of care according to assessment
- Documentation
- Appropriate management of Referrals
- Family-Centered Care Principles
- Optimizing all learning opportunities
- Implementation of multicultural nursing care
- Understanding the importance of the multidisciplinary team
- Respecting privacy
- Providing parents with accurate information about their child's health management.
- Practice good infection control measures

# Common Presentations to SCBU

Common presentations to SCBU include:

## **PREMATURITY**

Prematurity is the most common condition necessitating admission to SCBU. This is defined, as less than 37wks gestation, 24wks gestation is currently the age of viability. The appearance of the neonate will vary depending on gestational age; for this assessment a gestational assessment tool may be used: i.e. assessing skin thickness, skin colour, amount of breast tissue, and ear cartilage.

## **SMALL FOR GESTATIONAL AGE (SGA)**

The definition of SGA is neonates who are less than the 10th centile for their gestational age. It is important that these babies are identified at delivery, weight and head circumference should be plotted on a centile chart, and an appropriate feeding regime commenced according to unit policy.

Newborns who are small for gestational age and who have experienced slow growth and development throughout the pregnancy often appear 'old looking' for their tiny birth size. The skin of post term SGA newborns is often loose, dry and scaly. SGA babies have little fat and muscle tissue development. These infants are usually alert and active, however, and seem hungry. Because there are many causes of fetal growth restriction, it is impossible to generalize about complications.

## **LARGE FOR GESTATIONAL AGE**

Some babies grow larger than usual during gestation and so weigh more at birth than the average baby of the same gestational age. These babies are called large for gestational age. The infants can be born preterm, at term or post term. Fast growth often occurs in babies whose mothers have diabetes, babies whose parents are larger than average, and babies who have certain congenital syndromes. LGA babies have above average amounts of fat tissue at birth. Be aware that the pre term LGA baby can experience many of the same problems that other preterm babies do.

## **INTRAUTERINE GROWTH RETARDATION (IUGR)**

IUGR is the failure of a fetus or infant to achieve his or her genetic growth potential. Most will also be small for gestational age although the two terms are not synonymous.

The etiology can be determined three ways, fetal, maternal and placental. IUGR can be classified as symmetric and asymmetric, however, in practice there is much overlap.

**SYMMETRIC:** Growth failure affecting width, head and length.

Predominantly caused by infection, maternal or fetal problems and usually starts in early half of pregnancy.

**ASYMMETRIC:** Growth failure with head growth relatively preserved. Usually caused by placental insufficiency towards the end of pregnancy.

Traditionally the management has been intensive fetal scanning to maximize gestation without compromising the fetus.

## **HYPOGLYCAEMIA**

This is defined as a blood glucose level of  $<2.6\text{mmols}$ . It is very common, readily diagnosed and easily treated.

Some of the common causes are:

- ❖ Prematurity  $<36\text{wks}$  gestation
- ❖ IUGR
- ❖ SGA/LGA
- ❖ Babies of diabetics mothers
- ❖ Hypothermia
- ❖ Maternal obesity
- ❖ Sick infants- polycythemia, sepsis, cold stress, high stress in labour
- ❖ Iatrogenic

It is important to note that absence of symptoms does not exclude significant hypoglycemia. Early feeding and monitoring the neonate are the first simple steps in management (please see our policy to further your knowledge in this area).

## **FEEDING PROBLEMS**

There are several reasons why neonates may experience feeding problems. Prematurity is the one that we see the most in this unit. Whilst the neonate who is 34wks - 36 wks gestation will have a sucking reflex, they do not have very good coordination skills, i.e. sucking, swallowing and breathing. These babies are usually fed by nasogastric (NG) tube until feeding is established.

Other conditions, which may cause feeding difficulties, are:

- ❖ Cleft lip and palate
- ❖ Pierre robin syndrome
- ❖ Downs syndrome
- ❖ Severe hypoxic insults
- ❖ Cardiac babies

## **REFLUX**

This is the passage of gastric contents up into the oesophagus. It is very common in the preterm infant-

- ❖ The sphincter at the lower end of the oesophagus is not toned or strong.
- ❖ There are delayed times in gastric emptying which leads to larger amounts in the stomach.
- ❖ Oesophageal motility is poor due to immaturity.

Reflux can cause –

- ❖ Aspirations
- ❖ Pain
- ❖ Ulceration of the oesophagus
- ❖ Failure to thrive due to loss of food and calories

## **MANAGEMENT**

Babies with reflux should be fed slowly. They may have thickened feeds and more frequent small feeds. You may see some pharmacological input such as – H2 antagonists (ranitidine) and proton pump inhibitors (omeprazole) administered.

## **HYPOTHERMIA**

All babies are at risk of becoming hypothermic, auxiliary temperature <36.4C. One of the main reasons is because they have a large surface area relative to their mass, so there is an imbalance between heat generation and heat loss.

Other factors, which contribute to hypothermia, are:

- ❖ Prematurity
- ❖ SGA/IUGR
- ❖ Babies that have required resuscitation
- ❖ Environment, i.e. cold delivery room

Neonatal skin is thin and permeable to heat. They also have a very limited capacity to generate heat. Neonates cannot shiver. Neonates should be nursed in a neutral thermal environment and have a core body temperature of 37C.

Neonates lose heat by:

- ❖ Convection- air movement, i.e. draughts
- ❖ Radiation – warmth uncovered to cooler places, i.e. under radiant heat
- ❖ Evaporation – at birth when the skin is wet

Conduction – direct heat loss, i.e. placement of baby on mattress

## **RESPIRATORY DISTRESS SYNDROME (RDS)**

The main cause of RDS is Hyaline Membrane Disease, and occurs in babies less than 36wks gestation. This is because there is little or no surfactant production in the alveoli. Surfactant lowers the surface tension, which in turn allows for a better exchange of gases. Giving antenatal steroids to mothers does often reduce the severity of RDS.

There are four classic symptoms of RDS

- ❖ Tachypnoea
- ❖ Recession – increased work of breathing
- ❖ Cyanosis/desaturation
- ❖ Expiratory grunt

Depending on the severity of the condition treatment may vary from a small amount of ambient oxygen to full ventilation therapy and antibiotics.

## **JAUNDICE**

Many babies become jaundiced within the first few days of life. This is a 'yellow' tinge to the skin caused by high levels of bilirubin in the blood. In most it is part of the adaption to extra uterine life.

There are several other causes of jaundice:

- ❖ Prematurity
- ❖ Rhesus, most severe form of haemolytic disease. Starts in utero. Usually identified in antenatal screening.
- ❖ ABO incompatibility
- ❖ Physiological, very common usually reaches its peak at 2 –5 days
- ❖ Infection

To determine treatment, blood is required for a serum bilirubin (SBR). If the levels are within the treatment guidelines then phototherapy is commenced. The need for treatment is ascertained by plotting the bilirubin levels on a graph of bilirubin against age in hours. (Please see our charts)

Phototherapy as a treatment is quite common in this unit, please familiarize yourself with our unit policy for more information.

## **APNOEA'S AND BRADYCARDIA'S**

A's and B's of prematurity. These are due to the immaturity of the cerebellum. The cerebellum provides us with the involuntary responses, such as breathing even when we are asleep. Our hearts beat according to our bodies needs. The cerebellum matures by 34 – 35wks. When the neonate sleeps the involuntary response may not be present and resp rate and HR decline, hence an apnoea and/or bradycardic episode can occur.

Apnoea of prematurity is the most important disorder of the control of breathing in the newborn period.

**DEFINITION** – Apnoea is the cessation of breathing. Apnoea is pathologic when the respiratory pause is prolonged (>20secs) or associated with cyanosis, pallor or bradycardia. (1)

### **CLASSIFICATION –**

- ❖ Central apnoea – inspiratory efforts are absent
- ❖ Obstructive apnoea – inspiratory efforts persist; airway obstruction is present
- ❖ Mixed apnoea airway obstruction with inspiratory efforts precedes or follows central apnoea's

At the bedside if your baby has an A and B it is important to stimulate them as quickly as possible. Start with gentle stimulation such as a foot tickle or chest rub. If no response, proceed to opening their mouths and sitting them up to maintain an open airway. Suction may be required if secretions are present.

IF NO RESPONSE THEN BAGGING IS REQUIRED

### **VAGAL STIMULATION**

This can be a frequent cause of bradycardias. When you suction or insert any tube into or through the oropharynx and down the oesophagus, you can induce a brady by stimulating a vagal response. The vagal nerve runs down the back of the pharynx and down the oesophagus. Any touch of this nerve will cause a response. The vagal nerve runs the cardiac electrical pattern. With stimulation it can slow the impulses down and the heartbeat slows.

## **MISCELLANEOUS**

Other neonates that come to our unit are:

- Neonates who are septic (have an infection)
- Neonates who are withdrawing from maternal drug use
- CYFS



## **GENERAL ASSESSMENT OF THE NEONATE**

A neonate can present with a diverse range of potential and actual problems. To anticipate, identify and limit problems it is important all people that are involved with their care assess all infants regularly.

All neonatal infants regardless of weight and gestation share common problems relating to:

- Temperature control
- Nutrition and feeding
- Infection control
- Family bonding
- Jaundice
- Low birth weight infants are more at risk of all the above problems.

There are tools available to assist in neonatal assessment. Below are some terms that you can define to help you understand the assessment process.

GESTATION	
PARITY	
GRAVIDA	
APGAR SCORE	
CENTILE GROWTH CHARTS	

Please see Appendix 1 Head to toe Assessment of the neonate in SCBU

## **WEIGHING OF A NEONATE**

This is an essential part of the assessment process. Neonates are weighed on admission then twice a week on a Tuesday and Saturday. It is normally done on the night duty.

There are exceptions to the above. Such as if the neonate is 34wks and older, or is over 1 week old. If the neonate is medically stable or has gained weight. But, please note that if you think the neonate you are looking after needs to be weighed outside these guidelines please do not hesitate in asking for advice. Please have your rationale ready for discussion!

The ideal weight gain is up to 15 – 30 grams a day  
Inappropriate gains would be >50grams a day

Most infants lose weight initially; but should regain birth weight within a specified time, dependent on gestation and wellness. Once rooming in to establish breastfeeding, return to daily weighing.

# **Common Abbreviations Used in SCBU**

## CONDITIONS/TREATMENTS

TTN	Transient Tachypnoea of the newborn
HMD	Hyaline membrane disease
RDS	Respiratory distress disease
BPD	Broncho – pulmonary dysplasia
NCPAP	Nasal continuous positive airway pressure
PREM	Premature
UAC	Umbilical arterial catheter
UVC	Umbilical venous catheter
PDA	Patent ductus arterious
PFC	Persistent foetal circulation
PFO	Patent foramen ovale
TGA	Transposition of the great arteries
APH	Antepartum haemorrhage
LSCS	Lower segment caesarian section
FDS	Foetal distress syndrome
NVD	Normal vaginal delivery
IDDM	Insulin dependant diabetes mellitus
PROM	Prolonged rupture of membranes
SRM	Spontaneous rupture of membranes
ROP	Retinopathy of prematurity
SGA/SFD	Small for gestational age/small for dates
IUGR	Intrauterine growth retardation
LGA	Large for gestational dates
EBM	Expressed breast milk
CXR	Chest xray
USS	Ultrasound scan
HUSS	Head ultrasound scan
ABG	Arterial blood gas
CBG	Capillary blood gas
FBC/CBC	Full blood count/complete blood count
SBR	Serum bilirubin
U&E	Urea and electrolytes
CRP	C Reactive protein
DAT	Direct antiglobulin test

# Common Medications

As part of student growth and development within SCBU it is recommended that the student completes the IV manual for students (only for 3<sup>rd</sup> year students). Once completed and passed you can administer IV medications under the direct supervision of a RN in SCBU. Students are not allowed to double check any medications.

Below is a list of common medications used in SCBU. It is recommended to 'read up' on these before you attend the placement, including what the medication is used for, the side effects and the usual dosage.

- **Amoxicillin**  
A broad spectrum penicillin with anti-bacterial activity against certain gram +ve and Gram -ve bacteria. Used in combination with Gentamycin as a first line defence in suspected sepsis in neonates including Group B Strep and E. Coli.
- **Caffeine Citrate** (Caffeine Base)  
Caffeine is commonly given to premature infants to manage apnoea (central/mixed), when other causes have been excluded. Caffeine acts as a stimulant on the central nervous system causing infants' heart rate, respiratory rate and oxygen saturations to increase.
- **Flucloxacillin**  
Narrow spectrum bactericidal antibiotic. The drug of choice for penicillinase resistant staphylococci. Used in the treatment of skin infections and umbilical cord infections.
- **Gentamycin**  
An aminoglycoside that inhibits bacterial protein synthesis. Active against pathogenic gram -ve bacteria and used in combination with amoxicillin for 48 hours, as routine prophylactic antibiotic cover.
- **Iron** (Ferrous Sulphate)  
Iron supplements are commonly given for the treatment and prevention of anemia in pre term infants. Infants who are premature, have a low birth weight and are only on breast milk are more likely to become anemic.
- **Human Milk Fortifier** (HMF)  
Fortification of expressed breast milk (EBM) may be considered to fully meet the nutritional needs of the preterm/sick infants, particularly energy, protein, sodium, calcium, phosphorus and some vitamins.

- **Phosphate**(Phosphate-Sandoz)

Phosphate supplements are used for premature infants to treat hypophosphatemia (low phosphate) and hypercalcaemia (high calcium). Phosphate supplements correct the balance of phosphate and calcium by increasing the phosphate levels in the body while decreasing the amount of calcium absorbed into the bloodstream.

*Calcium and phosphate are usually accumulated by babies in the third trimester of pregnancy. Premature babies therefore often have bone mineralisation deficiencies, which can manifest as metabolic bone disease or rickets in extreme cases. Sick babies also lose a lot of their already low phosphate stores in the first few days of life with phosphaturia. If there is insufficient dietary availability of calcium and phosphate, the baby will remodel and leach these substrates from their own bones.*

> Policies & Guidelines > Clinical > Paediatrics - Special Care Baby Unit (SCBU) > Metabolic Bone Disease: Phosphate & Vitamin D Sup

- **Sodium Chloride**

Sodium Chloride supplement is used for the treatment of hyponatremia (low sodium) in premature infants, due to immature kidney development. Hyponatremia is associated with poor growth.

- **Sucrose**

Used to reduce the pain response and indicated for minor invasive procedures.

- **Thickener**

Added to feeds to assist infants with regurgitation problems.

- **Vitadol C** – contains vitamins A C & D and used for the prevention of vitamin deficiency.

- **Vitamin K** – administration promotes synthesis of coagulation factors by the liver, lessening the tendency for haemorrhagic disease in the newborn.

# Pre-reading/Resources

Pre reading can be useful, below are some topics to get you started –

- ❖ Fetal development 32 – 40 weeks
- ❖ Apgar scores
- ❖ Thermoregulation
- ❖ Nutrition, breast, NG tube, bottle, cup
- ❖ Respiratory distress syndrome (RDS)
- ❖ PKU testing

Please note there are plenty of resources available on the unit for you to use. We have teaching packages, books, a teaching board and the library is well stocked with appropriate material. Don't forget the senior staff, that have an invaluable amount of experience, and can guide you through your time here in SCBU. There are also people within the multidisciplinary team who can provide you with information if required. We have home care, CNE, CYF'S team and don't forget the medical staff.

# 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

<b>My Preceptor:</b>	<b>E</b>	<b>VG</b>	<b>S</b>	<b>NI</b>
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

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Describe anything you would like done differently

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Signed: \_\_\_\_\_ Name: \_\_\_\_\_

# Notes

Please use this space for notes.



