Chesterfield Royal Hospital NHS
NHS Foundation Trust

Women and Children's Directorate

Welcome to the
Neonatal Unit

Updated January 2016

Welcome to the Neonatal Unit at Chesterfield Royal Hospital NHS Foundation Trust. At times this can be a complex and stressful environment and you may find this frightening at first, especially if this is your first experience of working in a neonatal unit.

This welcome book is intended to be a useful guide for you during your first few weeks on the Neonatal Unit. At the back of the book you will found the following information which is intended to be a useful resource during your induction/orientation period.

- Neonatal Unit philosophy
- Visiting policy
- Calculation of fluid charts
- Vitamin and supplements guide
- Calculation of drugs
- Further links and addresses advised reading

On commencement of your placement/post you will be allocated a mentor/ mentors who will work closely with you during your first few weeks on the unit. Where appropriate, you will be given an induction package which is designed to ease your introduction into your new job/placement, the directorate and the hospital. Your mentor will work through this package with you.

THE NEONATAL UNIT

The Neonatal Unit is a 12 cot unit with 3 critical care cots and 9 special care cots. This is occasionally subject to change dependent upon staffing levels on the unit and also dependency of the babies. Babies are admitted to the unit from 27 weeks to 40+ weeks' gestation for a variety of reasons.

Sometimes a baby's condition may necessitate transfer to a specialist unit in a different hospital, For example, if a baby requires surgery it is usually transferred to Sheffield Children's Hospital. A baby with a cardiac problem may be transferred to Leeds and a baby requiring certain forms of ventilation other than conventional may be transferred to a regional unit, usually at Sheffield or Nottingham. The transfer is normally carried out by a specialist transport team. The team for our network is called Embrace.

The unit is divided into 3 main areas, the intensive care room, the main nursery and four side cubicles.

Most babies will be admitted into the intensive care area and may then be nursed in different areas of the unit according to their condition and reason for admission.

Our aim is to provide family centred care, offering support to all members of the family unit for the duration of their baby's stay on the unit and also for a time following discharge.

THE NEONATAL TEAM

The Neonatal Unit Matron is Lynn Elliott. There are Band 6 Sisters who all have various areas of responsibility including visiting babies after they have been discharged out into the community. The rest of the nursing team is made up of Band 5 Senior Staff Nurses (all having a qualification in neonatal nursing) plus several Band 5 Staff Nurses and Nursery Nurses. To complete the team we have part-time Housekeepers, Ward Receptionist and our own regular part-time Domestic.

VISITING

Parents and siblings are encouraged to visit at any time. Grandparents are welcome to visit between **3pm -9pm** other visitors are only allowed in if accompanied by parents at specified visiting times. Children under 16 years (excluding siblings) are not allowed to visit due to the increased risk of infection.

All visitors are asked to use hand gel on entering the unit and to leave outdoor coats in the cloakroom.

We expect all members of staff to familiarise themselves with the visiting policy and to ensure that it is enforced at all times. In extenuating circumstances please consult the person in charge of the unit.

Information regarding the baby's condition, treatment etc is only to be given to the parents, except in extenuating circumstances and by prior arrangement.

SECURITY

Security on the unit is paramount in order to protect the babies in our care. Access to the unit is through the main security door. Parents and visitors to the unit are asked to ring the doorbell and declare their identity with the aid of the intercom system. They are then allowed in.

Babies may also be tagged with an electronic security leg tag which sets off an alarm if the baby is moved out of the unit.

All staff that has permission to gain entry into the Neonatal Unit is issued with an identity badge which can be used as a swipe card to open the main doors. Anyone not wearing an identification badge should be challenged if necessary.

THE QUIET ROOM

The Quiet Room is situated at the end of a corridor away from the main area of the unit. It is designed as a bedsit, having a comfortable double bed settee, colour television and separate kitchen area. It also has piped oxygen and suction, allowing babies to be nursed by parents in exceptional circumstances.

It is intended for use by parents of seriously ill babies. It is also used for the sad time of bereavement. Occasionally it may be used by nursing or medical staff to talk to parents about their baby's care.

Toilet and shower facilities are situated next door to the Quiet Room and are shared by parents using the Quiet Room and bedroom.

PARENTS' BEDROOM

We have one bedroom on the unit in the same corridor as the Quiet Room. This is mainly used for:

- Mothers establishing breastfeeding
- Mothers rooming in prior to discharge

The bedroom is allocated to mothers at the discretion of the nurse in charge.

THE BREASTFEEDING/EXPRESSING ROOM

All mums are encouraged and supported in breastfeeding and expressing their milk. In addition to the well-documented health benefits to mothers and their babies, it helps mums to be able to do something unique for their baby.

The Breastfeeding Room is a quiet, comfortable room equipped with the necessary facilities for expressing milk. It also provides a peaceful and private environment in which babies, whose condition is satisfactory whilst being nursed in a cot, may be taken for breastfeeding.

Each mum wishing to express milk is set up with her own expressing kit to use whilst her baby is on the Neonatal Unit. Breast pumps and expressing kits may also be loaned out to parents wishing to express at home. A fridge and freezer are located in the milk kitchen for the storage of expressed milk.

We also respect the wishes of parents who do not wish to express or breastfeed.

PARENTS' SITTING ROOM

We have a small sitting room for parents on the unit. This contains tea and coffee making facilities, radio, magazines. Visitors other than parents are <u>not</u> allowed to use this facility. Parents are asked to supervise their children and not to leave them unattended in this room at any time.

We provide a small selection of books, toys, games and videos for use by siblings visiting the unit.

CLINICAL RISK

The Trust Board is committed to reducing healthcare risks and to continuing to implement risk management at every level throughout the hospital. The Trust has a Clinical Risk Team which supports the Trust in its aim to identify and reduce clinical risks. Central to this is the Trust's incident reporting process which encourages staff to report incidents and near misses via the Datix Incident Reporting System on the hospital's intranet site. Each incident is then investigated and, where possible, measures are taken to reduce the risk of re-occurrence by reviewing and changing practice if appropriate. In order to achieve this, the Trust Board is committed to the promotion of a learning culture in which staff feel able to report all incidents.

EQUIPMENT

As a healthcare professional we are accountable for our own practice, and also for making sure that we use all medical equipment/devices safely. Please refer to the NMC Code of Professional Conduct (2002) to identify your personal accountability.

New starters will receive an equipment credentialisation form in the induction package. Please ask your mentor to instruct you in the safe and correct use of the medical equipment that you will be using whilst working on the Neonatal Unit. In the absence of your mentor, any of the senior staff on the unit will be happy to explain the equipment to you. Please note that credentialisation of equipment is a mandatory requirement for all staff who use diagnostic or therapeutic equipment within the Trust.

Representative from medical equipment companies are invited periodically to given demonstrations on specific items of equipment, please try to attend these sessions if possible.

Instruction manuals for all equipment used on the Neonatal Unit can be found in the bottom drawer of the resource cabinet or in the relevant clinical area.

EDUCATION AND RESOURCES

Keely Turner and Lynn Elliott are the Learning Environment Managers for the unit. Keely supports Lynn in this role and is responsible for helping to facilitate and support learning and education on the unit.

We aim to hold regular teaching sessions, which you are welcome to attend. A wide range of books are kept in Lynn's office and you are welcome to utilise these whilst you are on the unit but are requested not to remove them without permission. A selection of educational DVDs is also available for your use.

We also have a number of relevant journals on the unit, you are welcome to photocopy relevant articles but please do not remove from the unit.

Access to the intranet is available on the unit for the purpose of education and continuing professional development. You will need to complete in-house email training in order to utilise this facility.

Comprehensive joint medical and nursing guidelines are kept at the nurses' station and are updated regularly by the review group.

LEARNING OPPORTUNITIES

You will also have the opportunity to spend time with the NNU community team, shadowing neonatal visits within the home surroundings.

HOURS OF WORK

Please ensure that you are punctual at the start of each shift as the handover takes place promptly. Changing rooms are available and you will be orientated with these on your first shift. In the interest of health and safety, staff are asked not to wear their uniform outside of the hospital. Staff found doing so might be faced with disciplinary action. Facilities are available for the laundering of staff uniforms.

SHIFT TIMES

With half an hour break time:

Morning Shift	0730 – 1400 hrs (6 hrs)	0730 – 1530 hrs (7½ hrs)
Afternoon Shift	1330 – 2000 hrs (6 hrs)	1200 – 2000 hrs (7½ hrs)

With three-quarters of an hour break time:

Long Day Shift	0730 – 2000 hrs (11¾ hrs)
Long Night Shift	1930 – 0800 hrs (11¾ hrs)

All nursing posts are based on internal rotation to night duty.

BEGINNING OF SHIFT CHECKLIST

1) Carry out a full physical assessment of the baby, including cannula sites pain score and tissue viability assessments

2) Ensure the baby is wearing 2 identity bands, correctly labelled.

3) Check emergency equipment and document

EMERGENCY EQUIPMENT

Please follow the joint medical and nursing guideline 1H (Checking Bedside Oxygen, Air, Suction, Neopuff and Bag and Mask)

MONITORING

Check all alarm limits are within acceptable rage and that alarms are NOT turned off.

DRUGS

- Check that prescription charts are in date and signed
- Check infusions running as prescribed calculating fluid totals
- Note when infusion will need renewing
- Check all lines and infusions are labelled correctly

DURING SHIFT

- Read patient's notes
- Read care plan , update as necessary and deliver care accordingly
- Complete pain assessment score chart
- Check and record daily blood results
- Restock cot

HANDOVER

Handover takes place at the start of each shift in the staff room. The purpose of handover is to ensure that all staff receive a clear, concise report of each baby's current condition and family details.
A further more in-depth patient handover is then carried out at the bedside.

SOME REASONS FOR ADMISSION TO THE NEONATAL UNIT

- Prematurity
- Intrauterine growth retardation (IUGR)
- Birth asphyxia
- Respiratory disorders
- Congenital abnormalities
- Meconium aspiration
- Infection
- Infant of diabetic mother / hypoglycaemia
- Poor temperature control
- Feeding problems
- Drug withdrawal (NAS)
- Fitting
- Social problems
- Transfers from other units

CONDITIONS THAT YOU MAY OBSERVE ON THE NEONATAL UNIT

- Respiratory Distress Syndrome (RDS)
- Transient Tachypnoea of the Newborn (TTN)
- Pneumothorax
- Pneumonia
- Pulmonary Intestitial Emphysema
- Apnoea
- Diaphragmatic Hernia
- Tacheo-oesophageal Atresia / Fistula
- Broncho Pulmonary Dysplasia
- Chronic Lung Disease
- Necrotising enterocolitis (NEC)
- Jaundice

HAEMATOLOGICAL

- Anaemia
- Haemorrhagic

- Rhesus Incompatibilities

METABOLIC

- Respiratory Related
- Hypoglycaemia
- Hypocalcaemia
- Hyponatraemia
- Acidosis

CRITERIA FOR DISCHARGE FROM THE NEONATAL UNIT

The criteria for discharge from the unit is that the baby is:

- maintaining their temperature in a cot,
- taking feeds from the breast or bottle, and
- adequately gaining weight. We aim for a discharge weight of at least 1.8kg.

In special circumstances babies may go home whilst still requiring nasogastric tube feeds. Babies requiring long-term oxygen therapy are also allowed to be nursed at home, provided the baby meets other discharge criteria. Parents of such babies are trained on the unit to ensure they feel confident and competent to care for their baby at home prior to discharge. The Neonatal Community Liaison Sister continues to support these babies and their families for as long as is necessary.

COMMONLY USED ABBREVIATIONS

Apex	Heart rate
APH	Antepartum haemorrhage
Apnoea	Respiratory pause > 20 seconds
ARM	Artificial rupture of membranes
ASD	Arterial septal defect
AXR	Abdominal x-ray
B/P	Blood pressure
BPD	Bronchopulmonary dysplasia
Bradycardia	Heart rate < 88 beats per minute
Breech	Buttocks delivered first
Cephalic	Head delivered first
CHD	Congenital heart disease
CLD	Chronic lung disease
CMV	Continuous mandatory ventilation
CPAP	Continuous positive airways pressure
CTG	Cardio-tachygraph (measures fetal heart rate in conjunction with uterine contractions)
CXR	Chest x-ray
DIC	Disseminated intravascular coagulation
Dusky/ Cyanosed	Blue in colour
EBM	Expressed breast milk
ECMO	Extracorporeal membrane oxygenation
EDD	Estimated date of delivery
ELLSCS	Elective lower segment caesarean section
EMLSCS	Emergency lower segment caesarean section
ETT	Endotracheal tube
FBC	Full blood count
FBS	Fetal blood sample
FFD	Fit for discharge
FFP	Fresh frozen plasma
FIO2	Inspired oxygen concentration

FSE	Fetal scalp electrode
FTNVD	Full-term normal vaginal delivery
G	Gravida (number of pregnancies)
Gest	Gestational age
GOR	Gastro-oesophageal reflux
Grunting	Noise made on expiration (often heard in babies with RDS)
HDN	Haemolytic disease of the newborn; Rhesus incompatibility / ABO
HFOV	High frequency oscillation ventilation
HMD	Hyaline membrane disease
HVS	High vaginal swab
I/E Ratio	Inspiration / expiration ratio
IDDM	Infant of insulin dependent diabetic mother
IPPV	Intermittent positive pressure ventilation
IUGR	Intrauterine growth retardation
IVH	Intra-ventricular haemorrhage
IVI	Intravenous infusion
IVN	Intravenous nutrition
Jaundice	Yellow in colour
LBW	Low birth weight < 2.5kg
LL	Long line
LMP	Last menstrual period
LP	Lumbar puncture
LSCS	Lower segment caesarean section
MAP	Mean airway pressure or mean arterial pressure
MSB	Mean serum bilirubin
NAS	Neonatal abstinence syndrome
NBFD	Neville Barnes forceps delivery
NEC	Necrotising enterocolitis
NG	Nasogastric
NICU	Neonatal intensive care unit
NNU	Neonatal unit
NO	Nasopharynx, Nasal prong
NPA	Nasopharyngeal aspiration

NVD	Normal vaginal delivery
OGT	Orogastric tube
OP	Oropharynx
P	Parity (number of live deliveries)
PcO2	Partial carbon dioxide
PCV	Packed cell volume
PDA	Patient ductus arteriosus
PEEP	Positive end expiratory pressure
PET	Pre-eclampsia toxaemia
PFC	Persistent fetal circulation
PICU	Paediatric intensive care unit
PIE	Pulmonary interstitial emphysema
PIH	Pregnancy induced hypotension
PMH	Past medical history
PO2	Partial oxygen
POH	Past obstetric history
PPH	Postpartum haemorrhage
Pre-term	Born before 37 weeks' gestation
PROM	Prolonged rupture of membranes (if >24 hours duration there is an increased risk of infection for the baby)
PTV	Patient triggered ventilation
RDS	Respiratory distress syndrome
Resps	Respiratory rate
RLF	Retrolental fibroplasias
ROM	Rupture of membranes
ROP	Retinopathy of prematurity
SCBU	Special care baby unit
SFD	Small for dates
SIMV	Synchronised intermittent mandatory ventilation
SPA	Suprapubic aspiration
SROM	Spontaneous rupture of membranes
STOP	Surgical termination of pregnancy
Tachycardia	Heart rate >180 beats per minute

Tachypnoea	Respirations > 60-70 per minute
TcPO2	Transcutaneous partial oxygen monitoring
Term	Born between 37 – 42 weeks' gestation
TOF	Tracheo-oesophageal fistula
TOP	Termination of pregnancy
TORCH	Screen for infection: Toxoplasmosis and others, e.g. Rubella, Cytoplasmosis and herpes
TPN	Total parenteral nutrition
TTN	Transient tachypnoea of the newborn
Type 1 dip on CTG	Heart rate falls with contraction
Type 2 dip on CTG	Heart rate falls, no relation to contractions
UAC	Umbilical arterial catheter
USS	Ultrasound scan
UVC	Umbilical vein catheter
Ventouse	Suction extraction (Kiwi – commonly used type of suction cup)
Volume guided	Alternative form of ventilation

VITAMIN & SUPPLEMENT GUIDE

Birth Weight	Feed	Supplement & Vitamins
> 2500g	Breastfed exclusively	0.3 ml Abidec od until 18 months of age Then from this age, all children who are not on 600ml formula require vitamin A and D supplementation until 5 years of age (use Healthy Start, Abidec or Dalivit)
< 2500g (LBW)	Formula (term) Fed	0.3 ml Abidec od until 1 year of age Then from this age, all children who are not on 600ml formula require vitamin A and D supplementation until 5 years of age (use Healthy Start, Abidec or Dalivit) 1ml Sytron od until 6 months corrected age commenced at 28 days of age
< 2500g (LBW)	Breastfed or Expressed Breastmilk (EBM)	0.6 ml Abidec od until 5 years of age 1ml Sytron od until 6 months corrected age commenced at 28 days of age
<1000g (ELBW)	Preterm Formula >150 ml/kg	No supplementation until on term formula (see above)
<1000g (ELBW)	Preterm Formula <150 ml/kg	Supplementation commences when neonate is on full enteral feeds of >150mls/kg

DRUG CALCULATIONS

Unit of weight Equivalent

1 kilogram (kg) 1000 grams

1 gram (g) 1000 milligrams

1 milligram (mg) 1000 micrograms

1 microgram (mcg or µga) 1000 nanograms

Converting lb to kg and kg to lb

lb = kg × 2.2

kg = lb ÷ 2.2

Formula

$$\frac{\text{AMOUNT REQUIRED}}{\text{AMOUNT AVAILABLE}} \times \text{VOLUME AVAILABLE (IN MLS)} = \text{VOLUME REQUIRED (IN MLS)}$$

OR

$$\frac{\text{WHAT YOU WANT}}{\text{WHAT YOU'VE GOT}} \times \text{WHAT'S IN IT} = \text{VOLUME REQUIRED}$$

Example

1. SPIRONOLACTONE SYRUP is available as 25mg in 5mls.
   A baby requires 15mg. How many mls should be given?

$$\frac{15\text{mg}}{25\text{mg}} \times 5\text{mls} = 3\text{mls}$$

2. Give a baby 0.4mg of ATROPNE SULPHATE
   This is available as 600 mcg in 1 ml. How many mls should be given?

$$\frac{400\text{ mcg}}{600\text{ mcg}} \times 1\text{mls} = 0.6\text{mls}$$

NEONATAL UNIT PHILOSOPHY

Parents and staff
Partners in care

- We believe that babies should only be admitted to the Neonatal Unit if their care cannot be equally managed on the postnatal ward or at home.
- Each baby who needs special care will be welcomed and cared for as an individual, their different physical, psychological and social needs will be taken into account and care will be shared and planned with their parents.
- The staff will provide a caring, safe, comfortable and child-friendly environment for babies, parents and siblings. Babies shall be cared for by specially trained staff, keeping parents involved and informed as much as they are able.
- We aim to provide a suitable learning environment for all students and staff, enabling them to carry out evidence-based practices under supervision of qualified neonatal nurses/medical staff.
- Health promotion and education for parents is an integral part of total baby care and parents will be supported by the staff to develop parenting skills to adapt the family towards a happy and healthy home life with their baby/babies.

Neonatal Unit

VISITING INFORMATION

When can I visit my baby?

The Unit is open to visiting 24 hours a day for parents, siblings and grandparents. During the admission period the doctors and nurses can be very busy caring for your baby. The nurses will let you know as soon as it is possible to come and see your baby.

If your baby is transferred here from another hospital:

You will be shown where your baby is and updated as to his/her condition. You will also be introduced to the staff that will be caring for your baby.

How many visitors can come to see the baby/babies at a time?

We only allow **3 adult visitors** per family at any one time. Grandparents may visit alone with permission from the parents. Visitors other than grandparents must be with a parent and visiting times are **3.00pm – 4.00pm** and **7.00pm – 8.00pm**. Visiting outside these times is at the discretion of the Nurse in Charge. This limit is to reduce the risks of any infection being spread in the Unit and because the rooms get crowded. If a large family wants to visit they may take turns to come in with one of the parents.

We do not have a waiting area for visitors on the Neonatal Unit but in the Scarsdale Entrance there is a waiting area with refreshments available.

The Quiet Time:

In order to assist your baby with growth and development we have established a Quiet Time. This is between the hours of **1.00pm and 3.00pm.** During these times we recommend **parents-only** visiting.

Can my other children visit the baby?

We welcome visits from the baby's siblings – just as long as they do not have obvious signs of having a cold or other infectious disease.

In particular, they should not visit is they have had recent contact with children who have chicken pox (varicella zoster) or shingles.

If you have any questions or concerns about infections, please discuss them with the nurse caring for your baby.

Can my visitors' children also come to the Unit?

Only the brothers and sisters of the baby (the parents' children) may visit. This is to minimise the risk of infection to this group of vulnerable babies.

Can I take photos of my baby?

When the baby is first admitted, a nurse on the Unit will take a photo and will give you a copy as soon as possible.

You are welcome to bring your own camera to the Unit and take further photos of your baby, but do not take any pictures of other babies in the room. The camera flash does not seem to harm babies but please try to limit its use because pre-term babies need undisturbed sleep. To prevent accidental loss, please take care not to leave your camera unattended.

Please respect the privacy and dignity of other babies by not looking in their incubators or cots.

What should I wear to visit the Unit?

All visitors entering the Unit must remove their outdoor clothing (e.g. coats etc). Because of all the equipment generating heat, the rooms can get very hot so we advise you wear only light clothing.

When your baby is ready to be handled outside the incubator, we encourage both parents to hold the baby skin-to-skin on their chest. This is good for both of you. Mothers can usually start to breastfeed at this time. Both of you will find it easier if you wear a shirt or top that opens down the front to give the baby easy access to your chest skin.

Why do I need to wash my hands?

All visitors to the Unit must wash their hands when they enter the Unit and when they leave. This is because our babies are both vulnerable to infections and are more susceptible to having major reactions to simple colds than older infants.

Always wash and dry your hands and wrists thoroughly before touching your baby, and please use the alcohol hand rub.

Before touching your baby, if possible, please remove any rings and watches that you are wearing. Again, this is to minimise the risk of carrying infection to the baby.

Can we, as the baby's parents, phone the unit to ask about his/her progress?

Parents are given the direct number to the Unit (01246 512924) and may call at any time of the day and night. We would prefer you to give us a call to reassure yourselves rather than site at home worrying.

For practical reasons, we will limit the information given over the phone and will only give information over the phone to a baby's parents.

Can other people phone the Unit?

To limit the disturbance of the staff of the Unit, we ask that relatives or friends should ask you, as parents, for current updates.

Depending on the circumstances of the parents, they may wish a relative or friend to act as their support person. As long as the parent lets the Unit staff know this and gives permission, we can share information by phone with the nominated contact person.

ADDITIONAL LINKS AND FURTHER READING

Bliss - **http://www.bliss.org.uk/about-neonatal-care**

Network policies -
http://www.yorkshirehumberodn.nhs.uk/neonatal/guidelines-from-the-south-of-the-region.htm

Derby Nursing – www.derby.ac.uk/health/nursing/mentors

Unicef baby friendly - http://www.unicef.org.uk/babyfriendly/

Neonatal Care NHS –http://www.nhs.uk/conditions/pregnancy-and-baby/pages/baby-special-intensive-care.aspx

Shaking your baby is just not the deal - http://www.wales.nhs.uk/sitesplus/documents/888/Shaking%20your%20baby%20is%20just%20not%20the%20deal%20leaflet-English%20version-September%2020131.pdf

Tommy's - http://www.tommys.org/pregnancy/labour-and-birth/premature-birth/having-a-premature-baby