CHILDREN’S SERVICES DIRECTORATE

Maternity Unit
Wansbeck General Hospital

Northumberland Neonatal Unit

PORTFOLIO OF LEARNING OPPORTUNITIES
Dear

On behalf of the ward team we would like to welcome you to the Special Care Baby Unit (SCBU) at South Wing, Wansbeck General Hospital. We all appreciate that a new ward placement can be a little daunting and may cause some apprehension; however please don’t be too worried, we can still remember how it feels!

Read through your pack and if you have any queries, please do not hesitate to ask. Your educational needs are very important to us.

Looking forward to working with you.

Sincerely,

Joan Oliver
Ward Manager/ANNP

Susan Charlton
Ward Sister

George Brooks
ANNP/Supervisor of Midwives
Lecturer in Midwifery & Neonatal Care

This pack was developed using previous resources at SCBU Ashington and North Tyneside. We acknowledge the major contribution of our colleagues S.Bower, M. Urwin and S.Ahern.
Special Care Baby Unit.
Teaching Pack for Students and New staff.

Welcome to Northumberland’s neonatal unit. We have 12 Special Care and 2 High Dependency Care cots/incubators, and a lot of specialist equipment, and can fully support two high dependency babies requiring CPAP. Two short-term ventilator spaces are also available for emergency intensive care.

We also have 2 en-suite rooms for parents and a parent’s sitting room. Transitional care is offered on the postnatal ward in collaboration with our midwifery colleagues.

We are committed to supporting your learning experience. Your allocation will be primarily based in SCBU with opportunities to visit other areas outlined in the learning zones.

The aim of this handbook is to provide information about S.C.B.U. It is intended for students and new members of staff, in order to give some structure to their time in S.C.B.U. This will be tailored to individual needs.

A mentor/preceptor will be allocated. However all of the staff have a neonatal qualification and a wealth of experience, and are committed to helping you enjoy your
placement and achieve the competencies appropriate to your needs.

Our neonatal unit is unique as it is a nurse-led service and our history is discussed in the attached article.
Working as a professional team, we endeavour to provide appropriate individual and holistic care in a safe, secure and nurturing environment, in order to facilitate the best possible outcome for baby and their family.

We feel privileged to offer special and high dependency care for your baby. We attempt to display at all times that we acknowledge how essential it is to include parents and families, in the care of their babies.

We actively work together with parents to help them achieve this, equipping them with the skills and confidence to become a family unit.
**SCBU Routines**

**Shift Patterns.**

Early Shift - 0745 – 1545hr

Late Shift - 1315 – 2145hr

Night shift 2030 – 0800hr

**Ward Rounds.**

Completed by ANNP 0830hr

**Ward Manager/A.N.N.P**

Joan Oliver

**Telephone Numbers.**

- Cardiac Arrest: 2222
- **PAEDIATRIC EMERGENCY 2222**
- Fire: 4444
- Security/Police: 3333
- SCBU: 6154
- Direct line: (01670) 564154
- SCBU fax: (01670) 564152
In the event of a Collapsed Baby ring 2222 state “paediatric emergency” & your location.

**Bleep System.**

Dial 55 await instruction then dial bleep number, key in extension number when instructed.

Then hang up.

**Bleep numbers**

**ANNP 3071**

**Senior Midwife 3074**
<table>
<thead>
<tr>
<th>Activity</th>
<th>Student Signature</th>
<th>Mentor Signature</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Introduction to mentor/staff members</td>
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<tr>
<td>Tour of ward and maternity unit</td>
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<tr>
<td>Fire procedure. Location of emergency exits.</td>
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<tr>
<td>Cardiac arrest procedure. Emergency equipment.</td>
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<td>Location of files.</td>
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<td>Trust policies</td>
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<td>Health and safety</td>
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<td>Manual Handling</td>
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<td>Control of infection</td>
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<td>S.C.B.U. procedures</td>
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<td>Procedure for reporting sick</td>
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<td>Location of learning resources</td>
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<td>Documentation</td>
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<tr>
<td>Complaints Procedure</td>
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<tr>
<td>Discussion with mentor re: placement Discuss any worries/interests</td>
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<td>Laboratory</td>
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<td>Pharmacy</td>
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<tr>
<td>X-Ray/ ultra sound</td>
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</table>
Student Responsibilities

Students should be on time for shift.

Inform unit if you are going to be late.

Inform us in advance if you are going to be sick.

Wear I.D. badge.

Students should have a clean and tidy appearance, and wear a minimum amount of jewellery.

Be responsible for completing your part of your portfolio.

To discuss any problems re: placement as early as possible with ward manager/mentor.

Before giving any information to parents, discuss it with mentor/a member of the nursing staff. Giving incorrect information may compromise a baby's care and cause unnecessary stress for parents who are already anxious.

Discuss telephone calls re: babies with person looking after that baby. Do not give information to anyone other than parents.

To show willingness to learn, use every opportunity available.
Mentors will help you gain the best from your placement.

Discuss care plan with mentor for your babies each morning.

Attend ward rounds as these can be a learning opportunity.
Special Care Baby Unit
Wansbeck General Hospital

LEARNING ZONE / LEARNING OPPORTUNITIES

- Nursing staff
- ANNP’s
- Paediatricians
- Liaison H.V.
- Delivery suite
- Post-natal ward
- Children’s out-patients
- Laboratory
- Infection control
- Neonatal Pharmacology
- Child protection
- Health Promotion
- Bonding
- Parent Support
- Special support services
ADDITIONAL LEARNING OPPORTUNITIES

- Referral units
  - NICU
  - Surgery
  - Cardiology

- Perinatal mortality meetings
  - CONI

- Interpreting services
  - Drug withdrawal

- Paediatric community nurses

Wansbeck SCBU
<table>
<thead>
<tr>
<th>Learning Element</th>
<th>Achievable Skills in this Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen dependent infant.</td>
<td>Recording and understanding observations - Temperature, respirations, heart rate and SaO2. Identify related illnesses ie. R.D.S., B.P.D. Recognise change in condition - improvement/deterioration. Inform senior nursing/medical staff.</td>
</tr>
<tr>
<td>Feeding problems</td>
<td>Associated conditions: Prematurity ie infants with cleft lip/palate Downs syndrome Special needs.</td>
</tr>
<tr>
<td>Jaundice</td>
<td>Recognise condition.</td>
</tr>
<tr>
<td>Topic</td>
<td>Description</td>
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<td>-------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
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<tr>
<td>Have an understanding of various causes.</td>
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<tr>
<td>Obtain capillary blood sample for analysis.</td>
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<tr>
<td>Understanding of results and treatment.</td>
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<tr>
<td>Communication</td>
<td>Answer telephone/intercom in polite manner.</td>
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<tr>
<td>If taking results inform nursing staff of results.</td>
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<tr>
<td>Respect patient confidentiality</td>
<td>Do not give any information over telephone.</td>
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<tr>
<td>Logical sequence with handover.</td>
<td>Exercising caution within own limitations when communicating with parents.</td>
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<tr>
<td>Through discussion, assess development, of assessing, planning, implementing and evaluating care.</td>
<td>Understanding the importance of communicating any information or concerns from parents to qualified nursing staff.</td>
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<tr>
<td>Maternal - infant separation</td>
<td>Understanding/awareness of importance of bonding.</td>
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<td></td>
<td>Understanding the strategies to minimise risks.</td>
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<tr>
<td>Neonatal pharmacology</td>
<td>Knowledge of frequently used medications.</td>
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<td></td>
<td>Knowledge of drug administration policy.</td>
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<td></td>
<td>Understanding and practice drug calculations.</td>
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</tbody>
</table>
To practice administration of basic drugs ie: vitamins under supervision.

| Health Promotion | Awareness of: 
Values of breast feeding 
Diet 
Sudden Infant Death Syndrome (SIDS). 
Smoking 
Immunisation |
|------------------|---------------------------------------------------------------|
| Newborn Spot Screening 
Hearing Screening | Awareness of: 
Protocol for obtaining samples. 
(Newborn spot screening ) 
Gaining consent. 
Information for parents. |
**Areas for Clinical Development**

The following checklist has been developed for all students of all abilities.
Discuss with your mentor which areas you feel may developed further.

<table>
<thead>
<tr>
<th>Clinical skills</th>
<th>Achieved</th>
<th>Evidence</th>
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</thead>
<tbody>
<tr>
<td>Temp, heart rate, resps, SaO2 BP. observations</td>
<td></td>
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<tr>
<td>Blood glucose testing</td>
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<tr>
<td>Naso-gastric feeds</td>
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<tr>
<td>- Passing tube</td>
<td></td>
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<tr>
<td>- Feeding methods</td>
<td></td>
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<td>Infusion pumps</td>
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<tr>
<td>- Neomate</td>
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<td>- Syringe drivers</td>
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<td>Incubators</td>
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<td>- Set up</td>
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<td>- Cleaning</td>
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<tr>
<td>Oxygen &amp; Suction</td>
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<tr>
<td>- Methods of administration</td>
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<td>- Recording</td>
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<td>- Analysers</td>
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<td>- Safety measures</td>
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<tr>
<td>- Appropriate use of suction</td>
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<tr>
<td>Documentation</td>
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<tr>
<td>- Admission</td>
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<td>- Record keeping</td>
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<td>- Evaluations</td>
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<td>- Discharges</td>
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<td>- Referrals</td>
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<td>Observing/administering</td>
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<tr>
<td>medication</td>
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<td>• Oral</td>
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<td>• I.V.</td>
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<tr>
<td>• Infusion</td>
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Places to aid learning outcomes:
SCBU resource room
Library
Internet/intranet
Nursing/medical staff.
Drug Calculations - nurse/midwife responsibilities

As a registered nurse/midwife you must consider:-

- Is the drug correctly prescribed?
- Is the dosage correct?
- What does the drug do?
- Are their any side effects?
- Do you need parental consent?

Medication is prescribed according to the babies' weight.

Calculation formulae:

\[
\text{What you want} \times \text{volume} \div \text{What you have}
\]

e.g. Paracetamol 60mg (120mg in 5mls)
\[
60/120 \times 5 = 2.5mg
\]
<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
<th>Use</th>
<th>Side effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abidec</td>
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<tr>
<td>Vitamin K</td>
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<td>Caffeine</td>
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<td>Penicillin</td>
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<td>Gentamicin</td>
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**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, to assess this the aid of a gestational assessment score may be used: i.e. skin thickness, skin colour, amount of breast tissue, and ear cartilage.

**Small for Gestational Age (SGA)**

The definition of SGA are neonates who are less than the 4th centile for 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.
Respiratory Distress Syndrome / Hyaline Membrane Disease (RDS)

The main cause of RDS is Hyaline Membrane Disease, and occurs in babies less than 36wks. Gestation, this is due to the lack of surfactant in the alveoli. Surfactant lowers the surface tension, which in turn allows for a better exchange of gases. Giving ante-natal steroids to mothers, does often reduce the severity of RDS. If the baby is less than 30wks. Gestation, and requires active resuscitation, an artificial surfactant is given via the ETT. There are four classic symptoms of RDS: Tachypnoea, (resps >60) recession, cyanosis, and an expiratory grunt. Confirmation may be obtained with a chest x-ray, which shows a 'ground glass' appearance. Depending on the severity of the condition, treatment may vary from a small amount of ambient O2 to full ventilation. I.V. therapy and antibiotics.

Bronco-pulmonary dysplasia (BPD)

BPD may sometimes be referred to as chronic lung disease. This is a condition that often occurs in sick premature infants, who have required prolonged ventilatory support. The neonate's lungs are delicate and long term ventilation may cause inflammation and damage. The classification of BPD is a neonate who is still oxygen dependant at 28 days of age. This can be confirmed by chest x-ray. These neonates may require diuretics, and long term low flow oxygen, and often are discharged with home oxygen.

Hypoglycaemia

This is defined as a blood glucose level of <2.6 mmols. The common causes of hypoglycaemia are:
- Prematurity <36wks. Gestation
- SGA
- Babies of diabetic mothers
- Hypothermia
Commence early feeds, 3hrly. of 100-120 mls./Kg. (breast may be offered with formula top-up)
A small sample of blood will be sent to the lab. at 6hrs. of age, if this is < 2.6mmols. 2hrly feeds should be commenced and a repeat blood glucose sent before the next feed. If the problem persists continuous naso-gastric feeds/I.V. therapy may be used.

**Hypothermia**

All babies are at risk of becoming hypothermic, axillary temperature of <36°C.

Some of the main factors which contribute to hypothermia are:
- Prematurity
- SGA
- Babies that have required resuscitation procedures
- Environment-cold delivery room
- Inadequate clothing after delivery

There are 4 sources of heat loss:
- Evaporation- not adequately dried at delivery.
- Convection- air movement, draughts.
- Radiation-warmth uncovered to cooler surfaces
- Conduction-placing on cold surfaces.

**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.

There are several causes of jaundice:
- Prematurity
- Rhesus
- ABO incompatibility
- Physiological
- Abnormalities
To determine serum bilirubin (SBR) levels, a small sample of blood is sent to the lab. If levels are within the treatment range, phototherapy is commenced. This is a spectrum of light which converts bilirubin which is not water soluble, into biliverdin which is then excreted by the kidneys.

Feeding Problems

There are several reasons why neonates may experience feeding problems.

Prematurity: is the one we see most often. Whilst the neonate who is <34-36 wks. gestation will have a sucking reflex, they do not have very good co-ordination skills ie. sucking, swallowing and breathing. These infants are usually fed by naso-gastric tube until breast/bottle feeding is established. Neonates who are <34wks. gestation/SGA are initially fed with pepti-junior (an easily digestible formula) until they produce a changing stool, then progress to breast milk with fortifier or low-birth weight formula. Amount and frequency will be worked out on weight.

Other conditions which may cause feeding problems are:
- Cleft lip and or palate
- Pierre Robin syndrome
- Downs syndrome
- Severe Hypoxic insults.
**Neonatal Quiz**

1) What is the feeding regime for low dependency babies?

2) Which milk may be chosen for a S.G.A. baby?

3) How are feeds calculated?

4) Which babies are given vitamin supplements, dose, frequency, and how long are they given for?

5) What is the Parkin score?

6) Describe the symptoms of R.D.S.

7) What observations would you make on such a baby?

8) When would you use a respiratory stimulant and when would it be appropriate to discontinue it.

9) Discuss methods to encourage breast feeding and baby bonding.
10) A baby born at 34 weeks gestation weighing 1920 gms is now 5 days old and weighs 1850 gms. The feeds are to be increased to 150 mls/kg 4 hourly. Calculate the feed.
Student Learning Zone

Evaluation Form

We welcome your views and would appreciate any relevant comments.

Did you address all areas of opportunity within the learning zones?  

Yes

No

Comments:

Were your learning needs/opportunities identified, during the first week of your allocation?

Yes

No

Comments:

Could your allocation/learning opportunities be improved?

Yes

No

Comments:

Please send to Joan Oliver, Unit Manager, Special Care Baby Unit, WGH, on completion. All comments are valued and confidentiality will be maintained.